Kunzman Associates, Inc.

EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN

TRAFFIC IMPACT ANALYSIS

March 4, 2013

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN

TRAFFIC IMPACT ANALYSIS

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Traffic Impact Analysis

This report contains the traffic impact analysis for the expansion of El Camino College. The project site is bounded by Manhattan Beach Boulevard to the north, Crenshaw Boulevard to the east, and Redondo Beach Boulevard to the south. The student enrollment currently is 16,400 full time equivalent (FTE) students and is expected to grow to 20,025 FTEs by Year 2020.

The traffic report contains documentation of existing traffic conditions, trips generated by the project, distribution of the project traffic to roads outside the project, and an analysis of future traffic conditions. Each of these topics is contained in a separate section of the report. The first section is "Findings", and subsequent sections expand upon the findings. In this way, information on any particular aspect of the study can be easily located by the reader.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

I. Executive Summary

This section summarizes the existing traffic conditions, project traffic impacts, and the proposed recommendations.

A. Existing Traffic Conditions

1. El Camino College currently has an enrollment of 16,400 FTEs.

2. The project site currently has access to Manhattan Beach Boulevard, Crenshaw Boulevard, and Redondo Beach Boulevard.

3. The study area includes the following intersections:

   Hawthorne Boulevard (NS) at:
   Manhattan Beach Boulevard (EW) - #1

   I-405 Freeway SB Ramps (NS) at:
   Redondo Beach Boulevard (EW) - #2

   I-405 Freeway NB Ramps (NS) at:
   Redondo Beach Boulevard (EW) - #3

   Prairie Avenue (NS) at:
   Manhattan Beach Boulevard (EW) - #4
   Redondo Beach Boulevard (EW) - #5

   Yukon Avenue (NS) at:
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   El Camino College NW Entrance (NS) at:
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   Artesia Boulevard (EW) - #13
   182nd Street (EW) - #14
   I-405 Freeway SB Ramps (EW) - #15

I-405 Freeway SB Ramps (NS) at:
182nd Street (EW) - #16

4. The study area intersections currently operate at Level of Service E or better during the peak hours for Existing traffic conditions (see Table 1), except for the following study area intersections that operate at Level of Service F during the peak hours:

   Crenshaw Boulevard (NS) at:
   182nd Street (EW) - #14
   I-405 Freeway SB Ramps (EW) - #15

B. Traffic Impacts

1. El Camino College is proposed to increase its enrollment from 16,400 FTEs in Year 2012 to 20,025 FTEs in Year 2020 (increase of 3,625 FTEs). As part of the school expansion, a new signalized intersection will be created on Manhattan Beach Boulevard to serve the campus.

2. The proposed development is projected to generate approximately 4,459 daily vehicle trips, 436 vehicles per hour will occur during the morning peak hour and 435 vehicles per hour will occur during the evening peak hour.

3. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Existing Plus Project traffic conditions (see Table 3), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

   Crenshaw Boulevard (NS) at:
   182nd Avenue (EW) - #14
   I-405 Freeway SB Ramps (EW) - #15

4. A traffic signal is projected to be warranted at the following study area intersection for Existing Plus Project traffic conditions (see Appendix D):

   El Camino College NW Entrance (NS) at:
   Manhattan Beach Boulevard (EW) - #7

   The unsignalized intersection has been evaluated for a traffic signal using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices, dated January 2012.

5. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Existing Plus Cumulatives traffic conditions (see Table 6), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

Crenshaw Boulevard (NS) at:
182nd Avenue (EW) - #14
I-405 Freeway SB Ramps (EW) - #15

6. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Existing Plus Project Plus Cumulatives traffic conditions (see Table 7), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

   Crenshaw Boulevard (NS) at:
   182nd Avenue (EW) - #14
   I-405 Freeway SB Ramps (EW) - #15

7. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Year 2020 Without Project traffic conditions (see Table 9), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

   Crenshaw Boulevard (NS) at:
   182nd Avenue (EW) - #14
   I-405 Freeway SB Ramps (EW) - #15

8. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Year 2020 With Project traffic conditions (see Table 10), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

   Crenshaw Boulevard (NS) at:
   182nd Avenue (EW) - #14
   I-405 Freeway SB Ramps (EW) - #15

C. Recommendations

The following mitigation measures are recommended for the El Camino College campus:

On-Site Mitigation Measures

1. The sight distance at each project access on campus shall be reviewed with respect to California Department of Transportation/County of Los Angeles standards in conjunction with the preparation of final grading, landscape, and street improvement plans. Facilities Planning and Services shall monitor compliance.

2. The college shall implement the circulation recommendations included on Figure 35 concurrent with adjacent development on campus. Facilities Planning and Services shall monitor compliance.

3. The college shall implement the Transportation Demand Management mitigation measures required by the Los Angeles County Congestion Management Program for

projects of 100,000 or more square feet of floor space. Facilities Planning and Services shall monitor compliance.

4. The college shall implement on-site traffic signing and striping in conjunction with detailed construction plans for the project. Facilities Planning and Services shall monitor compliance.

<u>Off-Site Mitigation Measures</u>

1. Prior to Year 2020, the California Department of Transportation shall implement the lane improvements at the I-405 Freeway SB Ramps/Redondo Beach Boulevard intersection (see Table 12). The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The California Department of Transportation shall monitor compliance.

2. Prior to Year 2020, the County of Los Angeles/City of Lawndale shall implement the lane improvements at the Prairie Avenue/Redondo Beach Boulevard intersection (see Table 12) through their Capital Improvement Program. The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Public Works Department of the County of Los Angeles/Engineering Department of the City of Lawndale shall monitor compliance.

3. Prior to Year 2020, the college shall implement the lane improvements at the El Camino College NW Entrance/Manhattan Beach Boulevard intersection (see Table 12). The Public Works Department of the County of Los Angeles shall monitor compliance.

4. Prior to Year 2020, the college shall implement the lane improvements at the El Camino College SW Entrance/Redondo Beach Boulevard and Crenshaw Boulevard/Redondo Beach Boulevard intersections (see Table 12). The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Public Works Department of the County of Los Angeles/Engineering Department of the City of Torrance shall monitor compliance.

5. Prior to Year 2020, the County of Los Angeles/City of Gardena shall implement the lane improvements at the Crenshaw Boulevard/Manhattan Beach Boulevard intersection (see Table 12) through their Capital Improvement Program. The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Public Works Department of the County of Los Angeles/Engineering Department of the City of Gardena shall monitor compliance.

6. Prior to Year 2020, the City of Torrance shall implement the lane improvements at the Crenshaw Boulevard/Artesia Boulevard and Crenshaw Boulevard/182nd Street intersections (see Table 12) through their Capital Improvement Program. The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Engineering Department of the City of Torrance shall monitor compliance.

Construction Mitigation Measures

1. Contractors shall submit traffic handling plans to Facilities Planning and Services and to the Campus Police Department prior to commencement of demolition or grading. The plans and documents shall comply with the *Work Area Traffic Control Handbook (WATCH)*. Facilities Planning and Services shall approve the final plans and monitor compliance.

2. Demolition and construction contracts shall include plans for temporary sidewalk closures, pedestrian safety on adjacent sidewalks, and vehicle and pedestrian safety along the project perimeter, along construction equipment haul routes on campus and near on-site construction parking areas. These plans shall be reviewed by the Campus Police Division and approved by Facilities Planning and Services. Facilities Planning and Services shall monitor compliance.

3. Construction contractors shall post a flag person at locations near a construction site during major truck hauling activities to protect pedestrians from conflicts with heavy equipment entering or leaving the project site. Facilities Planning and Services shall monitor compliance.

4. Each project construction site shall be adequately barricaded with temporary fencing to secure construction equipment, minimize trespassing, vandalism, short-cut attractions, and reduce hazards during demolition and construction. Facilities Planning and Services shall monitor compliance.

5. The college shall consult with the effected cities on a truck haul route plan for all major earth hauling activities with more than eighty (80) trucks per day shall be established. Hauling of earth materials shall only occur between 9:00 AM and 2:00 PM Monday through Friday and between 8:00 AM and 5:00 PM on Saturdays. Light duty trucks with a weight of no more than 8,500 pounds are exempted from this restriction. Facilities Planning and Services shall ensure compliance.

Transportation System Management Actions

1. Schedule/fee information for the Los Angeles County Metropolitan Transportation Authority (MTA), Torrance Transit, Municipal Area Express (MAX), and the Gardena Municipal Bus Line shall be made available for students for each term. The college shall offer students discount bus passes for transit lines which offer them. Facilities Planning and Services shall monitor compliance.

II. Congestion Management Program Methodology

This section discusses the County Congestion Management Program. The purpose, prescribed methodology, and definition of a significant traffic impact are discussed.

A. County Congestion Management Program

The Congestion Management Program is a result of Proposition 111 which was a statewide initiative approved by the voters in June 1990. The proposition allowed for a nine cent per gallon state gasoline tax increase over a five-year period.

Proposition 111 explicitly stated that the new gas tax revenues were to be used to fix existing traffic problems and was not to be used to promote future development. For a city to get its share of the Proposition 111 gas tax, it has to follow certain procedures specified by the State Legislature. The legislation requires that a traffic impact analysis be prepared for new development. The traffic impact analysis is prepared to monitor and fix traffic problems caused by new development.

The Legislature requires that adjacent jurisdictions use a standard methodology for conducting a traffic impact analysis. To assure that adjacent jurisdictions use a standard methodology in preparing traffic impact analyses, one common procedure is that all cities within a county, and the county agency itself, adopt and use one standard methodology for conducting traffic impact analyses.

Although each county has developed standards for preparing traffic impact analyses, traffic impact analysis requirements do vary in detail from one county to another, but not in overall intent or concept. The general approach selected by each county for conducting traffic impact analyses has common elements.

The general approach for conducting a traffic impact analysis is that existing weekday peak hour traffic is counted and the percent of roadway capacity currently used is determined. Then growth in traffic is accounted for and added to existing traffic and the percent of roadway capacity used is again determined. Then the project traffic is added and the percent of roadway capacity used is again determined. If the new project adds traffic to an overcrowded facility, then the new project has to mitigate the traffic impact so that the facility operates at a level that is no worse than before the project traffic was added.

If the project size is below a certain minimum threshold level, then a project does not have to have a traffic impact analysis prepared, once it is shown or agreed that the project is below the minimum threshold. If a project is bigger than the minimum threshold size, then a traffic impact analysis is required.

B. Prescribed Methodology for Freeway Traffic Impact Analysis

The following Congestion Management Program freeway monitoring location in the project vicinity has been identified:

Congestion Management Program Station and Segment:

No. 1068: I-405 Freeway north of Inglewood Avenue at Compton Boulevard

The Congestion Management Program Traffic Impact Assessment guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the morning or evening weekday peak periods. The proposed project will not add 150 or more trips (in either direction) during either the morning or evening weekday peak hours to the Congestion Management Program freeway monitoring location, which is the threshold for preparing a traffic impact assessment, as stated in the Congestion Management Program manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the Congestion Management Program highway system is required.

C. Prescribed Methodology for a Traffic Impact Analysis

The traffic impact analysis must include all monitored intersections to which the project adds traffic above a certain minimum amount. In Los Angeles County, the monitored intersections are contained in Appendix A of the Congestion Management Program for the County of Los Angeles.

In Los Angeles County, the minimum project added traffic that is needed before an intersection has to be studied is if the project adds 50 two way trips in either the morning or evening weekday peak hour.

The following Congestion Management Program arterial monitoring locations in the project vicinity have been identified:

I-405 Freeway SB Ramps (NS) at:
Redondo Beach Boulevard (EW) - #2

I-405 Freeway NB Ramps (NS) at:
Redondo Beach Boulevard (EW) - #3

Crenshaw Boulevard (NS) at:
Artesia Boulevard (EW) - #13
I-405 Freeway SB Ramps (EW) - #15

I-405 Freeway SB Ramps (NS) at:
182nd Street (EW) - #16

If a project adds more traffic than the minimum threshold amount to an intersection, then that intersection has to be analyzed for deficiencies.

If the intersection has to be analyzed for deficiencies, then mitigation is required if the existing traffic plus anticipated traffic growth plus project traffic does cause the Intersection Capacity Utilization to go above a certain point.

In Los Angeles County, the impact is considered significant if the project related increase in the volume to capacity ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91 - more	0.01 or more

An intersection mitigation measure shall either fix the deficiency, or reduce the Intersection Capacity Utilization so that it is below the level that occurs without the project.

In Los Angeles County, the technique used to calculate Intersection Capacity Utilization is as follows. Lane capacity is 1,600 vehicles per lane per hour of green time for through and turn lanes, except that a capacity of 2,880 vehicles per lane per hour of green time is used for dual turn lanes. A total yellow clearance time of 10 percent is added.

Project traffic is generated using rates and procedures contained in the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012. The project trip distribution is provided by the reviewing agency or is agreed to in advance of the traffic impact analysis being prepared. The traffic impact analysis has to be prepared by a licensed Traffic Engineer.

This traffic impact analysis has been prepared in accordance with the requirements except as noted. The traffic impact analysis not only examined the Congestion Management Program system of roads and intersections, but also other roads and intersections.

The project generated traffic was added to intersections, and a full intersection analysis was conducted, even when the project added traffic failed to meet the minimum thresholds that require an intersection analysis.

D. Transit Impact Review

A review has been made of the Congestion Management Program transit service. Transit service is provided in the vicinity of the proposed project.

The project transit calculations are based upon values stated in the Congestion Management Program to estimate the transit trip generation. The person trips are equal to 1.4 times vehicle trips and the transit trips are equal to 3.5 percent of the total person trips.

Pursuant to the Congestion Management Program guidelines, over a 24-hour period, the proposed project is forecast to generate demand for 218 daily transit trips, 21 of which will occur during the morning peak hour and 21 of which will occur during the evening peak hour. The calculations for the morning, evening, and daily traffic conditions are as follows:

Morning Peak Hour = 436 x 1.4 x 0.035 = 21 Transit Trips

Evening Peak Hour = 435 x 1.4 x 0.035 = 21 Transit Trips

Daily = 4,459 x 1.4 x 0.035 = 218 Transit Trips

Transit service is provided adjacent to El Camino College by the Los Angeles County Metropolitan Transportation Authority (MTA) Transit Routes 126, 210, and 710, Torrance Transit Routes 2 and 5, the Municipal Area Express (MAX) Transit Route 3, and the Gardena Municipal Bus Line Transit Routes 3 and 4.

E. Mitigation Measures

If a project is large enough to require that a traffic impact analysis be prepared, and if the project adds traffic to an intersection above a minimum threshold, and if the intersection is operating at above an acceptable level of operation, then the project must mitigate its traffic impact.

Traffic mitigation can be in many forms including adding lanes. Lanes can sometimes be obtained through restriping or elimination of parking, and sometimes require spot roadway widening.

In the County of Los Angeles, Transportation Demand Management mitigation measures are required as a function of size of non-residential development. For non-residential projects with 25,000 square feet of floor space, an employee Transportation Information Area is required. For projects with 50,000 square feet or more, Preferential Carpool/Vanpool Parking, Parking Designed to Admit Vanpools, and Bicycle Parking are also required. For projects with 100,000 or more square feet of floor space, Carpool/Vanpool Loading Zones, Efficient Pedestrian Access, Bus Stop Improvements, and Safe Bike Access from Street to Bike Parking are also required.

The Los Angeles County Congestion Management Program Transportation Demand Management components are described below.

Projects with more than 25,000 square feet of non-residential floor space must provide:

Transportation Information Area. The information area may consist of a bulletin board, display case or kiosk featuring transportation information. The types of information that must be included are transit route maps, bicycle route maps, information numbers for local transit operators and the regional ridesharing agency, as well as a list of alternative transportation amenities at the site.

Projects with more than 50,000 square feet of non-residential floor space must also provide:

Preferential Carpool/Vanpool Parking. No less than 10 percent of all employee parking shall be set aside for carpools and vanpools. The preferential parking spaces must be provided upon request.

Parking Designed to Admit Vanpools. Vanpool parking areas must be designed to admit vanpool vehicles. A minimum interior clearance for parking structures of 7 foot 2 inches is required.

Bicycle Parking. Bicycle parking facilities may include bicycle racks, bicycle lockers or locked storage rooms.

Projects with more than 100,000 square feet of non-residential floor space must also provide:

Carpool/Vanpool Loading Zones. A safe and convenient area for carpool and vanpool passengers to wait for, board, and disembark from their ridesharing arrangement.

Direct Access for Pedestrians. A pedestrian system that allows direct and convenient access to the development.

Bus Stop Improvements. If appropriate, improvements must be made to bus stop areas of bus routes impacted by the proposed development. Consultation with local bus service providers shall be required.

Direct Access to Bicycle Parking from Street. Safe and convenient access to development bicycle parking from the external street system for bicycle riders.

III. Project Description

This section discusses the project's location and proposed development. Figure 1 shows the project location map and Figure 2 illustrates the site plan.

A. <u>Location</u>

The project site is bounded by Manhattan Beach Boulevard to the north, Crenshaw Boulevard to the east, and Redondo Beach Boulevard to the south.

B. <u>Proposed Development</u>

El Camino College is proposed to increase its enrollment from 16,400 FTEs in Year 2012 to 20,025 FTEs in Year 2020 (increase of 3,625 FTEs). As part of the school expansion, a new signalized intersection will be created on Manhattan Beach Boulevard to serve the campus.

Figure 1
Project Location Map

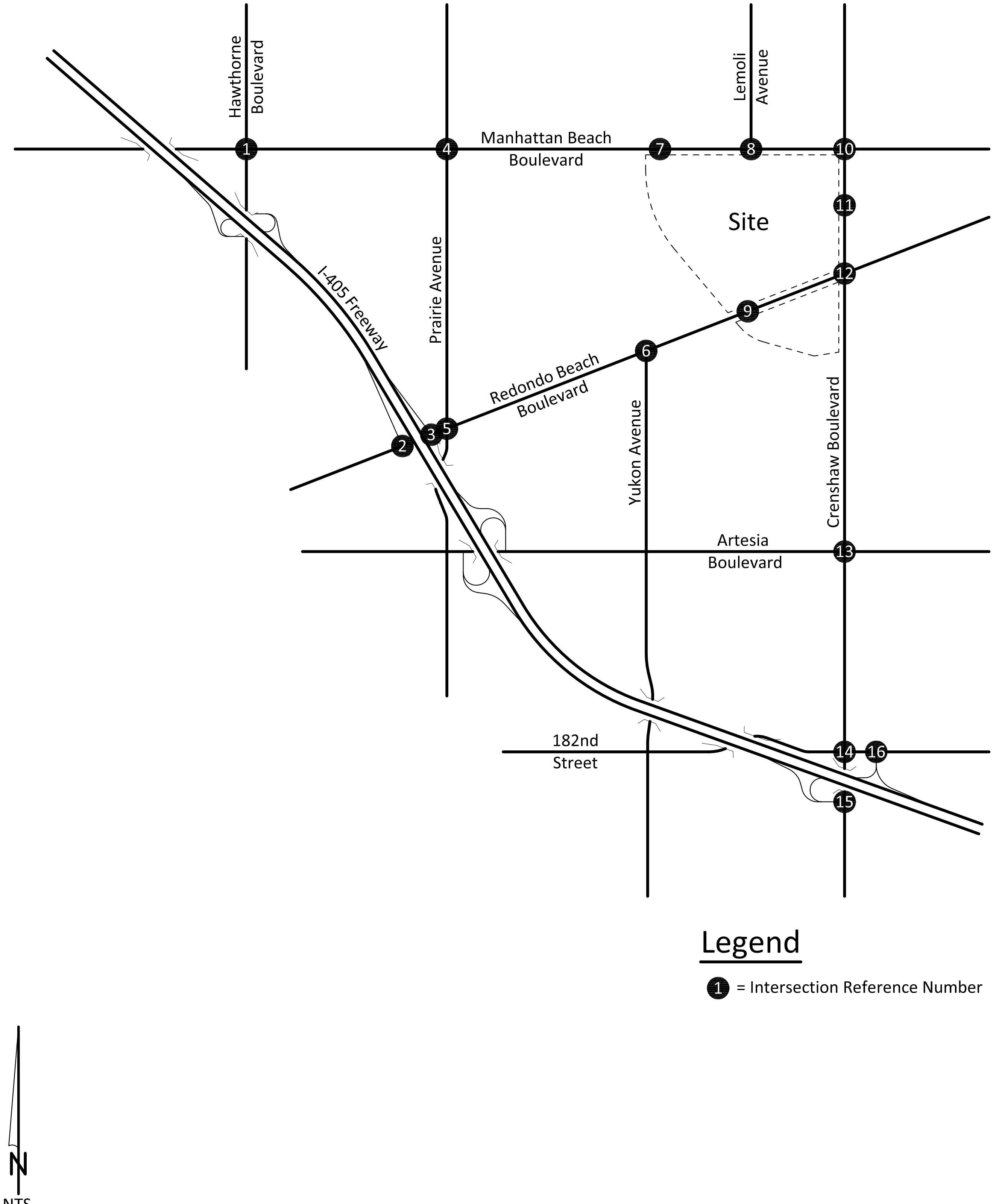

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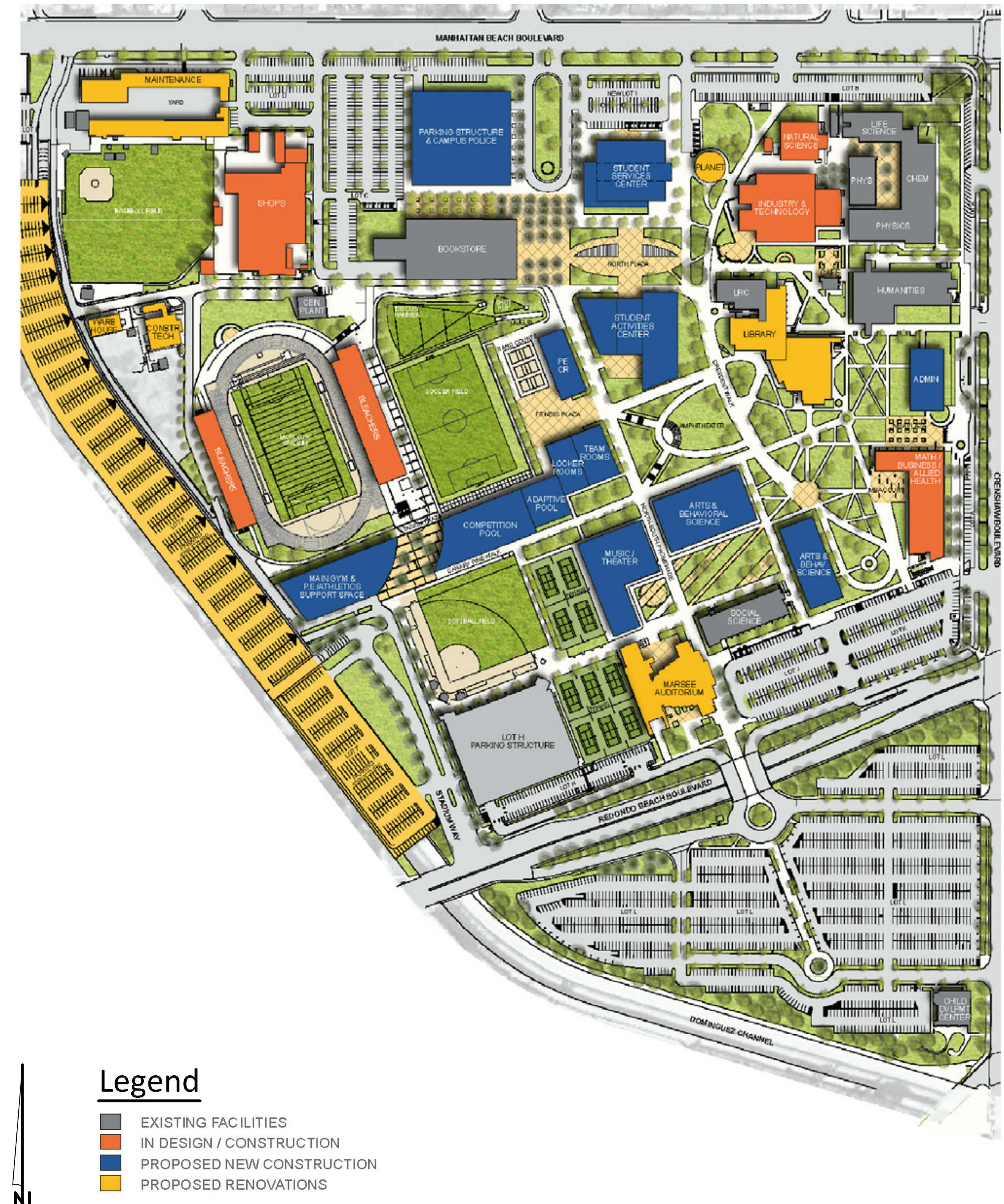
Figure 2
Site Plan



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IV. Existing Traffic Conditions

The traffic conditions as they exist today are discussed below and illustrated on Figures 3 to 11.

A. Surrounding Street System

Roadways that will be utilized by the development include Hawthorne Boulevard, Prairie Avenue, Yukon Avenue, Crenshaw Boulevard, Western Avenue, Marine Avenue, Manhattan Beach Boulevard, Redondo Beach Boulevard, Artesia Boulevard, and 182nd Street.

Hawthorne Boulevard: This north-south roadway currently is six lanes divided in the study area. It currently carries approximately 33,400 to 35,000 vehicles per day in the study area.

Prairie Avenue: This north-south roadway currently is four lanes divided in the study area. It currently carries approximately 20,900 to 26,200 vehicles per day in the study area.

Yukon Avenue: This north-south roadway currently is two lanes undivided in the study area. It currently carries approximately 4,000 vehicles per day in the study area.

Crenshaw Boulevard: This north-south roadway currently is four lanes divided to six lanes divided in the study area. It currently carries approximately 23,100 to 41,200 vehicles per day in the study area.

Manhattan Beach Boulevard: This east-west roadway currently is four lanes divided in the study area. It currently carries approximately 11,600 to 20,700 vehicles per day in the study area.

Redondo Beach Boulevard: This east-west roadway currently is four lanes divided to five lanes divided in the study area. It currently carries approximately 18,900 to 27,400 vehicles per day in the study area.

Artesia Boulevard: This east-west roadway currently is four lanes divided in the study area. It currently carries approximately 23,200 to 27,700 vehicles per day in the study area.

182nd Street: This east-west roadway currently is four lanes undivided to four lanes divided in the study area. It currently carries approximately 14,400 to 27,300 vehicles per day in the study area.

B. Existing Travel Lanes and Intersection Controls

Figure 3 identifies the existing roadway conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

C. Existing Average Daily Traffic Volumes

Figure 4 depicts the Existing average daily traffic volumes. The Existing average daily traffic volumes have been obtained from the 2011 Traffic Volumes on California State Highways by the California Department of Transportation and factored from peak hour counts made for Kunzman Associates, Inc. using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 10 = Leg Volume.

D. Existing Levels of Service

The technique used to assess the operation of an intersection is known as Intersection Capacity Utilization, as described in Appendix C. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The Levels of Service for the existing traffic conditions have been calculated and are shown in Table 1. Existing Levels of Service are based upon manual morning and evening peak hour intersection turning movement counts made for Kunzman Associates, Inc. in October 2012 (see Figures 5 and 6). Traffic count worksheets are provided in Appendix B.

There are two peak hours in a weekday. The morning peak hour is between 7:00 AM and 9:00 AM, and the evening peak hour is between 4:00 PM and 6:00 PM. The actual peak hour within the two hour interval is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the evening peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume.

The study area intersections currently operate at Level of Service E or better during the peak hours for Existing traffic conditions (see Table 1), except for the following study area intersections that operate at Level of Service F during the peak hours:

Crenshaw Boulevard (NS) at:
- 182nd Avenue (EW) - #14
- I-405 Freeway SB Ramps (EW) - #15

Existing Level of Service worksheets are provided in Appendix C.

E. Existing General Plan Circulation Elements

Figure 7 shows the current County of Los Angeles Highway Plan. Both existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 7. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the land use element of the General Plan.

Figures 8 to 11 illustrate the following adjacent City's General Plan Circulation Elements:

- City of Gardena
- City of Hawthorne
- City of Lawndale
- City of Torrance

F. Transit Service

Transit service is provided adjacent to El Camino College by the Los Angeles County Metropolitan Transportation Authority (MTA) Transit Routes 126, 210, and 710, Torrance Transit Routes 2 and 5, the Municipal Area Express (MAX) Transit Route 3, and the Gardena Municipal Bus Line Transit Routes 3 and 4.

Table 1

Existing Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour ICU-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Hawthorne Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #1	TS	2	3	d	2	3	1	1	2	1	1	2	1	0.816-D	0.797-C
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2	TS	0	0	1	1	0	1	0	2	d	0	2	0	0.726-C	0.793-C
I-405 Freeway NB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #3	CSS	0	0	0	0	0	0	1	2	0	0	2	d	0.613-B	0.543-A
Prairie Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #4	TS	1	2	d	1	2	d	1	2	d	1	2	d	0.753-C	0.783-C
Redondo Beach Boulevard (EW) - #5	TS	1	2	1	1	2	d	1	2	1	1	2	1	0.919-E	0.942-E
Yukon Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #6	TS	0	1	0	0.5	0.5	d	1	2	d	1	2	d	0.720-C	0.670-B
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW) - #7	CSS	0	0	2	0	0	0	0	1.5	0.5	1	2	0	0.468-A	0.523-A
Lemoli Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #8	TS	0	1	0	0	1	0	1	2	d	1	2	d	0.537-A	0.539-A
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9	TS	0	0	0	2	0	2	1	3	0	0	2	1	0.675-B	0.607-B
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10	TS	1	2.5	0.5	1	2.5	0.5	1	2	d	1	2	d	0.761-C	0.700-C
El Camino College East Entrance (EW) - #11	TS	1	2.5	0.5	1	2.5	0.5	0	1	0	0	1	0	0.589-A	0.516-A
Redondo Beach Boulevard (EW) - #12	TS	1	2	1	1	2	1	1	2	1	1	2.5	0.5	0.877-D	0.855-D
Artesia Boulevard (EW) - #13	TS	1	2	1	1	2.5	0.5	1	2	1	2	2	d	0.891-D	0.957-E
182nd Street (EW) - #14	TS	1	2	1>	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.872-D	1.086-F
I-405 Freeway SB Ramps (EW) - #15	TS	1	3	0	0	3	0	0.5	0	1.5	0	0	0	1.005-F	0.848-D
I-405 Freeway NB Ramps (NS) at:															
182nd Street (EW) - #16	TS	1.5	0	0.5	0	0	0	0	1.5	0.5	1	2	0	0.675-B	0.858-D

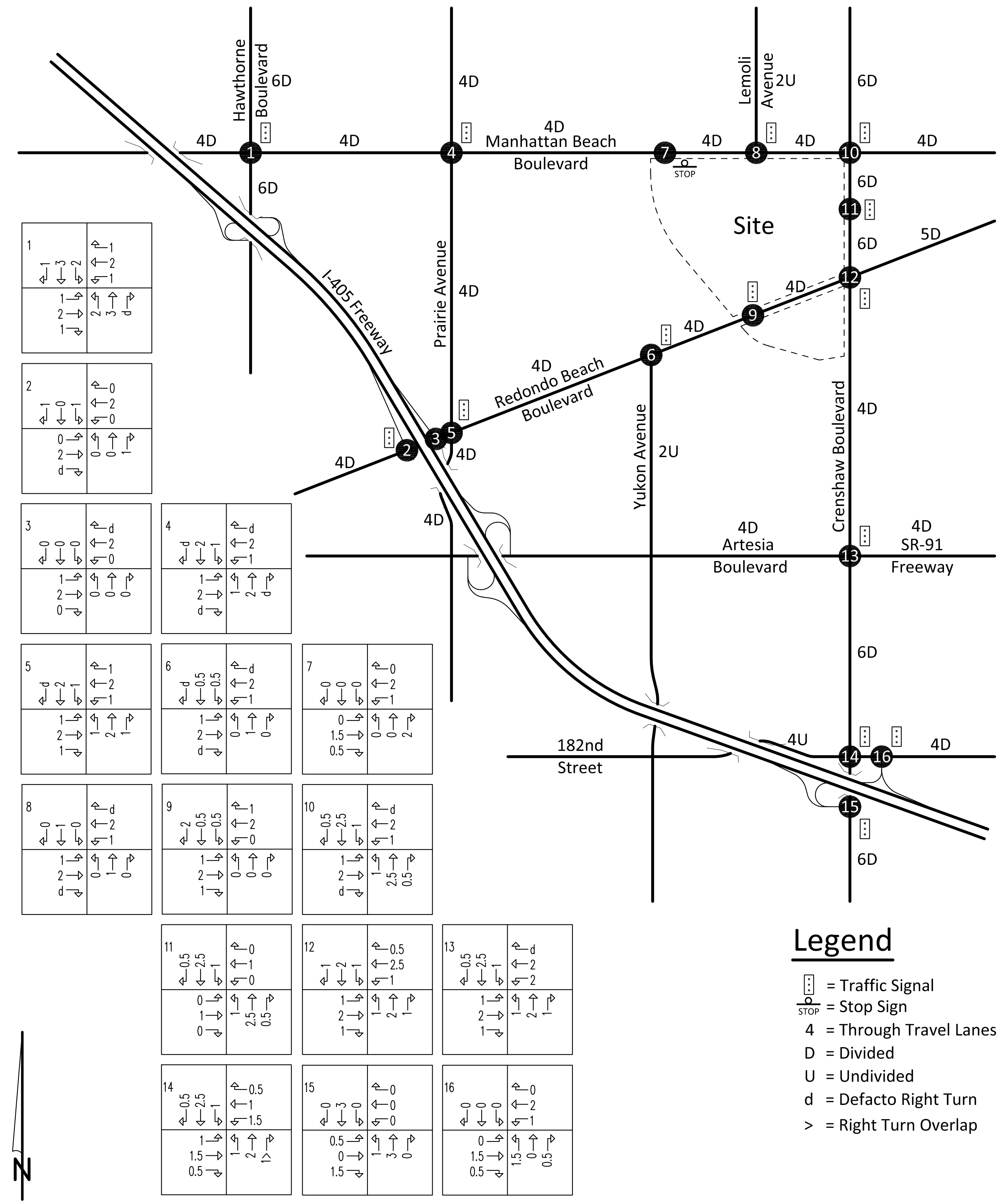
[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn; > = Right Turn Overlap

[2] ICU-LOS = Intersection Capacity Utilization - Level of Service

[3] TS = Traffic Signal; CSS = Cross Street Stop

Figure 3
Existing Through Travel Lanes and Intersection Controls



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Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

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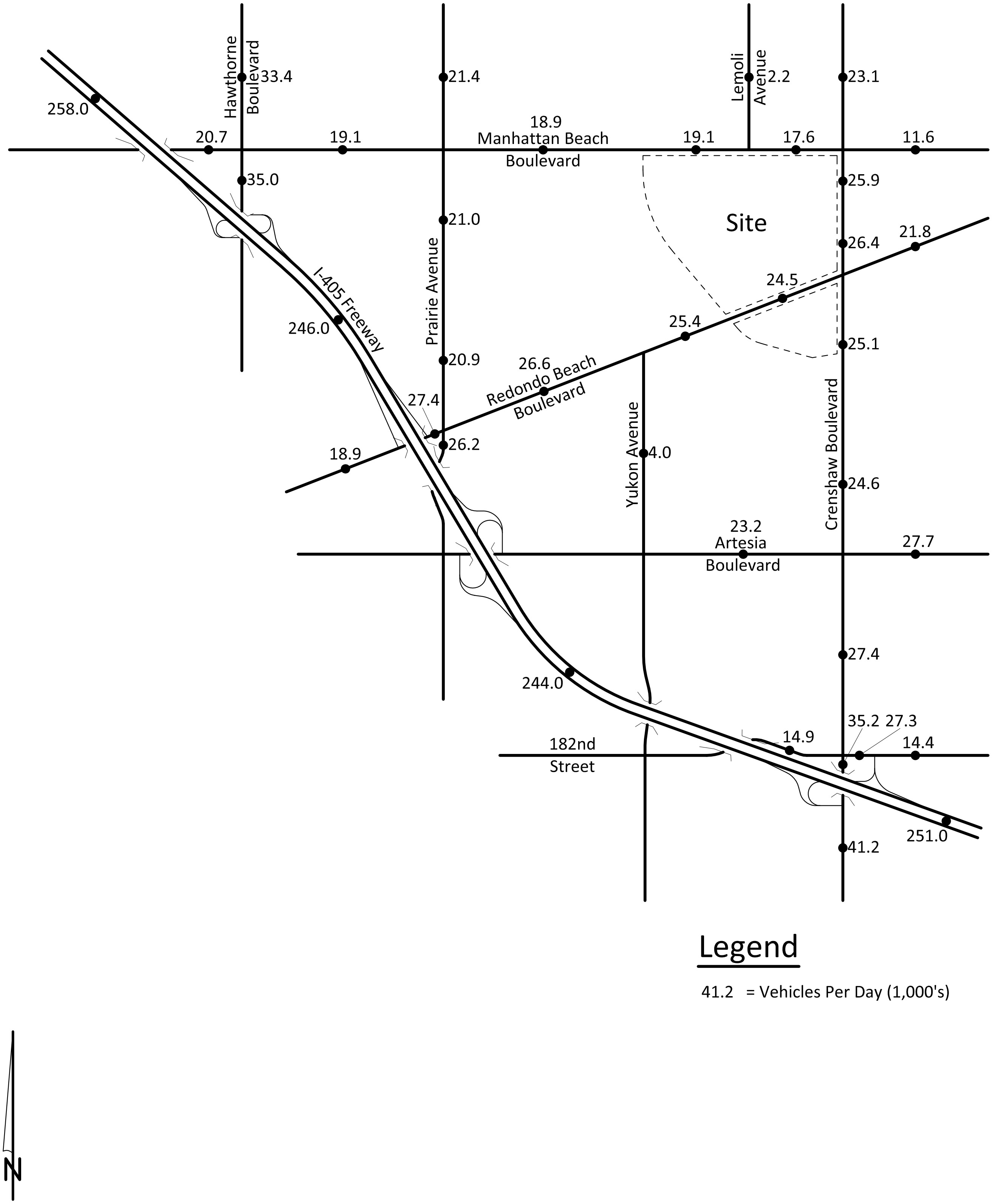
Figure 4
Existing Average Daily Traffic Volumes



4897/4

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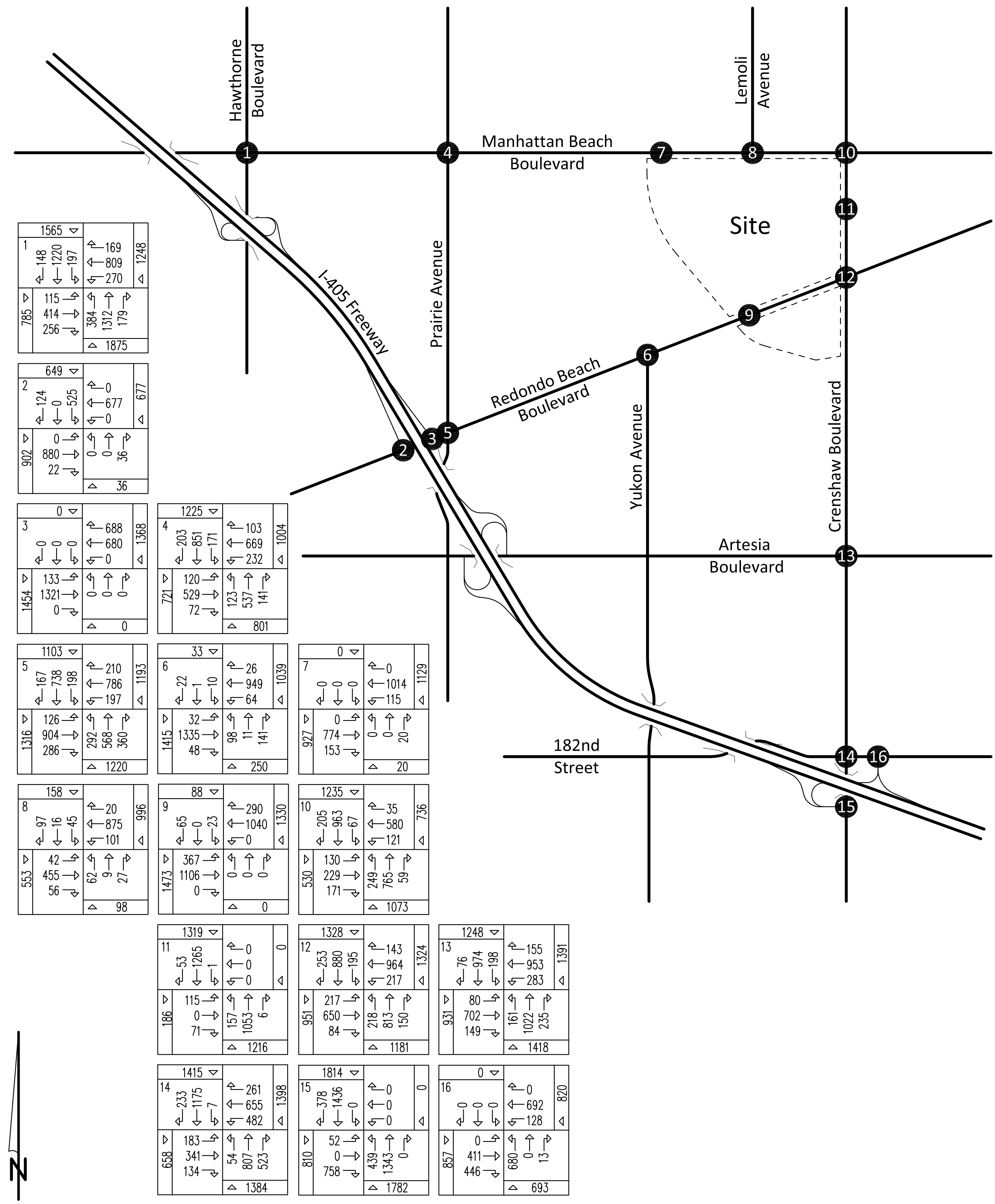
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 5
Existing Morning Peak Hour Intersection Turning Movement Volumes

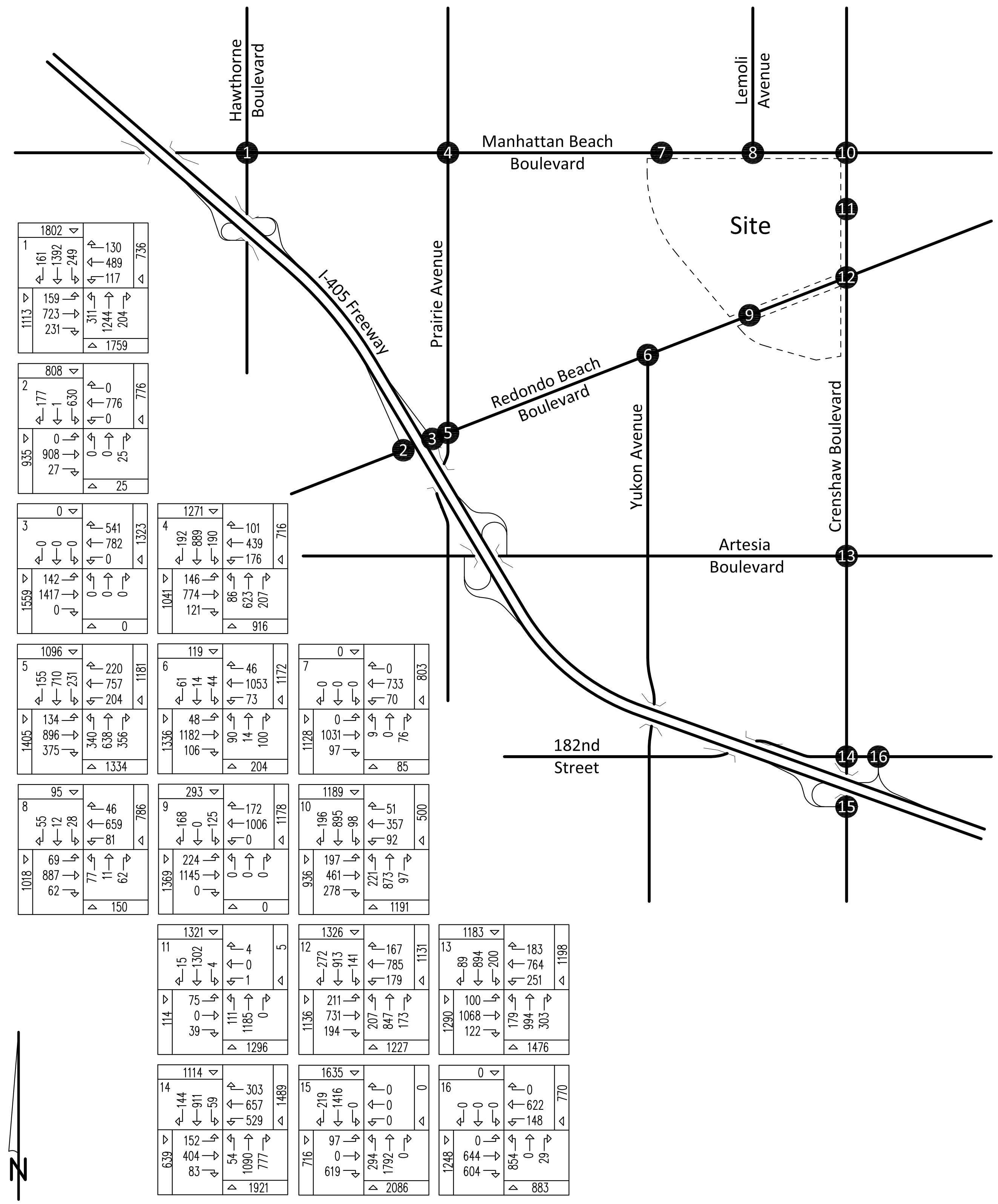


4897/5

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 6
Existing Evening Peak Hour Intersection Turning Movement Volumes



4897/6

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 7
County of Los Angeles Highway Plan

Legend

- Freeway - Existing
- Freeway - Proposed
- Major Highway - Existing
- Major Highway - Proposed
- Secondary Highway - Existing
- Secondary Highway - Proposed
- Limited Secondary Highway - Existing
- Limited Secondary Highway - Proposed
- Parkway - Existing
- Parkway - Proposed
- Expressway - Existing
- Expressway - Proposed
- National Forest
- Unincorporated Area

N

NTS

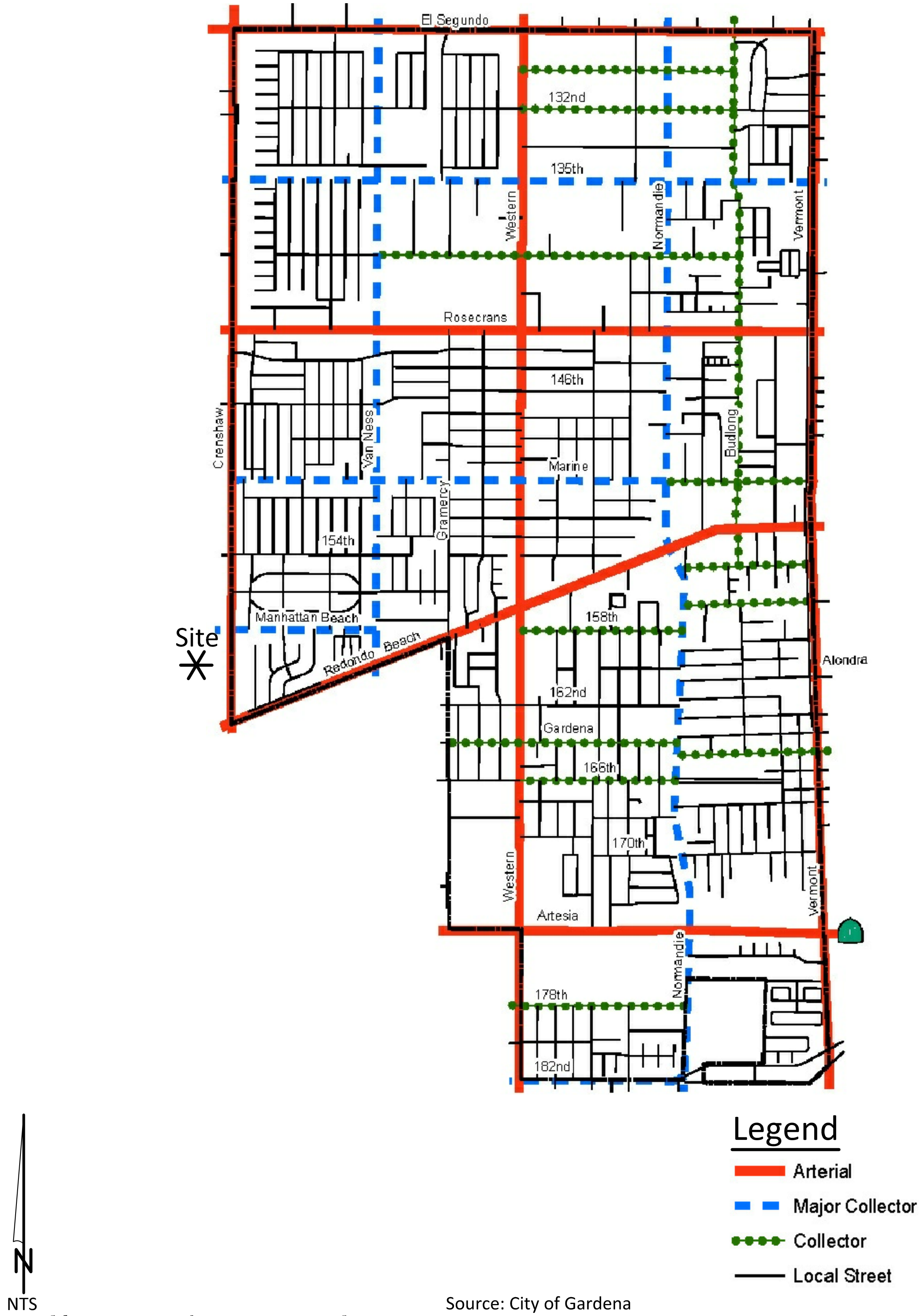
Source: County of Los Angeles

4897/7

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 8
City of Gardena General Plan Circulation Element



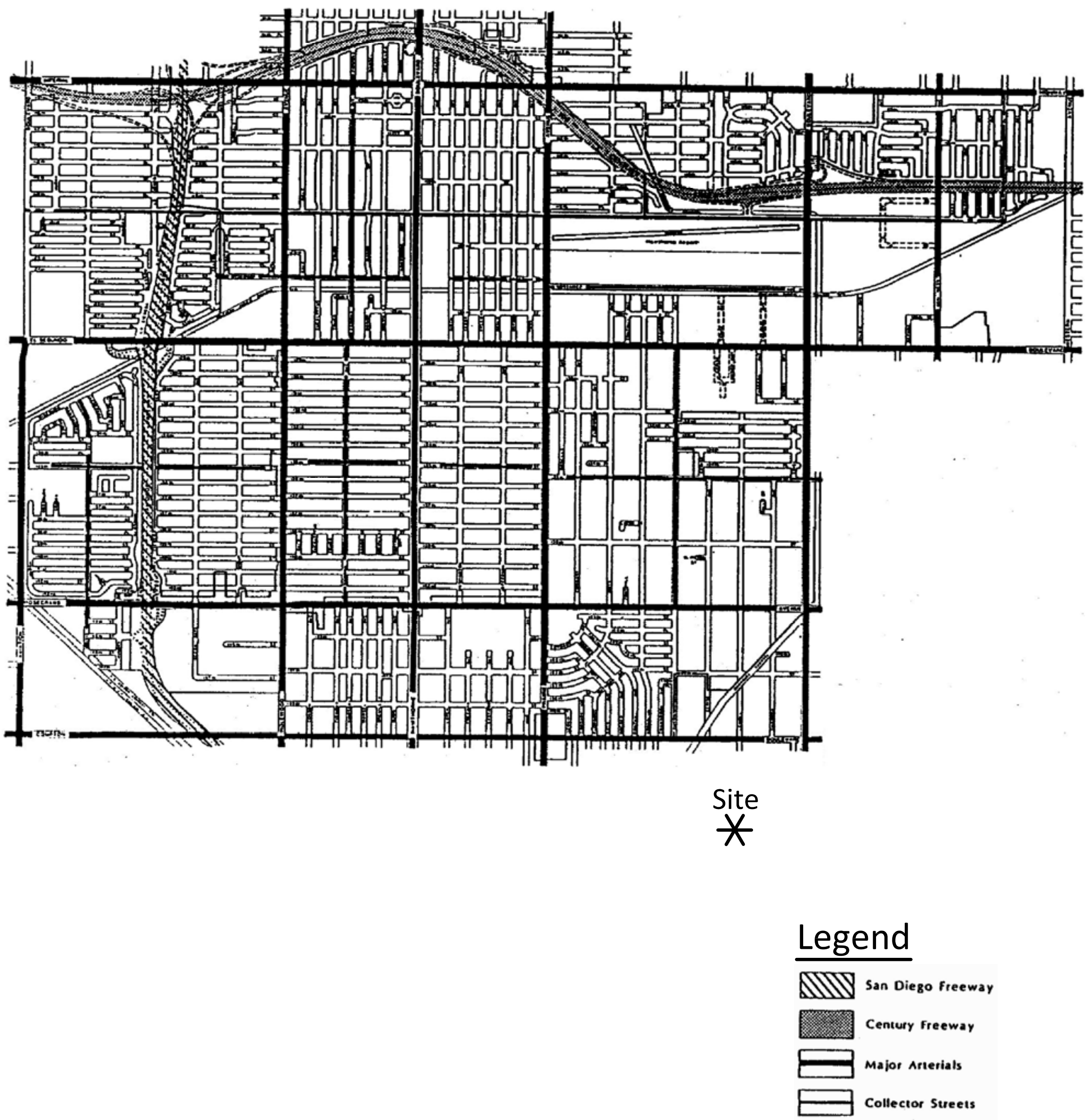
Source: City of Gardena

4897/8

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 9
City of Hawthorne General Plan Circulation Element

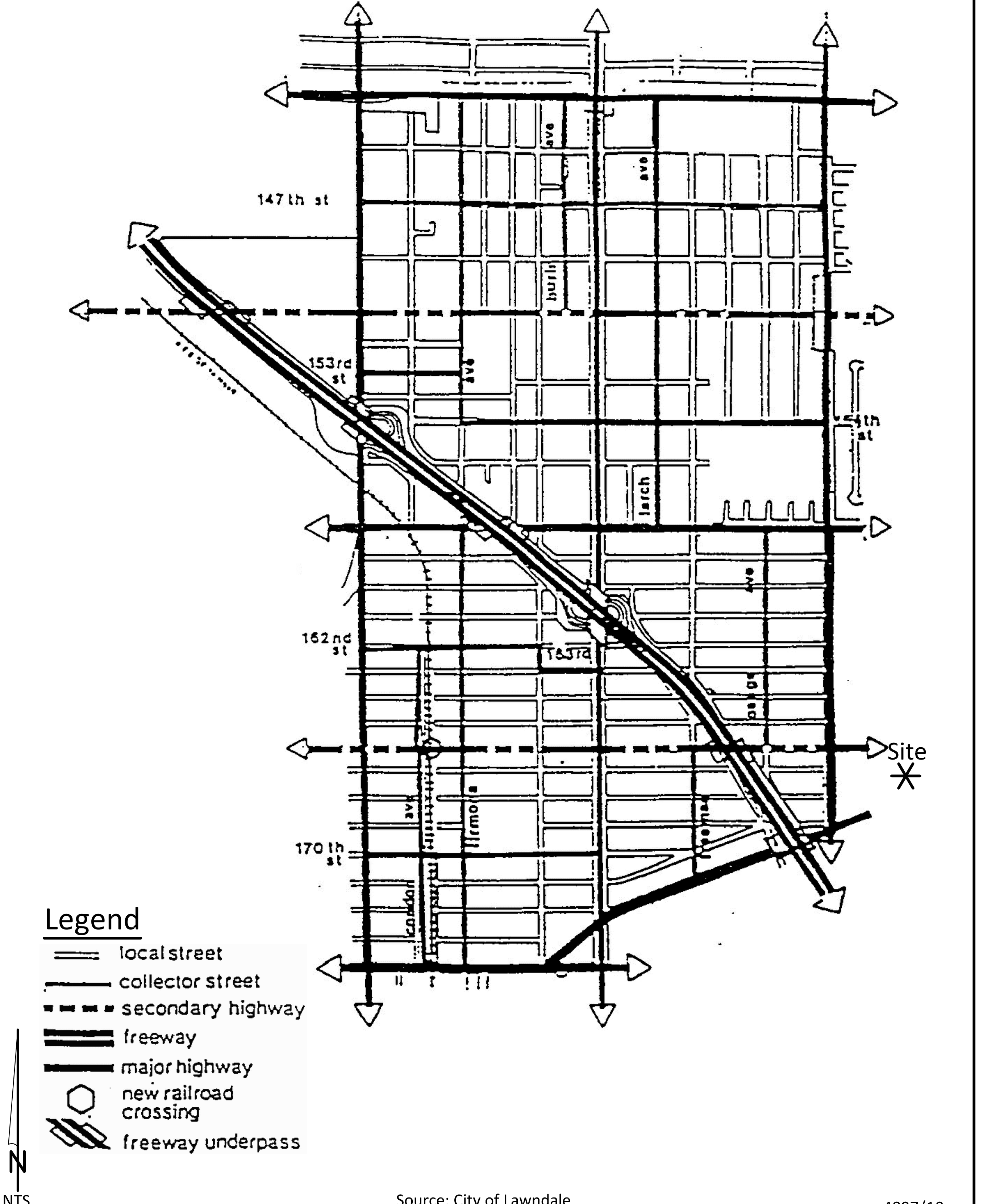


NTS

Source: City of Hawthorne

4897/9

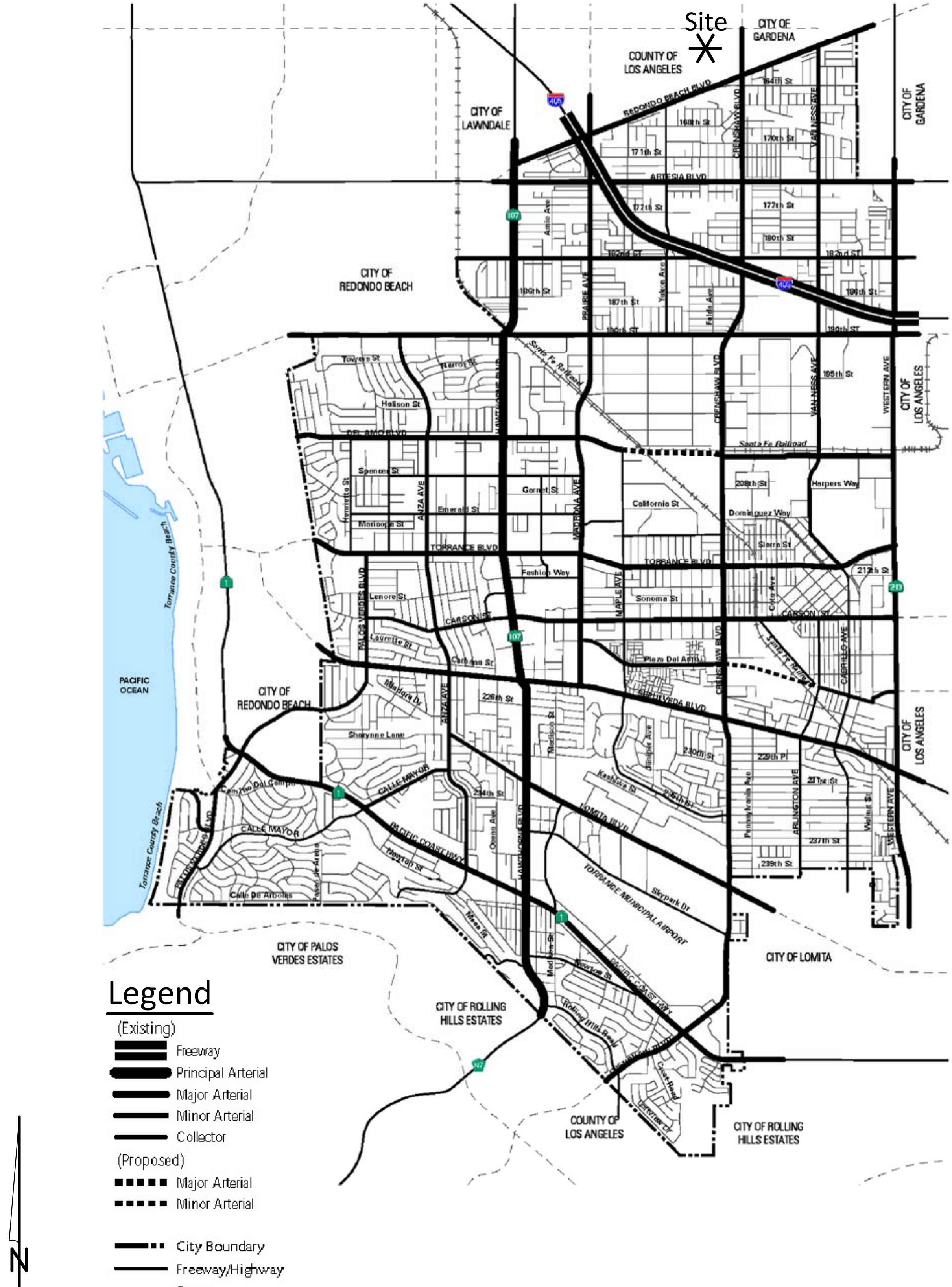
Figure 10
City of Lawndale General Plan Circulation Element



Source: City of Lawndale

4897/10

Figure 11
City of Torrance General Plan Circulation Element



NTS

Source: City of Torrance

4897/11

V. Project Traffic

El Camino College is proposed to increase from 16,400 FTEs in Year 2012 to 20,025 FTEs in Year 2020 (increase of 3,625 FTEs). The project site currently has access to Manhattan Beach Boulevard, Crenshaw Boulevard, and Redondo Beach Boulevard. As part of the school expansion, a new signalized intersection will be created on Manhattan Beach Boulevard to serve the campus.

A. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and our life styles remain similar to what we know today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 2 exhibits the trip generation rates, project peak hour volumes, and project daily traffic volumes. The trip generation rates are from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

The proposed development is projected to generate approximately 4,459 daily vehicle trips, 436 vehicles per hour will occur during the morning peak hour and 435 vehicles per hour will occur during the evening peak hour

B. Trip Distribution

Figure 12 contains the directional distribution of the project traffic for the proposed land use.

To determine the trip distribution for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed. In addition, the El Camino Community College District's boundary was obtained and utilized in the determination of a trip distribution for the proposed project.

C. Trip Assignment

Based on the identified trip generation and distribution, project average daily traffic volumes have been calculated and shown on Figure 13. Morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figures 14 and 15, respectively.

D. <u>Modal Split</u>

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.

Table 2

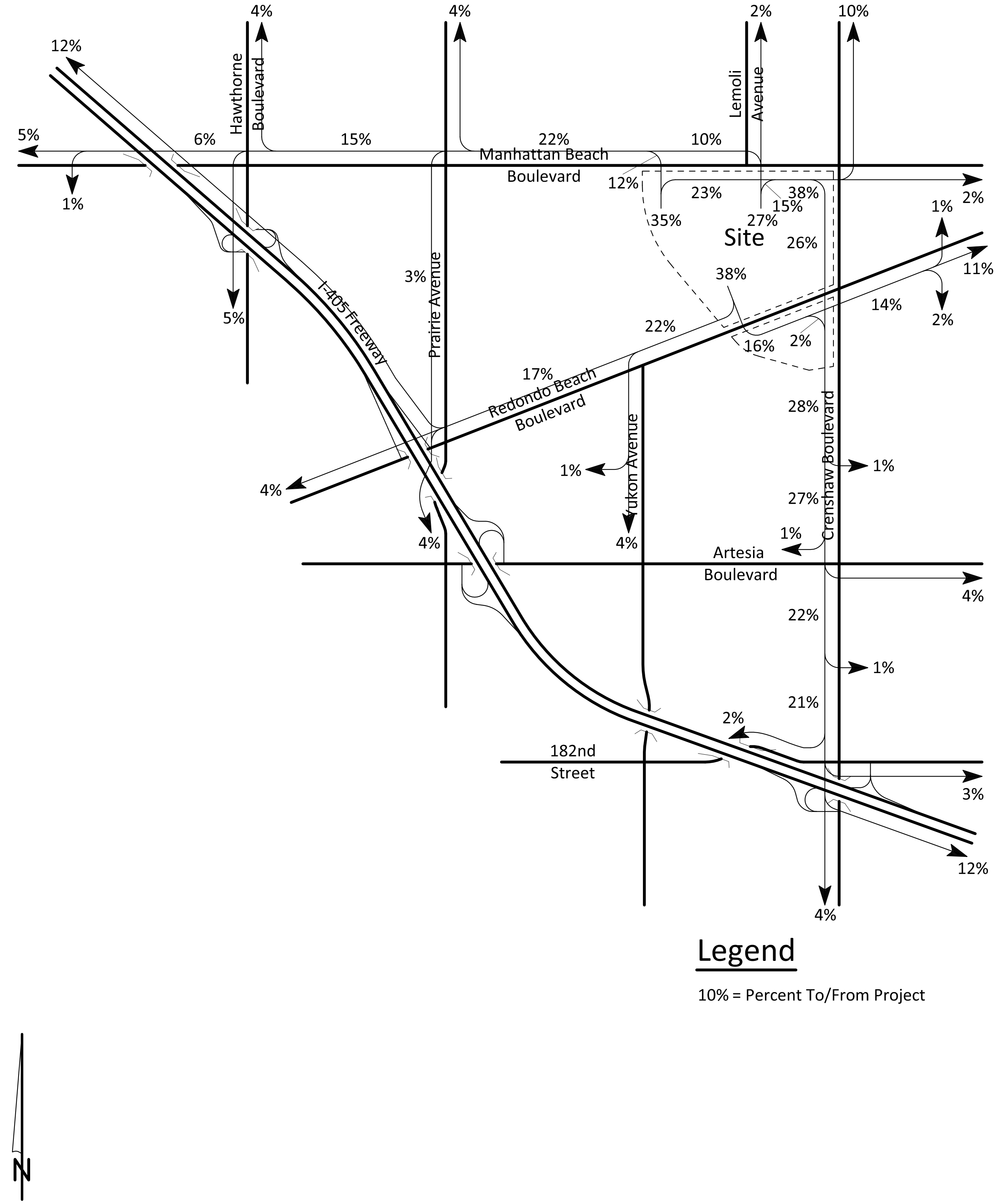
Project Trip Generation[1]

Land Use	Quantity	Units[2]	Morning Peak Hour			Evening Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Community College	3,625	FTES	0.10	0.02	0.12	0.08	0.04	0.12	1.23
Trips Generated									
Community College	3,625	FTES	363	73	436	290	145	435	4,459

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 540.

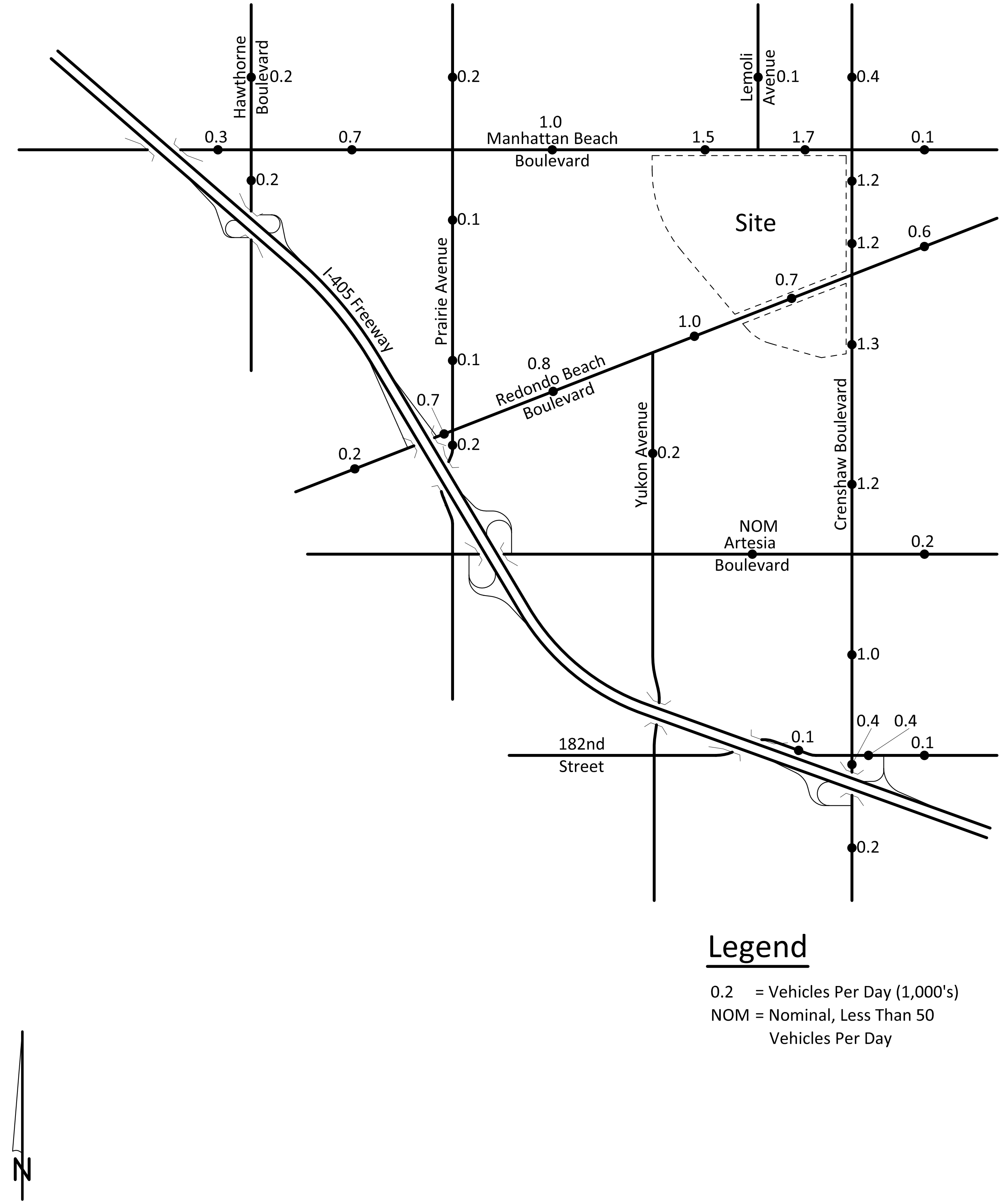
[2] FTES = Full Time Equivalent Student

Figure 12
Project Trip Distribution



4897/12

Figure 13
Project Average Daily Traffic Volumes



Legend

0.2 = Vehicles Per Day (1,000's)
NOM = Nominal, Less Than 50 Vehicles Per Day

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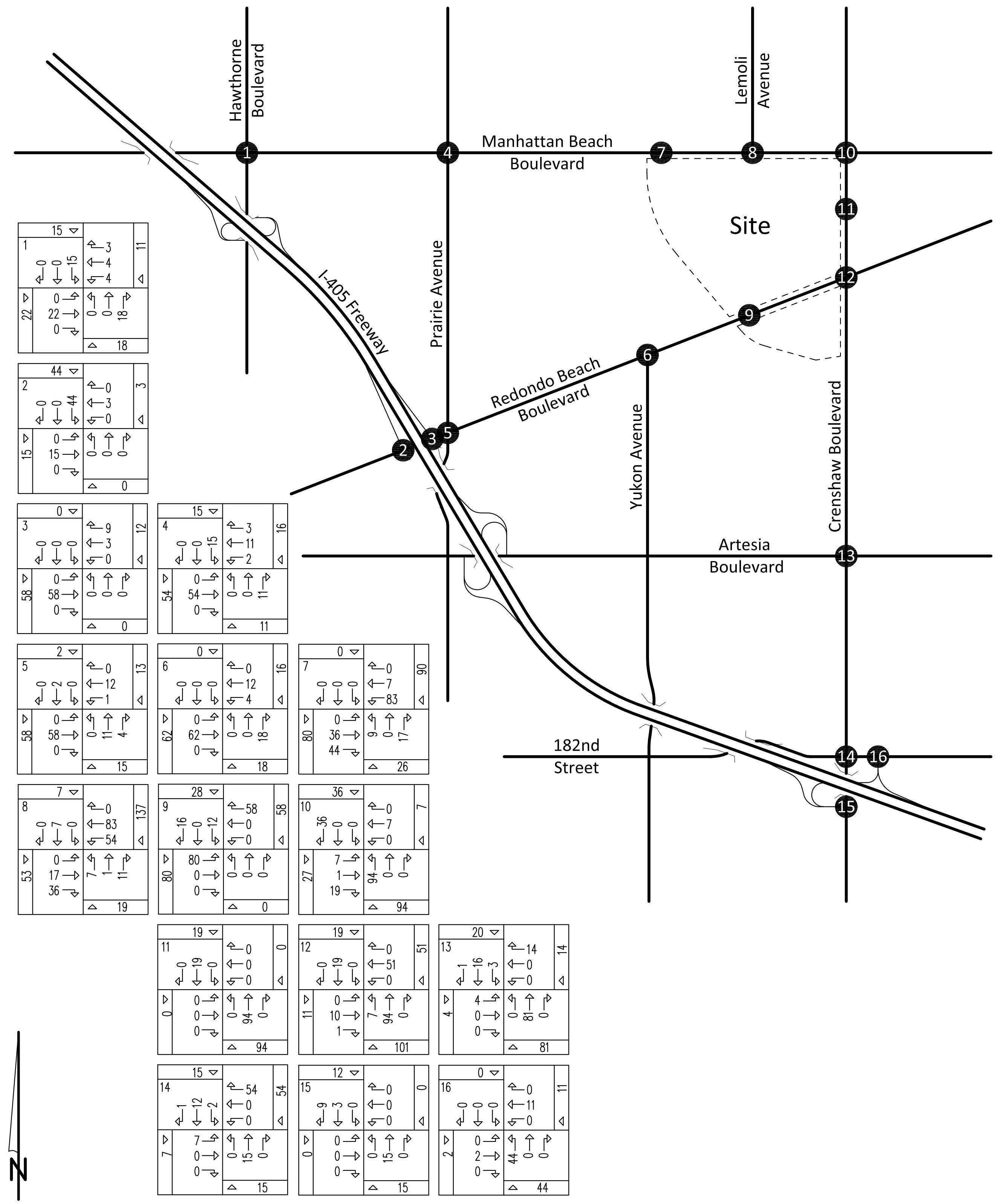
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 14
Project Morning Peak Hour Intersection Turning Movement Volumes

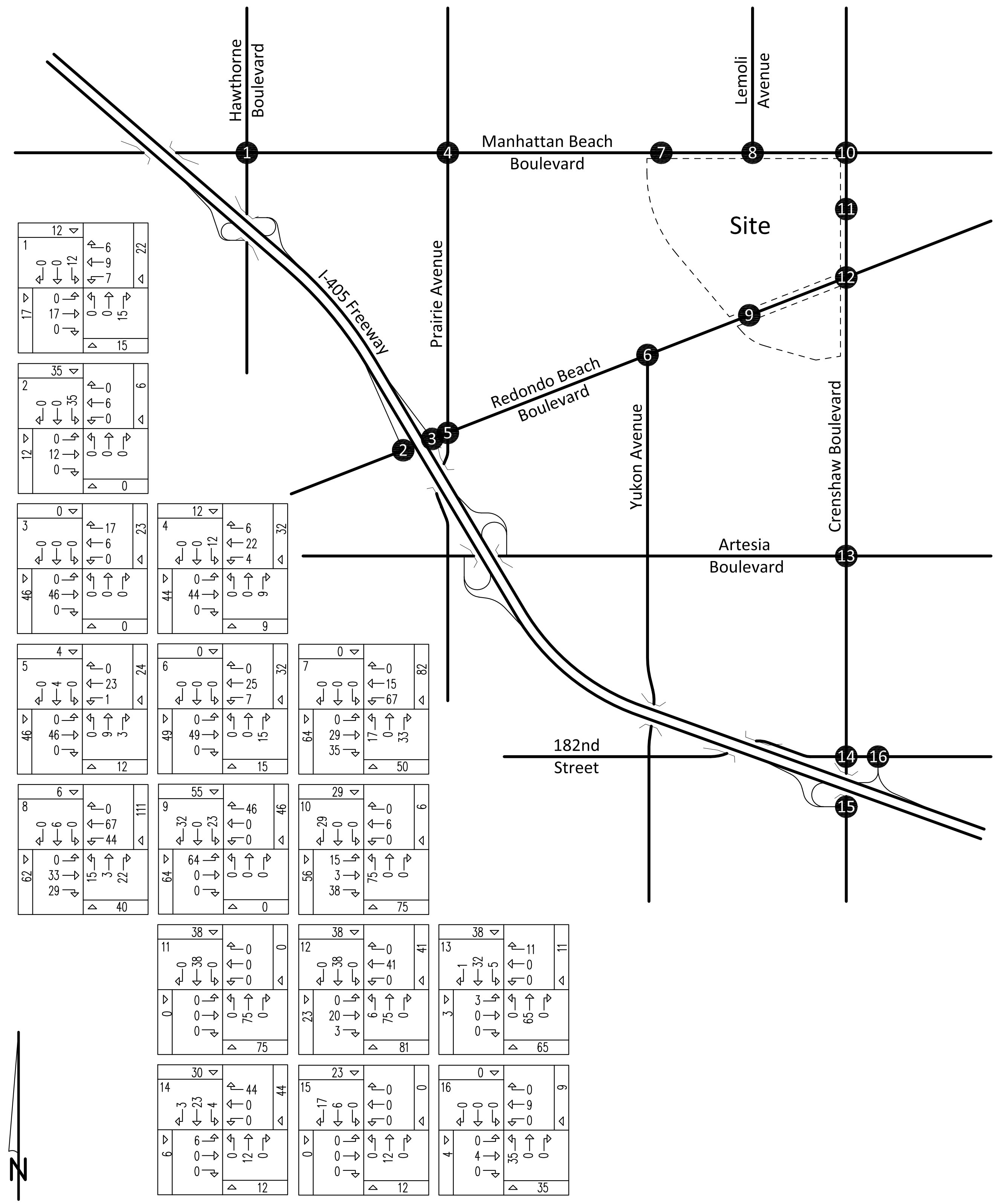


4897/14

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 15
Project Evening Peak Hour Intersection Turning Movement Volumes



4897/15

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

VI. Existing Plus Project Traffic Conditions

In this section, Existing Plus Project traffic conditions are discussed. Existing Plus Project traffic conditions are assumed for Year 2013. Figures 16 to 18 depict the Existing Plus Project traffic conditions.

A. Method of Projection

To assess Existing Plus Project traffic conditions, existing traffic is combined with the project.

B. Existing Plus Project Average Daily Traffic Volumes

Existing Plus Project average daily traffic volumes are as illustrated on Figure 16.

C. Existing Plus Project Traffic Signal Warrant Analysis

A traffic signal is projected to be warranted at the following study area intersection for Existing Plus Project traffic conditions (see Appendix D):

El Camino College NW Entrance (NS) at:
Manhattan Beach Boulevard (EW) - #7

The unsignalized intersection has been evaluated for a traffic signal using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices, dated January 2012.

D. Existing Plus Project Levels of Service

The technique used to assess the operation of an intersection is known as Intersection Capacity Utilization, as described in Appendix C. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The Levels of Service for the Existing Plus Project traffic conditions have been calculated and are shown in Table 3. Existing Plus Project morning and evening peak hour intersection turning movement volumes are shown on Figures 17 and 18, respectively. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Existing Plus Project traffic conditions (see Table 3), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

Prairie Avenue (NS) at:
Redondo Beach Boulevard (EW)

Crenshaw Boulevard (NS) at:
182nd Avenue (EW) - #14
I-405 Freeway SB Ramps (EW) - #15

Existing Plus Project Level of Service worksheets are provided in Appendix C.

E. Significant Transportation Impact

In Los Angeles County, the impact is considered significant if the project related increase in the volume to capacity ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91 - more	0.01 or more

Table 4 depicts the Existing Plus Project traffic contribution at the study area intersections. The following additional measures are recommended for implementation at study area intersections significantly impacted by the project (see Table 4):

I-405 Freeway SB Ramps (NS) at:
Redondo Beach Boulevard (EW) - #2
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane

Prairie Avenue (NS) at:
Redondo Beach Boulevard (EW) - #5
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane

El Camino College SW Entrance (NS) at:
Redondo Beach Boulevard (EW) - #9
- Restripe EB Through Lane to additional EB Left Turn Lane

Crenshaw Boulevard (NS) at:
Manhattan Beach Boulevard (EW) - #10
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane
- Restripe WB Right Turn Lane to Shared WB Through/Right Turn Lane

Redondo Beach Boulevard (EW) - #12
- Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane
- Restripe SB Right Turn Lane to Shared SB Through/Right Turn Lane

Artesia Boulevard (EW) - #13
- Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane

182nd Street (EW) - #14
- Construct NB Shared Through/Right Turn Lane

Fairshare calculations are provided within Table 12. Based upon Table 12, the project fairshare of study area intersection improvements is $336,085, less an offset equaling gas tax funds intended for making roadway improvements. Such funds are available from State gas tax revenues and Federal gas tax matching programs.

Table 3

Existing Plus Project Intersection Capacity Utilization and Level of Service

		Intersection Approach Lanes[1]												Peak Hour	
	Traffic	Northbound			Southbound			Eastbound			Westbound			ICU-LOS[2]	
Intersection	Control[3]	L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Hawthorne Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #1	TS	2	3	d	2	3	1	1	2	1	1	2	1	0.819-D	0.807-D
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2															
- Without Improvements	TS	0	0	1	1	0	1	0	2	d	0	2	0	0.758-C	0.819-D
- With Improvements	TS	0	0	1	1	0	1	0	**2.5**	**0.5**	0	2	0	0.691-B	0.776-C
I-405 Freeway NB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #3	CSS	0	0	0	0	0	0	1	2	0	0	2	d	0.619-B	0.557-A
Prairie Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #4	TS	1	2	d	1	2	d	1	2	d	1	2	d	0.771-C	0.800-C
Redondo Beach Boulevard (EW) - #5															
- Without Improvements	TS	1	2	1	1	2	d	1	2	1	1	2	1	0.938-E	0.958-E
- With Improvements	TS	1	2	1	1	2	d	1	**2.5**	**0.5**	1	2	1	0.898-D	0.938-E
Yukon Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #6	TS	0	1	0	0.5	0.5	d	1	2	d	1	2	d	0.753-C	0.699-B
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW) - #7	**TS**	**1**	0	**1**	0	0	0	0	1.5	0.5	1	2	0	0.562-A	0.626-B
Lemoli Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #8	TS	0	1	0	0	1	0	1	2	d	1	2	d	0.572-A	0.602-B
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9															
- Without Improvements	TS	0	0	0	2	0	2	1	3	0	0	2	1	0.730-C	0.657-B
- With Improvements	TS	0	0	0	2	0	2	**2**	**2**	0	0	2	1	0.570-A	0.520-A
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10															
- Without Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	2	d	1	2	d	0.834-D	0.773-C
- With Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	**2.5**	**0.5**	1	**2.5**	**0.5**	0.780-C	0.737-C
El Camino College East Entrance (EW) - #11	TS	1	2.5	0.5	1	2.5	0.5	0	1	0	0	1	0	0.593-A	0.524-A
Redondo Beach Boulevard (EW) - #12															
- Without Improvements	TS	1	2	1	1	2	1	1	2	1	1	2.5	0.5	0.898-D	0.877-D
- With Improvements	TS	1	2	1	1	**2.5**	**0.5**	1	2	1	1	2.5	0.5	0.882-D	0.834-D
Artesia Boulevard (EW) - #13															
- Without Improvements	TS	1	2	1	1	2.5	0.5	1	2	1	2	2	d	0.921-E	0.980-E
- With Improvements	TS	1	**2.5**	**0.5**	1	2.5	0.5	1	2	1	2	2	d	0.855-D	0.933-E
182nd Street (EW) - #14															
- Without Improvements	TS	1	2	1>	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.882-D	1.096-F
- With Improvements	TS	1	**2.5**	**1.5>**	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.879-D	0.904-E
I-405 Freeway SB Ramps (EW) - #15	TS	1	3	0	0	3	0	0.5	0	1.5	0	0	0	1.008-F	0.853-D
I-405 Freeway NB Ramps (NS) at:															
182nd Street (EW) - #16	TS	1.5	0	0.5	0	0	0	0	1.5	0.5	1	2	0	0.689-B	0.871-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; d = Defacto Right Turn; **1** = Improvement

[2] ICU-LOS = Intersection Capacity Utilization - Level of Service

[3] TS = Traffic Signal; CSS = Cross Street Stop

Table 4

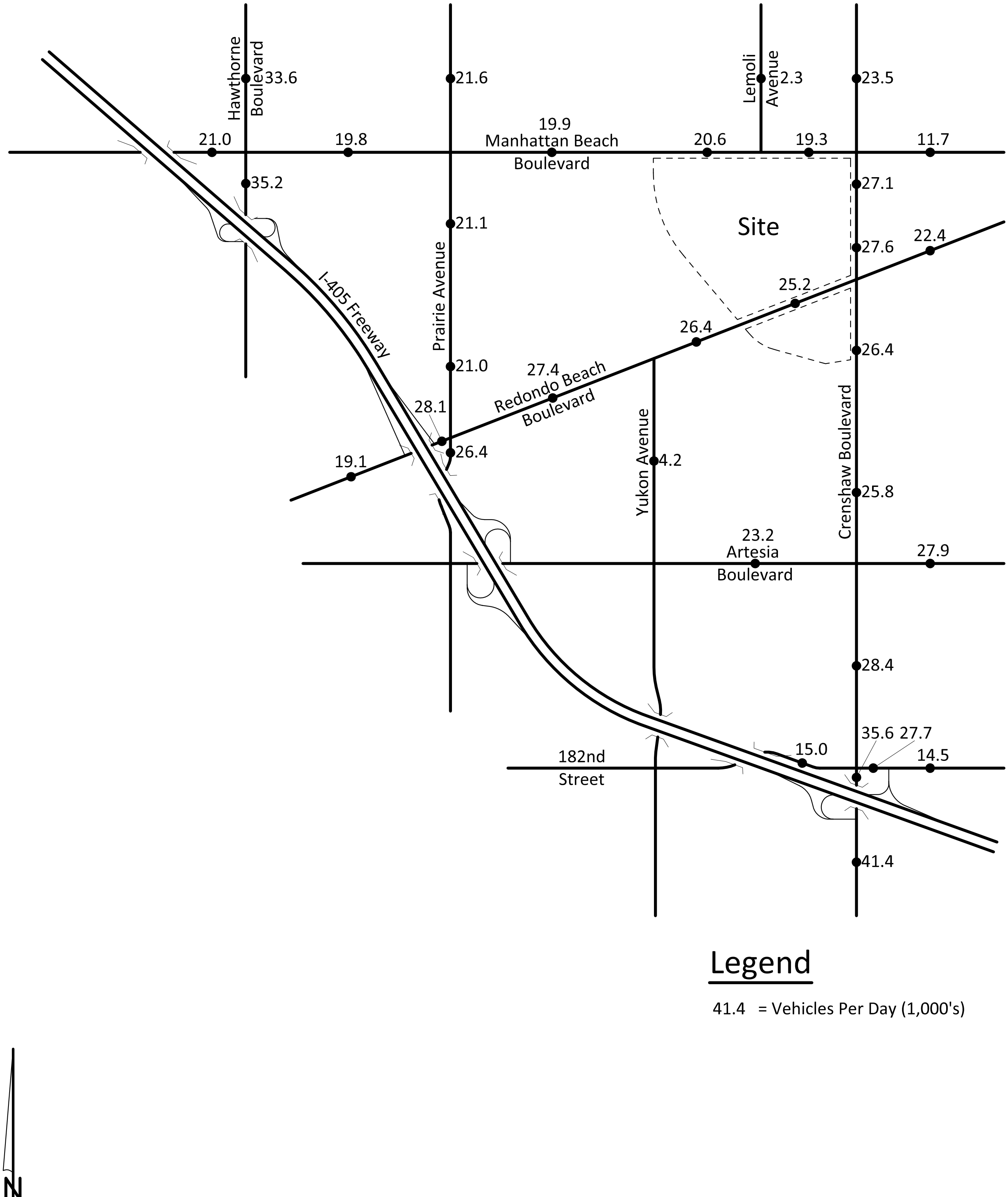
Existing Plus Project Traffic Contribution

Intersection	Peak Hour	Existing Intersection Capacity Utilization	Existing Level of Service	Existing Plus Project Without Mitigation Intersection Capacity Utilization	Without Mitigation Level of Service	Without Mitigation Project Impact	Without Mitigation Significant Impact[1]	With Mitigation Intersection Capacity Utilization	With Mitigation Level of Service	With Mitigation Project Impact	With Mitigation Significant Impact[1]
Hawthorne Boulevard (NS) at:											
Manhattan Beach Boulevard (EW) - #1	Morning	0.816	D	0.819	D	0.003	No				
	Evening	0.797	C	0.807	D	0.010	No				
I-405 Freeway SB Ramps (NS) at:											
Redondo Beach Boulevard (EW) - #2	Morning	0.726	C	0.758	C	0.032	No	0.691	B	-0.035	No
	Evening	0.793	C	0.819	D	0.026	Yes	0.776	C	-0.017	No
I-405 Freeway NB Ramps (NS) at:											
Redondo Beach Boulevard (EW) - #3	Morning	0.613	B	0.619	B	0.006	No				
	Evening	0.543	A	0.557	A	0.014	No				
Prairie Avenue (NS) at:											
Manhattan Beach Boulevard (EW) - #4	Morning	0.753	C	0.771	C	0.018	No				
	Evening	0.783	C	0.800	C	0.017	No				
Redondo Beach Boulevard (EW) - #5	Morning	0.919	E	0.938	E	0.019	Yes	0.898	D	-0.021	No
	Evening	0.942	E	0.958	E	0.016	Yes	0.938	E	-0.004	No
Yukon Avenue (NS) at:											
Redondo Beach Boulevard (EW) - #6	Morning	0.720	C	0.753	C	0.033	No				
	Evening	0.670	B	0.699	B	0.029	No				
El Camino College NW Entrance (NS) at:											
Manhattan Beach Boulevard (EW) - #7	Morning	0.468	A	0.562	A	0.094	No				
	Evening	0.523	A	0.626	B	0.103	No				
Lemoli Avenue (NS) at:											
Manhattan Beach Boulevard (EW) - #8	Morning	0.537	A	0.572	A	0.035	No				
	Evening	0.539	A	0.602	B	0.063	No				
El Camino College SW Entrance (NS) at:											
Redondo Beach Boulevard (EW) - #9	Morning	0.675	B	0.730	C	0.055	Yes	0.570	A	-0.105	No
	Evening	0.607	B	0.657	B	0.050	No	0.520	A	-0.087	No
Crenshaw Boulevard (NS) at:											
Manhattan Beach Boulevard (EW) - #10	Morning	0.761	C	0.834	D	0.073	Yes	0.780	C	0.019	No
	Evening	0.700	B	0.773	C	0.073	Yes	0.737	C	0.037	No
El Camino College East Entrance (EW) - #11	Morning	0.589	A	0.593	A	0.004	No				
	Evening	0.516	A	0.524	A	0.008	No				
Redondo Beach Boulevard (EW) - #12	Morning	0.877	D	0.898	D	0.021	Yes	0.882	D	0.005	No
	Evening	0.855	D	0.877	D	0.022	Yes	0.834	D	-0.021	No
Artesia Boulevard (EW) - #13	Morning	0.891	D	0.921	E	0.030	Yes	0.855	D	-0.036	No
	Evening	0.957	E	0.980	E	0.023	Yes	0.933	E	-0.024	No
182nd Street (EW) - #14	Morning	0.872	D	0.882	D	0.010	No	0.879	D	0.007	No
	Evening	1.086	F	1.096	F	0.010	Yes	0.904	E	-0.182	No
I-405 Freeway SB Ramps (EW) - #15	Morning	1.005	F	1.008	F	0.003	No				
	Evening	0.848	D	0.853	D	0.005	No				
I-405 Freeway NB Ramps (NS) at:											
182nd Street (EW) - #16	Morning	0.675	B	0.689	B	0.014	No				
	Evening	0.858	D	0.871	D	0.013	No				

[1] In Los Angeles County, impact is considered significant if the project related increase in the volume to capacity ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91-more	0.01 or more

Figure 16
Existing Plus Project Average Daily Traffic Volumes



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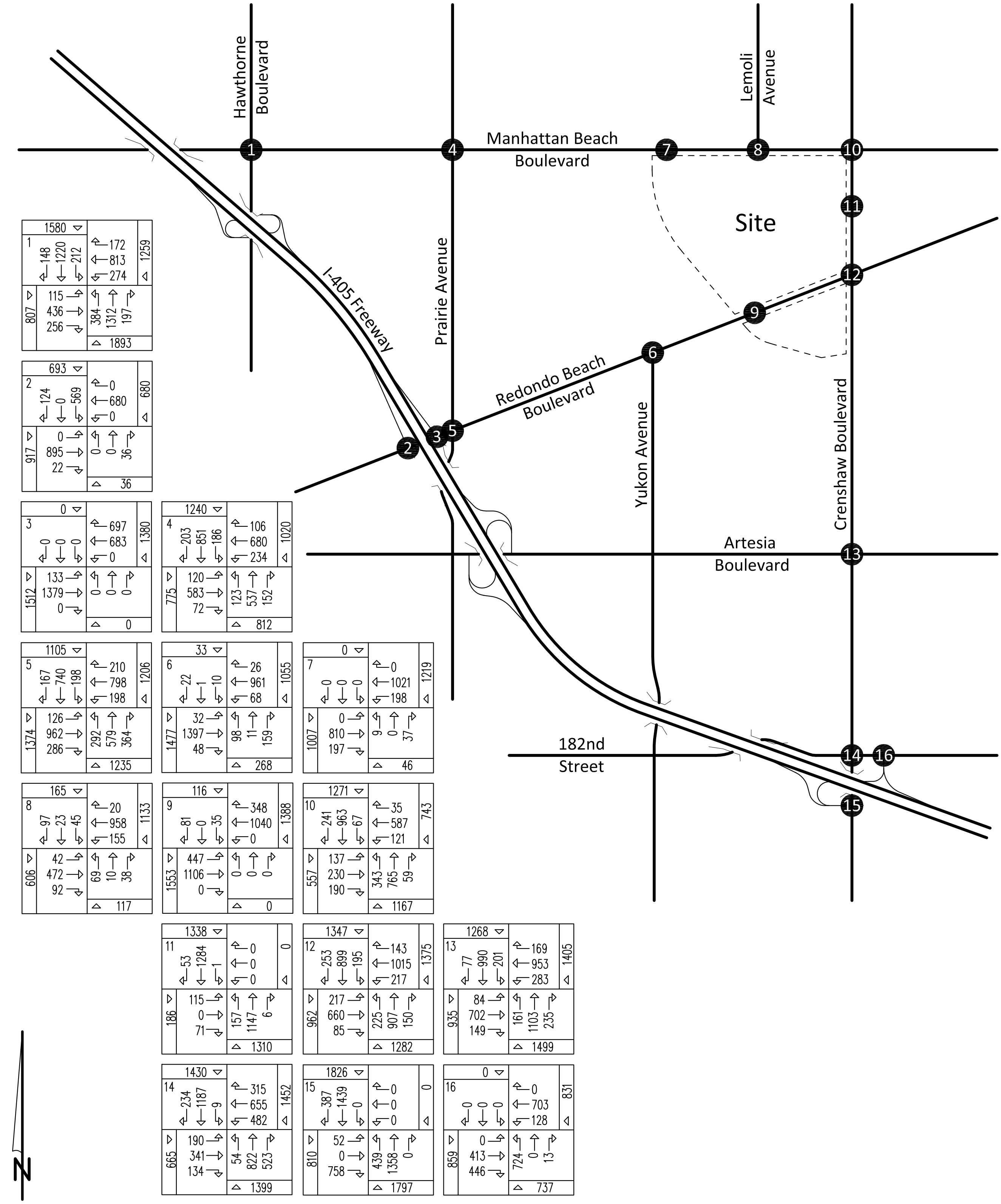
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 17
Existing Plus Project
Morning Peak Hour Intersection Turning Movement Volumes



4897/17

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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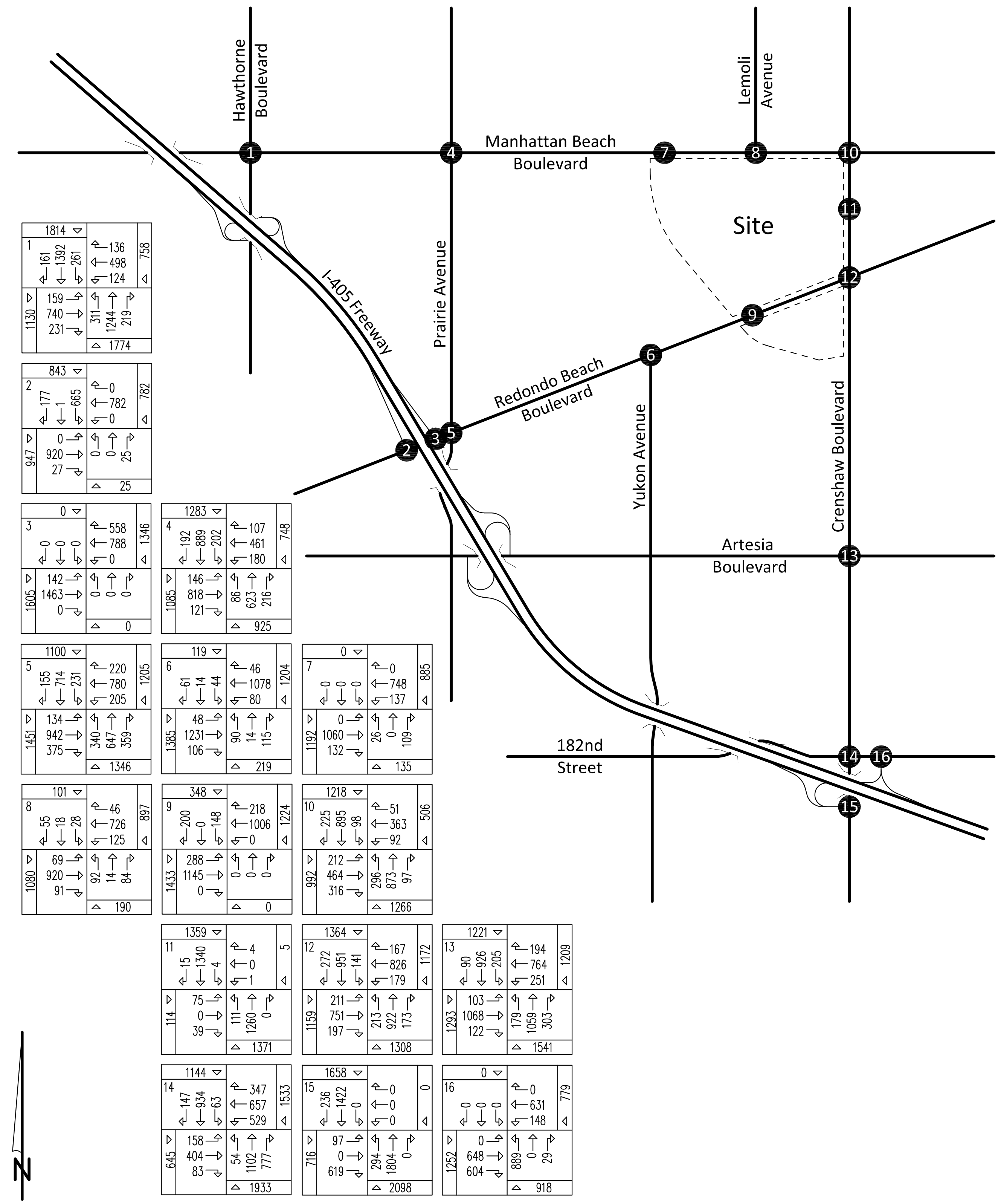
Figure 18
Existing Plus Project
Evening Peak Hour Intersection Turning Movement Volumes



4897/18

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

VII. Existing Plus Cumulatives Traffic Conditions

In this section, Existing Plus Cumulatives traffic conditions are discussed. Existing Plus Cumulatives traffic conditions are assumed for Year 2013. Figures 19 to 25 depict the Existing Plus Cumulatives traffic conditions.

A. Method of Projection

To assess Existing Plus Cumulatives traffic conditions, existing traffic is combined with the trips generated by other development.

Table 5 lists the proposed land uses for the other development (see Figure 19). Other development average daily traffic volumes are as illustrated on Figure 20. Other development morning and evening peak hour intersection turning movement volumes are shown on Figures 21 and 22, respectively.

B. Existing Plus Cumulatives Average Daily Traffic Volumes

Existing Plus Cumulatives average daily traffic volumes are as illustrated on Figure 23.

C. Existing Plus Cumulatives Levels of Service

The technique used to assess the operation of an intersection is known as Intersection Capacity Utilization, as described in Appendix C. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The Levels of Service for the Existing Plus Cumulatives traffic conditions have been calculated and are shown in Table 6. Existing Plus Cumulatives morning and evening peak hour intersection turning movement volumes are shown on Figures 24 and 25, respectively. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Existing Plus Cumulatives traffic conditions (see Table 6), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

Crenshaw Boulevard (NS) at:
- 182nd Avenue (EW) - #14
- I-405 Freeway SB Ramps (EW) - #15

Existing Plus Cumulatives Level of Service worksheets are provided in Appendix C.

Table 5

Other Development Trip Generation[1]

Traffic Analysis Zone	Address	Land Use[2]	Quantity	Units[3]	Peak Hour						Daily
					Morning			Evening			
					Inbound	Outbound	Total	Inbound	Outbound	Total	
1	1918 Artesia Boulevard, Torrance, CA	Worship Building	24.000	TSF	8	5	13	6	7	13	219
2	18203 Western Avenue, Torrance, CA	Commercial	7.500	TSF	6	4	10	15	15	30	332
3	2210 Redondo Beach Boulevard, Torrance, CA	Fast Food With Drive Thru	2.911	TSF	67	65	132	49	46	95	1,444
		Liquor Store	1.801	TSF	60	60	120	48	46	94	1,329
Total					141	134	275	118	114	232	3,324

[1] Source: City of Torrance Development List

[2] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 560, 814, 851, and 934.
San Diego Association of Governments, Traffic Generators, used for the retail morning peak hour.

[3] TSF = Thousand Square Feet

Table 6

Existing Plus Cumulatives Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour ICU-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Hawthorne Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #1	TS	2	3	d	2	3	1	1	2	1	1	2	1	0.816-D	0.799-C
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2	TS	0	0	1	1	0	1	0	2	d	0	2	0	0.730-C	0.796-C
I-405 Freeway NB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #3	CSS	0	0	0	0	0	0	1	2	0	0	2	d	0.613-B	0.546-A
Prairie Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #4	TS	1	2	d	1	2	d	1	2	d	1	2	d	0.755-C	0.785-C
Redondo Beach Boulevard (EW) - #5	TS	1	2	1	1	2	d	1	2	1	1	2	1	0.923-E	0.945-E
Yukon Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #6	TS	0	1	0	0.5	0.5	d	1	2	d	1	2	d	0.724-C	0.673-B
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW) - #7	CSS	0	0	2	0	0	0	0	1.5	0.5	1	2	0	0.470-A	0.524-A
Lemoli Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #8	TS	0	1	0	0	1	0	1	2	d	1	2	d	0.539-A	0.541-A
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9	TS	0	0	0	2	0	2	1	3	0	0	2	1	0.679-B	0.610-B
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10	TS	1	2.5	0.5	1	2.5	0.5	1	2	d	1	2	d	0.765-C	0.703-C
El Camino College East Entrance (EW) - #11	TS	1	2.5	0.5	1	2.5	0.5	0	1	0	0	1	0	0.590-A	0.517-A
Redondo Beach Boulevard (EW) - #12	TS	1	2	1	1	2	1	1	2	1	1	2.5	0.5	0.881-D	0.858-D
Artesia Boulevard (EW) - #13	TS	1	2	1	1	2.5	0.5	1	2	1	2	2	d	0.891-D	0.957-E
182nd Street (EW) - #14	TS	1	2	1>	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.872-D	1.087-F
I-405 Freeway SB Ramps (EW) - #15	TS	1	3	0	0	3	0	0.5	0	1.5	0	0	0	1.005-F	0.848-D
I-405 Freeway NB Ramps (NS) at:															
182nd Street (EW) - #16	TS	1.5	0	0.5	0	0	0	0	1.5	0.5	1	2	0	0.675-B	0.859-D

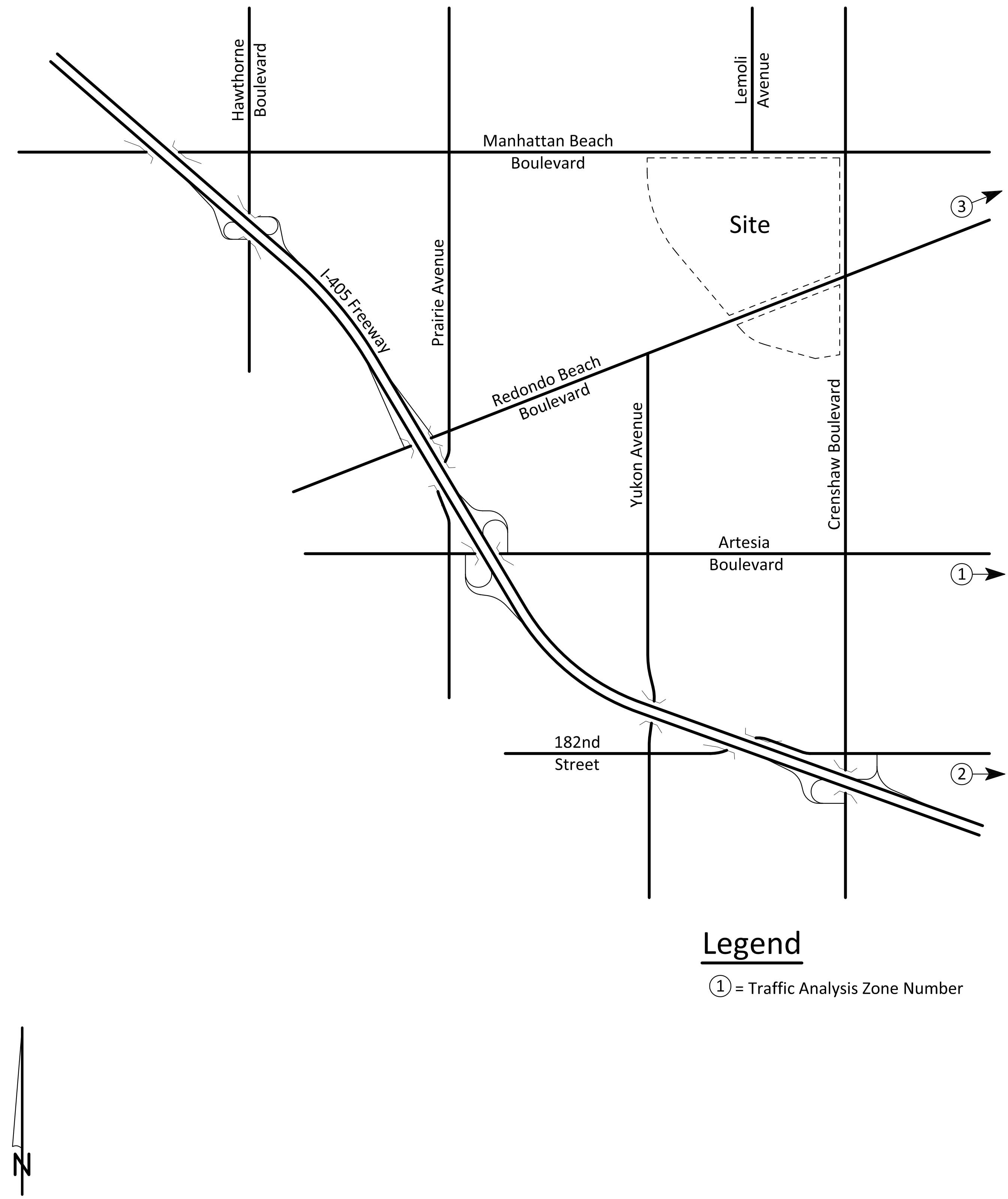
[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = Defacto Right Turn; > = Right Turn Overlap

[2] ICU-LOS = Intersection Capacity Utilization - Level of Service

[3] TS = Traffic Signal; CSS = Cross Street Stop

Figure 19
Other Development Traffic Analysis Zone Map



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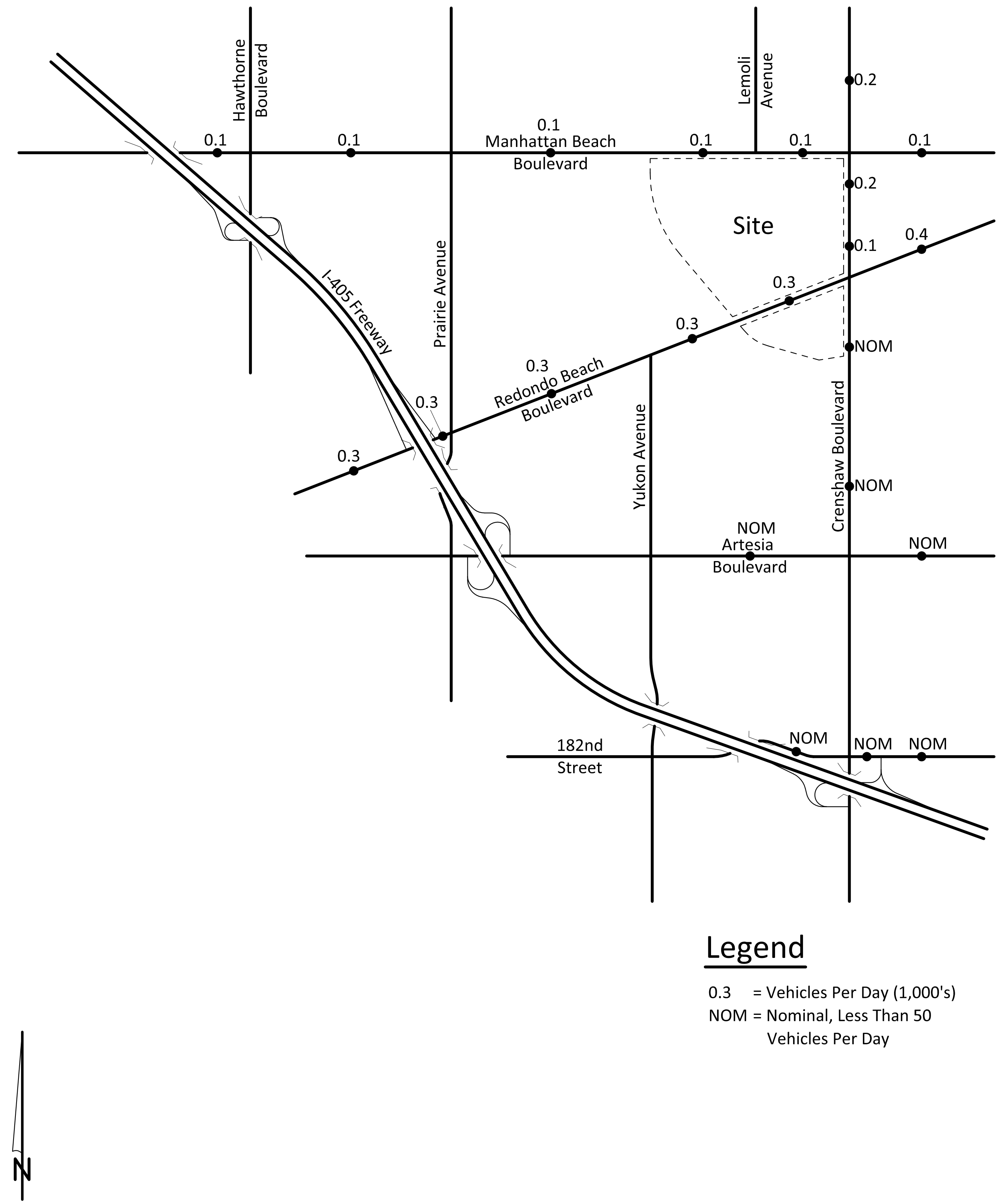
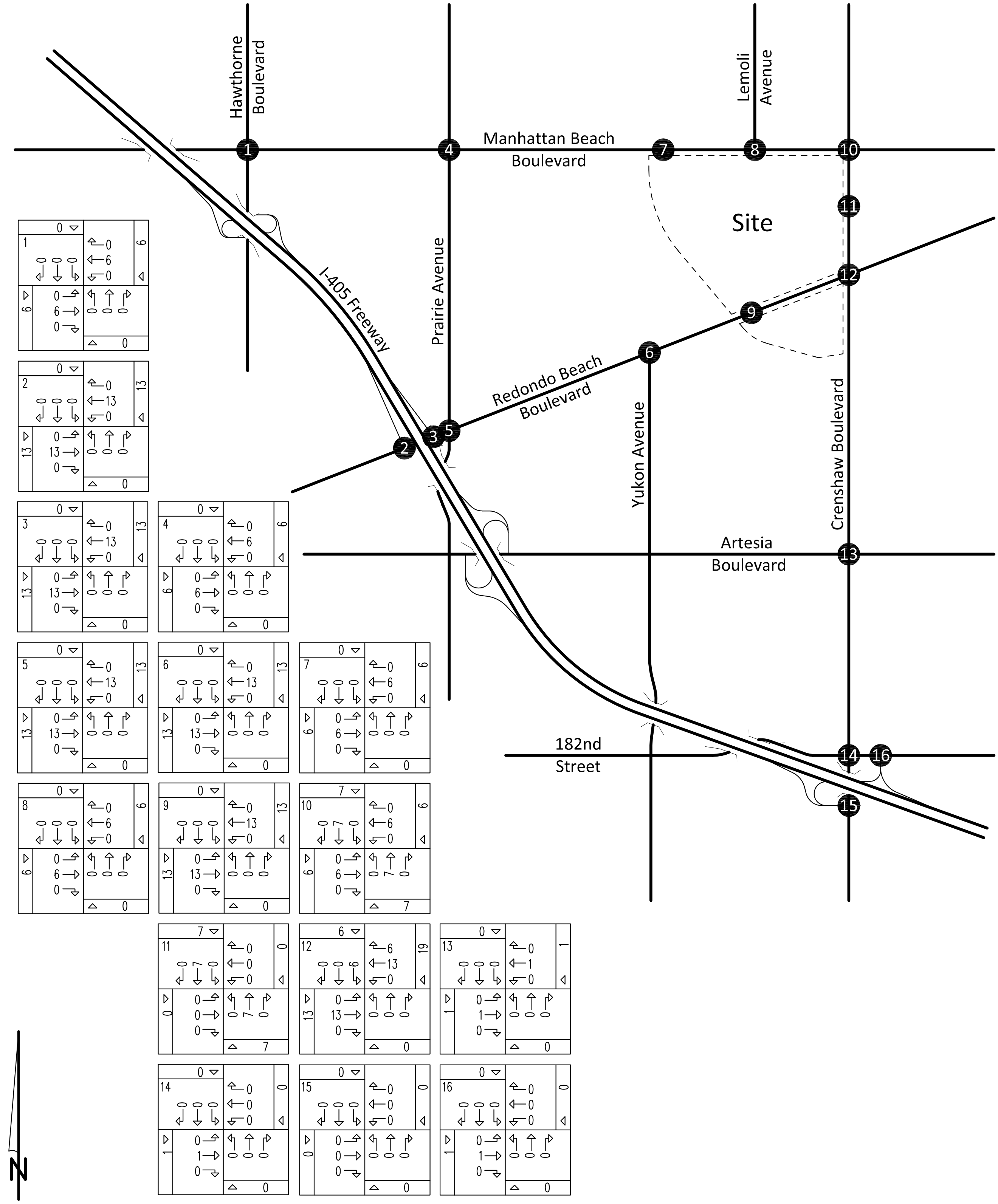
OVER 35 YEARS OF EXCELLENT SERVICE

Figure 20
Other Development Average Daily Traffic Volumes



4897/20

Figure 21
Other Development
Morning Peak Hour Intersection Turning Movement Volumes



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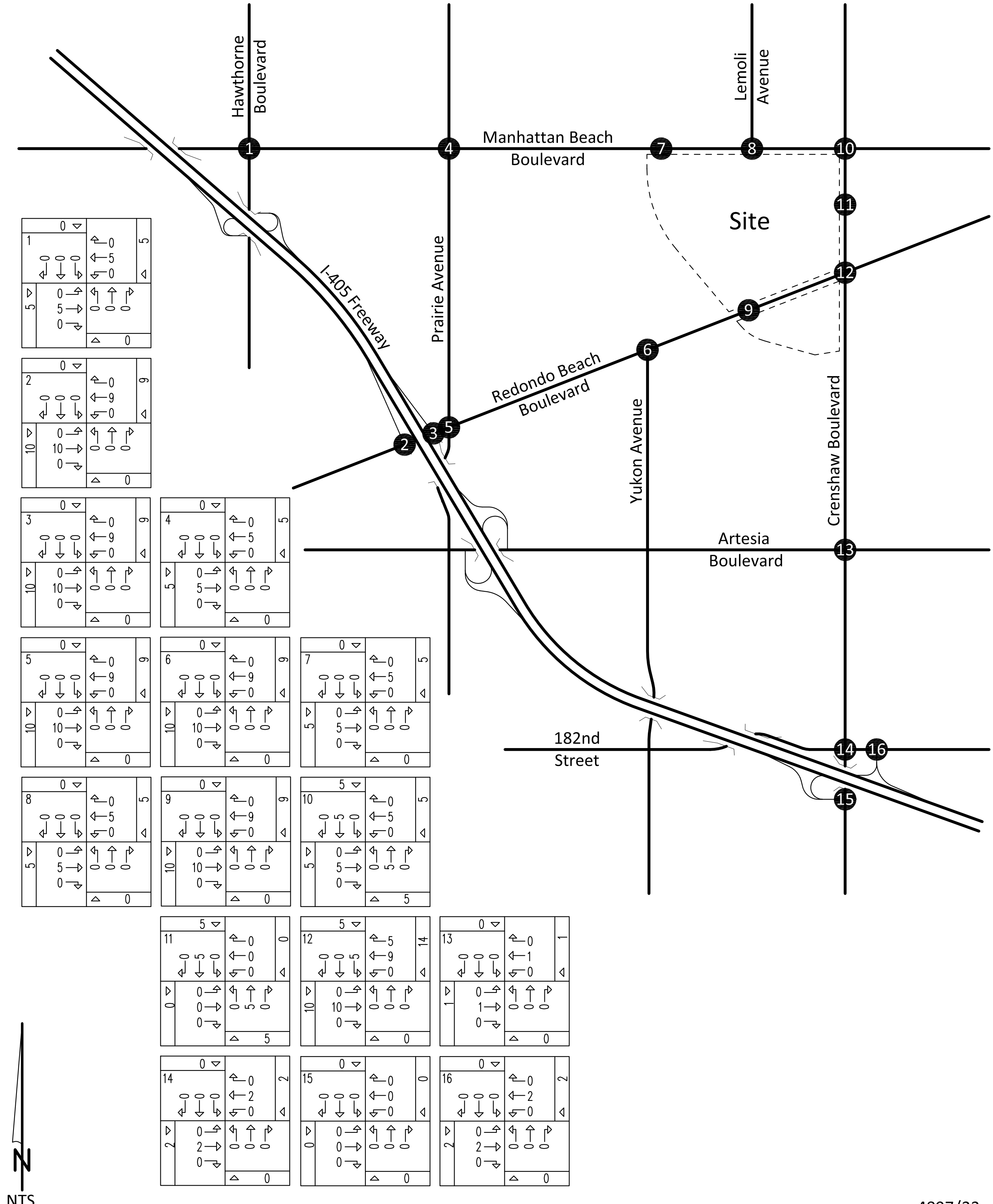
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 22
Other Development
Evening Peak Hour Intersection Turning Movement Volumes



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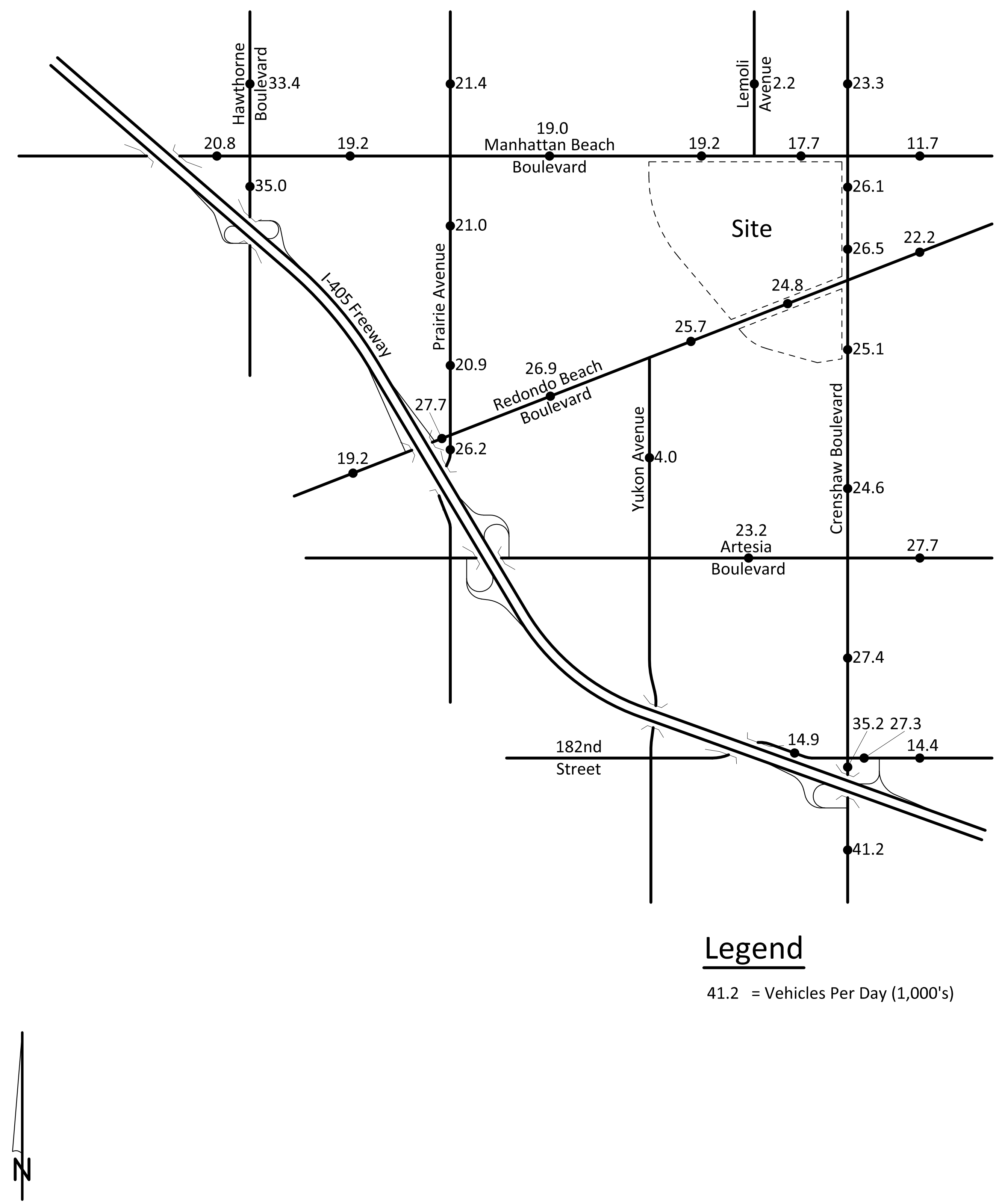
Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

Over 35 Years of Excellent Service

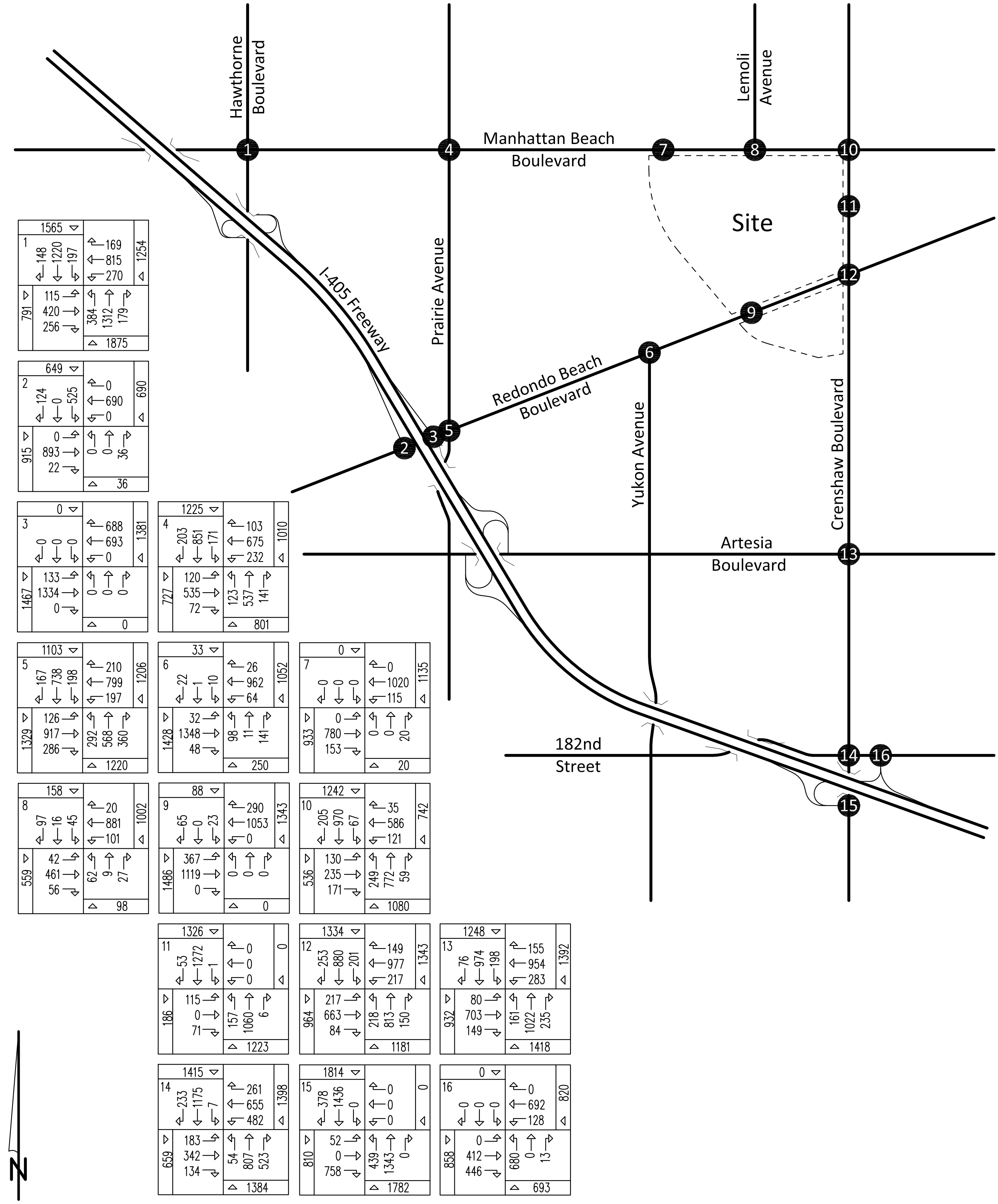
Figure 23
Existing Plus Cumulatives Average Daily Traffic Volumes



KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 24
Existing Plus Cumulatives
Morning Peak Hour Intersection Turning Movement Volumes



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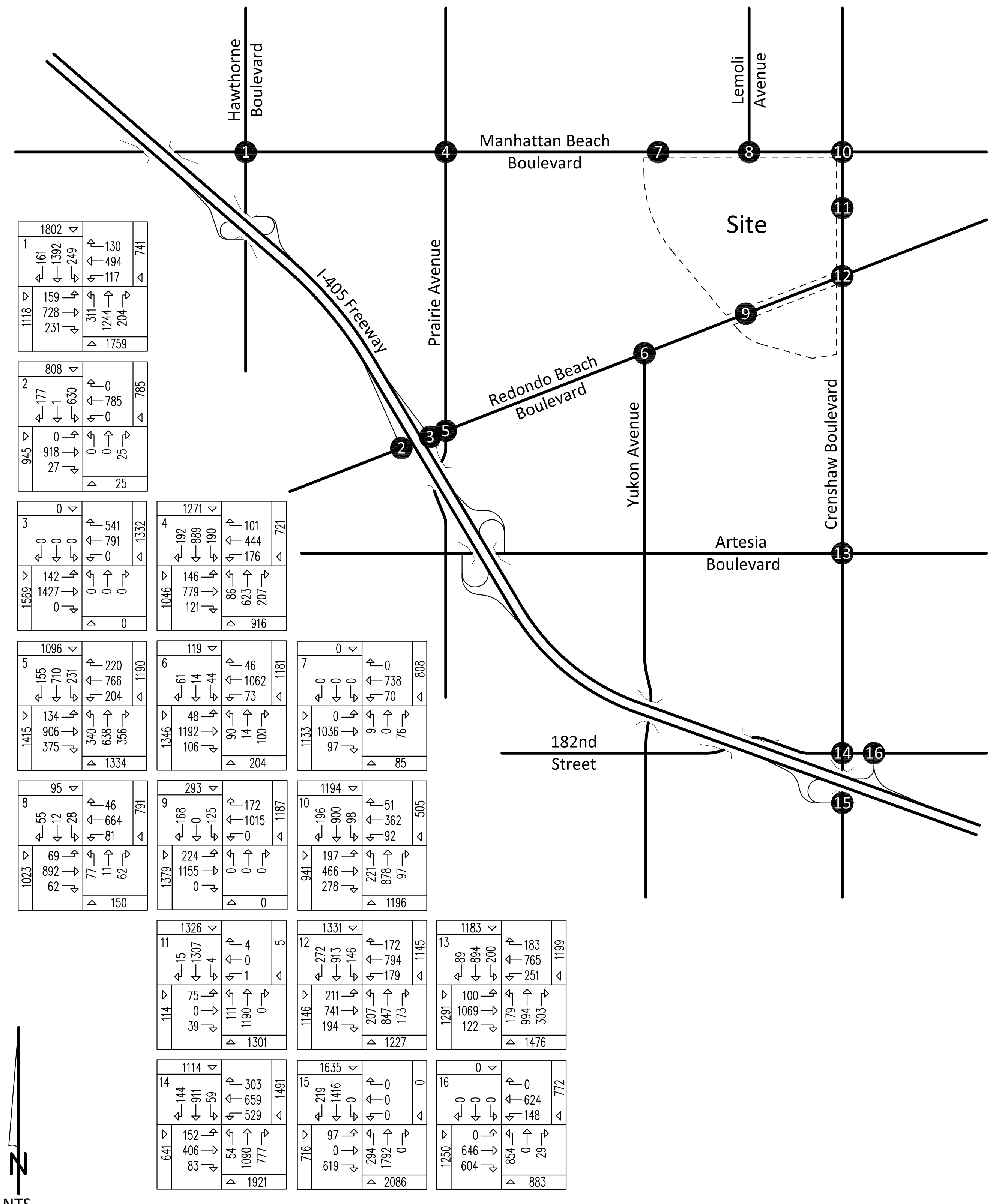
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 25
Existing Plus Cumulatives
Evening Peak Hour Intersection Turning Movement Volumes



4897/25

Kunzman Associates, Inc. Intersection reference numbers are in upper left corner of turning movement boxes.

Over 35 Years of Excellent Service

VIII. Existing Plus Project Plus Cumulatives Traffic Conditions

In this section, Existing Plus Project Plus Cumulatives traffic conditions are discussed. Existing Plus Project Plus Cumulatives traffic conditions are assumed for Year 2013. Figures 26 to 28 depict the Existing Plus Project Plus Cumulatives traffic conditions.

A. Method of Projection

To assess Existing Plus Project Plus Cumulatives traffic conditions, existing traffic is combined with the trips generated by the project and other development.

B. Existing Plus Project Plus Cumulatives Average Daily Traffic Volumes

Existing Plus Project Plus Cumulatives average daily traffic volumes are as illustrated on Figure 26.

C. Existing Plus Project Plus Cumulatives Levels of Service

The technique used to assess the operation of an intersection is known as Intersection Capacity Utilization, as described in Appendix C. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The Levels of Service for the Existing Plus Project Plus Cumulatives traffic conditions have been calculated and are shown in Table 6. Existing Plus Project Plus Cumulatives morning and evening peak hour intersection turning movement volumes are shown on Figures 27 and 28, respectively. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Existing Plus Project Plus Cumulatives traffic conditions (see Table 7), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

Prairie Avenue (NS) at:
Redondo Beach Boulevard (EW)

Crenshaw Boulevard (NS) at:
182nd Avenue (EW) - #14
I-405 Freeway SB Ramps (EW) - #15

Existing Plus Project Plus Cumulatives Level of Service worksheets are provided in Appendix C.

D. Significant Transportation Impact

In Los Angeles County, the impact is considered significant if the project related increase in the volume to capacity ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91 - more	0.01 or more

Table 8 depicts the Existing Plus Project Plus Cumulatives traffic contribution at the study area intersections. The following additional measures are recommended for implementation at study area intersections significantly impacted by the project (see Table 8):

I-405 Freeway SB Ramps (NS) at:
Redondo Beach Boulevard (EW) - #2
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane

Prairie Avenue (NS) at:
Redondo Beach Boulevard (EW) - #5
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane

El Camino College SW Entrance (NS) at:
Redondo Beach Boulevard (EW) - #9
- Restripe EB Through Lane to additional EB Left Turn Lane

Crenshaw Boulevard (NS) at:
Manhattan Beach Boulevard (EW) - #10
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane
- Restripe WB Right Turn Lane to Shared WB Through/Right Turn Lane

Redondo Beach Boulevard (EW) - #12
- Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane
- Restripe SB Right Turn Lane to Shared SB Through/Right Turn Lane

Artesia Boulevard (EW) - #13
- Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane

182nd Street (EW) - #14
- Construct NB Shared Through/Right Turn Lane

Fairshare calculations are provided within Table 12. Based upon Table 12, the project fairshare of study area intersection improvements is $336,085, less an offset equaling gas tax funds intended for making roadway improvements. Such funds are available from State gas tax revenues and Federal gas tax matching programs.

Table 7

Existing Plus Project Plus Cumulatives Intersection Capacity Utilization and Level of Service

		Intersection Approach Lanes[1]												Peak Hour	
	Traffic	Northbound			Southbound			Eastbound			Westbound			ICU-LOS[2]	
Intersection	Control[3]	L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Hawthorne Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #1	TS	2	3	d	2	3	1	1	2	1	1	2	1	0.819-D	0.808-D
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2															
- Without Improvements	TS	0	0	1	1	0	1	0	2	d	0	2	0	0.762-C	0.822-D
- With Improvements	TS	0	0	1	1	0	1	0	**2.5**	**0.5**	0	2	0	0.694-B	0.778-C
I-405 Freeway NB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #3	CSS	0	0	0	0	0	0	1	2	0	0	2	d	0.619-B	0.560-A
Prairie Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #4	TS	1	2	d	1	2	d	1	2	d	1	2	d	0.773-C	0.801-D
Redondo Beach Boulevard (EW) - #5															
- Without Improvements	TS	1	2	1	1	2	d	1	2	1	1	2	1	0.942-E	0.961-E
- With Improvements	TS	1	2	1	1	2	d	1	**2.5**	**0.5**	1	2	1	0.900-E	0.940-E
Yukon Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #6	TS	0	1	0	0.5	0.5	d	1	2	d	1	2	d	0.757-C	0.702-C
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW) - #7	**TS**	**1**	0	**1**	0	0	0	0	1.5	0.5	1	2	0	0.555-A	0.602-A
Lemoli Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #8	TS	0	1	0	0	1	0	1	2	d	1	2	d	0.574-A	0.603-B
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9															
- Without Improvements	TS	0	0	0	2	0	2	1	3	0	0	2	1	0.734-C	0.660-B
- With Improvements	TS	0	0	0	2	0	2	**2**	**2**	0	0	2	1	0.572-A	0.523-A
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10															
- Without Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	2	d	1	2	d	0.838-D	0.774-C
- With Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	**2.5**	**0.5**	1	**2.5**	**0.5**	0.783-C	0.739-C
El Camino College East Entrance (EW) - #11	TS	1	2.5	0.5	1	2.5	0.5	0	1	0	0	1	0	0.594-A	0.525-A
Redondo Beach Boulevard (EW) - #12															
- Without Improvements	TS	1	2	1	1	2	1	1	2	1	1	2.5	0.5	0.902-E	0.880-D
- With Improvements	TS	1	2	1	1	**2.5**	**0.5**	1	2	1	1	2.5	0.5	0.890-D	0.838-D
Artesia Boulevard (EW) - #13															
- Without Improvements	TS	1	2	1	1	2.5	0.5	1	2	1	2	2	d	0.921-E	0.981-E
- With Improvements	TS	1	**2.5**	**0.5**	1	2.5	0.5	1	2	1	2	2	d	0.855-D	0.934-E
182nd Street (EW) - #14															
- Without Improvements	TS	1	2	1>	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.883-D	1.098-F
- With Improvements	TS	1	**2.5**	**1.5>**	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.880-D	0.906-E
I-405 Freeway SB Ramps (EW) - #15	TS	1	3	0	0	3	0	0.5	0	1.5	0	0	0	1.008-F	0.853-D
I-405 Freeway NB Ramps (NS) at:															
182nd Street (EW) - #16	TS	1.5	0	0.5	0	0	0	0	1.5	0.5	1	2	0	0.689-B	0.871-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; d = Defacto Right Turn; **1** = Improvement

[2] ICU-LOS = Intersection Capacity Utilization - Level of Service

[3] TS = Traffic Signal; CSS = Cross Street Stop

Table 8

Existing Plus Project Plus Cumulative Traffic Contribution

Intersection	Peak Hour	Existing Plus Cumulative		Existing Plus Project Plus Cumulative							
				Without Mitigation				With Mitigation			
		Intersection Capacity Utilization	Level of Service	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]	Intersection Capacity Utilization	Level of Service	Project Impact	Significant Impact[1]
Hawthorne Boulevard (NS) at:											
Manhattan Beach Boulevard (EW) - #1	Morning	0.816	D	0.819	D	0.003	No				
	Evening	0.799	C	0.808	D	0.009	No				
I-405 Freeway SB Ramps (NS) at:											
Redondo Beach Boulevard (EW) - #2	Morning	0.730	C	0.762	C	0.032	No	0.694	B	-0.036	No
	Evening	0.796	C	0.822	D	0.026	Yes	0.778	C	-0.018	No
I-405 Freeway NB Ramps (NS) at:											
Redondo Beach Boulevard (EW) - #3	Morning	0.613	B	0.619	B	0.006	No				
	Evening	0.546	A	0.560	A	0.014	No				
Prairie Avenue (NS) at:											
Manhattan Beach Boulevard (EW) - #4	Morning	0.755	C	0.773	C	0.018	No				
	Evening	0.785	C	0.801	D	0.016	No				
Redondo Beach Boulevard (EW) - #5	Morning	0.923	E	0.942	E	0.019	Yes	0.900	D	-0.023	No
	Evening	0.945	E	0.961	E	0.016	Yes	0.940	E	-0.005	No
Yukon Avenue (NS) at:											
Redondo Beach Boulevard (EW) - #6	Morning	0.724	C	0.757	C	0.033	No				
	Evening	0.673	B	0.702	C	0.029	No				
El Camino College NW Entrance (NS) at:											
Manhattan Beach Boulevard (EW) - #7	Morning	0.470	A	0.555	A	0.085	No				
	Evening	0.524	A	0.602	B	0.078	No				
Lemoli Avenue (NS) at:											
Manhattan Beach Boulevard (EW) - #8	Morning	0.539	A	0.574	A	0.035	No				
	Evening	0.541	A	0.603	B	0.062	No				
El Camino College SW Entrance (NS) at:											
Redondo Beach Boulevard (EW) - #9	Morning	0.679	B	0.734	C	0.055	Yes	0.572	A	-0.107	No
	Evening	0.610	B	0.660	B	0.050	No	0.523	A	-0.087	No
Crenshaw Boulevard (NS) at:											
Manhattan Beach Boulevard (EW) - #10	Morning	0.765	C	0.838	D	0.073	Yes	0.783	C	0.018	No
	Evening	0.703	C	0.774	C	0.071	Yes	0.739	C	0.036	No
El Camino College East Entrance (EW) - #11	Morning	0.590	A	0.594	A	0.004	No				
	Evening	0.517	A	0.525	A	0.008	No				
Redondo Beach Boulevard (EW) - #12	Morning	0.881	D	0.902	E	0.021	Yes	0.890	D	0.009	No
	Evening	0.858	D	0.880	D	0.022	Yes	0.838	D	-0.020	No
Artesia Boulevard (EW) - #13	Morning	0.891	D	0.921	E	0.030	Yes	0.855	D	-0.036	No
	Evening	0.957	E	0.981	E	0.024	Yes	0.934	E	-0.023	No
182nd Street (EW) - #14	Morning	0.872	D	0.883	D	0.011	No	0.880	D	0.008	No
	Evening	1.087	F	1.098	F	0.011	Yes	0.906	E	-0.181	No
I-405 Freeway SB Ramps (EW) - #15	Morning	1.005	F	1.008	F	0.003	No				
	Evening	0.848	D	0.853	D	0.005	No				
I-405 Freeway NB Ramps (NS) at:											
182nd Street (EW) - #16	Morning	0.675	B	0.689	B	0.014	No				
	Evening	0.859	D	0.871	D	0.012	No				

[1] In Los Angeles County, impact is considered significant if the project related increase in the volume to capacity ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91-more	0.01 or more

Figure 26
Existing Plus Project Plus Cumulatives Average Daily Traffic Volumes

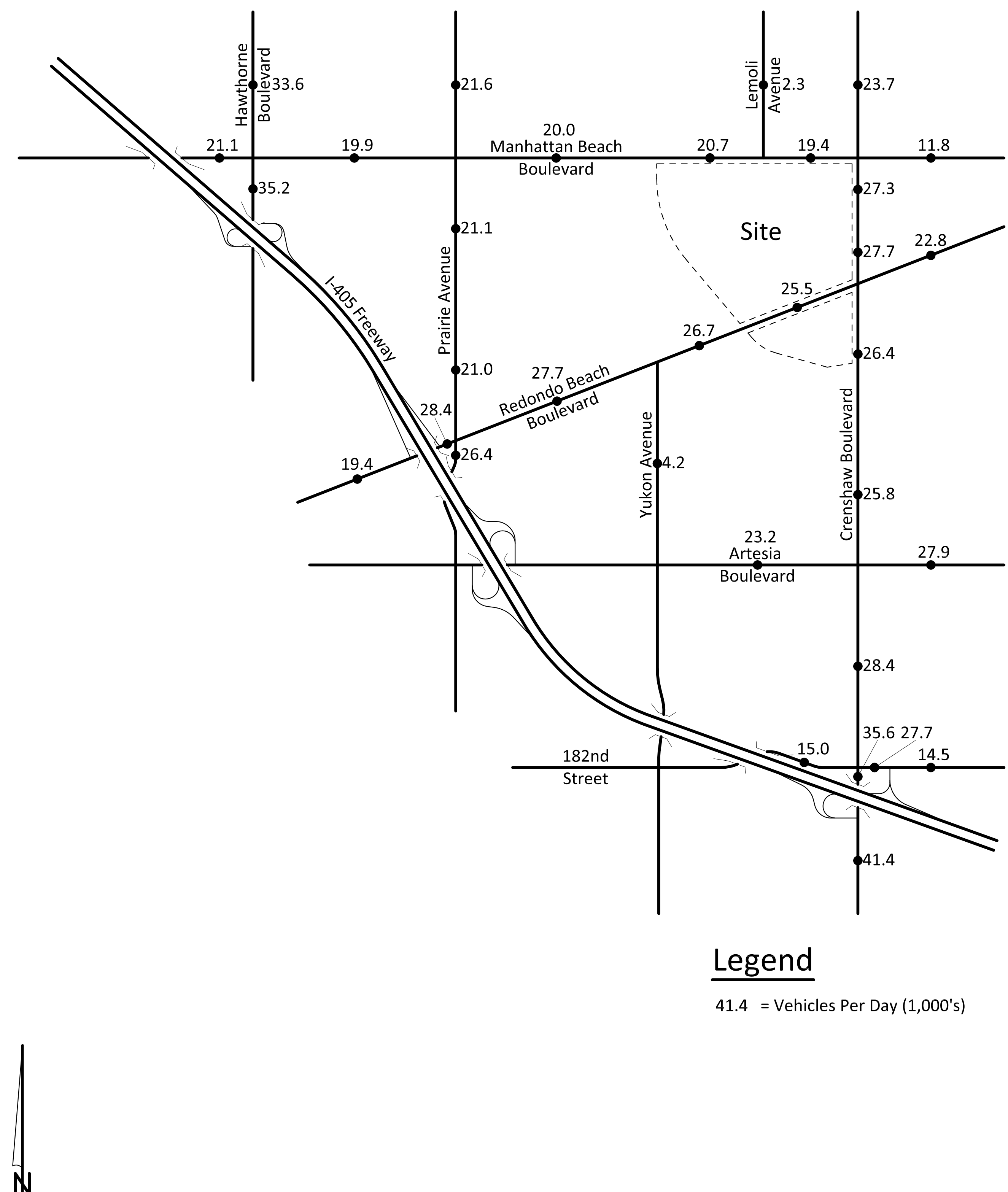


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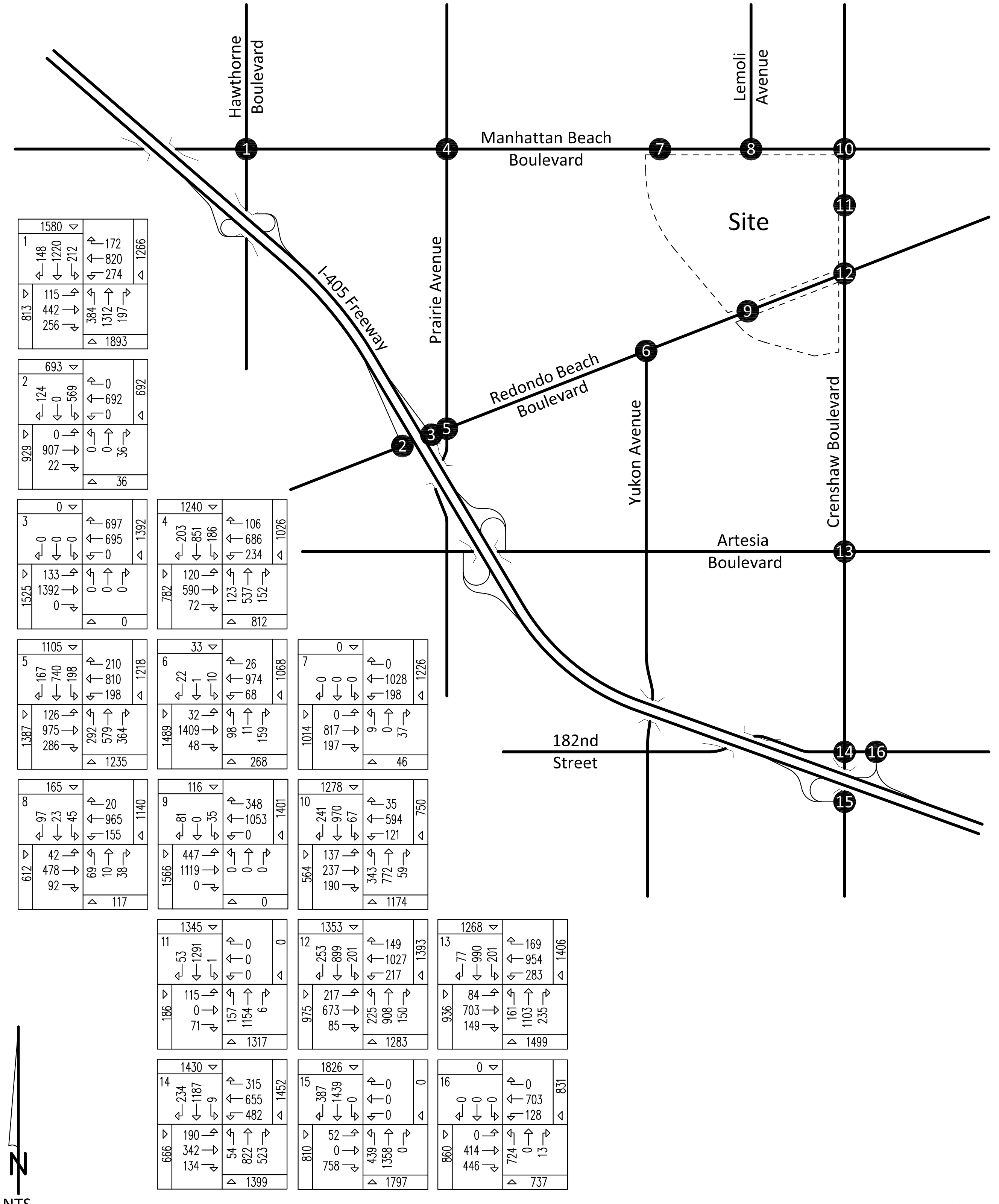
Figure 27
Existing Plus Project Plus Cumulatives
Morning Peak Hour Intersection Turning Movement Volumes

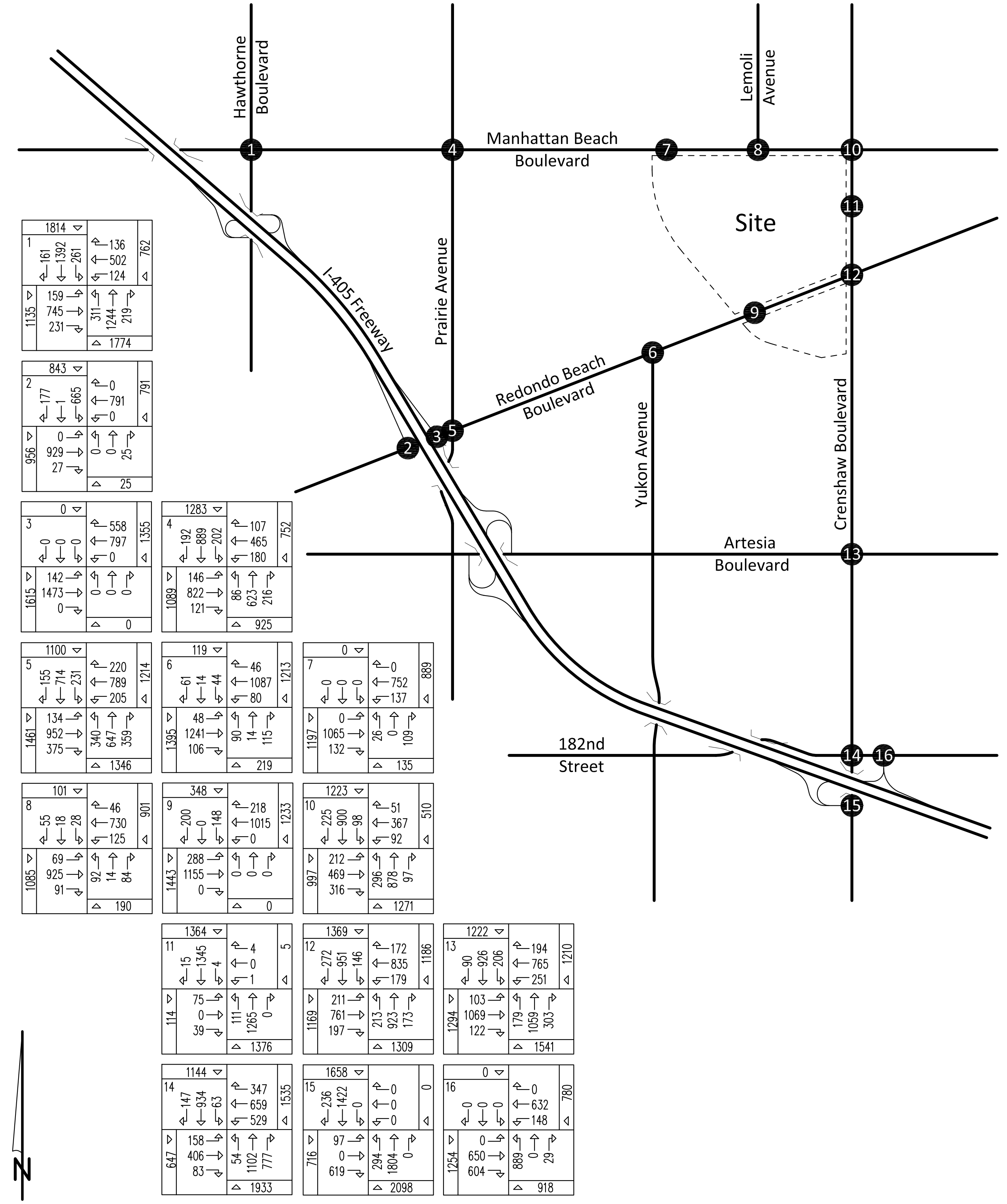


4897/27

KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 28
Existing Plus Project Plus Cumulatives
Evening Peak Hour Intersection Turning Movement Volumes



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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

IX. Year 2020 Traffic Conditions

In this section, Year 2020 traffic conditions without and with the project are discussed. Figures 29 to 34 depict the Year 2020 traffic conditions.

A. Method of Projection

Based upon discussions with the Cities of Gardena, Hawthorne, Lawndale, and Torrance, an areawide growth rate has been utilized to account for areawide growth on study area roadways. Year 2020 traffic volumes have been calculated based on a 0.21 percent annual growth rate of existing traffic volumes over an eight (8) year period. The areawide growth rate has been obtained from the 2010 Congestion Management Program for Los Angeles County.

Areawide growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to trips generated by the project and other development.

B. Year 2020 Average Daily Traffic Volumes

Year 2020 without project average daily traffic volumes are as illustrated on Figure 29 and the Year 2020 with project average daily traffic volumes are as illustrated on Figure 30.

C. Year 2020 Levels of Service

The technique used to assess the operation of an intersection is known as Intersection Capacity Utilization, as described in Appendix C. To calculate an Intersection Capacity Utilization value, the volume of traffic using the intersection is compared with the capacity of the intersection. An Intersection Capacity Utilization value is usually expressed as a decimal. The decimal represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

The Levels of Service for the Year 2020 without project traffic conditions have been calculated and are shown in Table 9. Year 2020 without project morning and evening peak hour intersection turning movement volumes are shown on Figures 31 and 32, respectively. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Year 2020 without project traffic conditions (see Table 9), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

Crenshaw Boulevard (NS) at:
- 182nd Avenue (EW) - #14
- I-405 Freeway SB Ramps (EW) - #15

Year 2020 without project Level of Service worksheets are provided in Appendix C.

The Levels of Service for the Year 2020 with project traffic conditions have been calculated and are shown in Table 10. Year 2020 with project morning and evening peak hour intersection turning movement volumes are shown on Figures 33 and 34, respectively. The study area intersections are projected to operate at Level of Service E or better during the peak hours for Year 2020 with project traffic conditions (see Table 10), except for the following study area intersections that are projected to operate at Level of Service F during the peak hours:

Crenshaw Boulevard (NS) at:
182nd Avenue (EW) - #14
I-405 Freeway SB Ramps (EW) - #15

Year 2020 with project Level of Service worksheets are provided in Appendix C.

D. Significant Transportation Impact

In Los Angeles County, the impact is considered significant if the project related increase in the volume to capacity (v/c) ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91 - more	0.01 or more

Table 11 depicts the Year 2020 project traffic contribution at the study area intersections. The following additional measures are recommended for implementation at study area intersections significantly impacted by the project (see Table 11):

I-405 Freeway SB Ramps (NS) at:
Redondo Beach Boulevard (EW) - #2
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane

Prairie Avenue (NS) at:
Redondo Beach Boulevard (EW) - #5
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane

El Camino College SW Entrance (NS) at:
Redondo Beach Boulevard (EW) - #9
- Restripe EB Through Lane to additional EB Left Turn Lane

Crenshaw Boulevard (NS) at:
Manhattan Beach Boulevard (EW) - #10
- Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane
- Restripe WB Right Turn Lane to Shared WB Through/Right Turn Lane

Redondo Beach Boulevard (EW) - #12
- Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane
- Restripe SB Right Turn Lane to Shared SB Through/Right Turn Lane

Artesia Boulevard (EW) - #13
- Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane

182nd Street (EW) - #14
- Construct NB Shared Through/Right Turn Lane

Fairshare calculations are provided within Table 12. Based upon Table 12, the project fairshare of study area intersection improvements is $336,085, less an offset equaling gas tax funds intended for making roadway improvements. Such funds are available from State gas tax revenues and Federal gas tax matching programs.

Table 9

Year 2020 Without Project Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1] Northbound L	T	R	Southbound L	T	R	Eastbound L	T	R	Westbound L	T	R	Peak Hour ICU-LOS[2] Morning	Evening
Hawthorne Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #1	TS	2	3	d	2	3	1	1	2	1	1	2	1	0.828-D	0.810-D
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2															
- Without Improvements	TS	0	0	1	1	0	1	0	2	d	0	2	0	0.740-C	0.808-D
- With Improvements	TS	0	0	1	1	0	1	0	**2.5**	**0.5**	0	2	0	0.676-B	0.766-C
I-405 Freeway NB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #3	CSS	0	0	0	0	0	0	1	2	0	0	2	d	0.622-B	0.553-A
Prairie Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #4	TS	1	2	d	1	2	d	1	2	d	1	2	d	0.766-C	0.797-C
Redondo Beach Boulevard (EW) - #5															
- Without Improvements	TS	1	2	1	1	2	d	1	2	1	1	2	1	0.937-E	0.959-E
- With Improvements	TS	1	2	1	1	2	d	1	**2.5**	**0.5**	1	2	1	0.900-E	0.943-E
Yukon Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #6	TS	0	1	0	0.5	0.5	d	1	2	d	1	2	d	0.734-C	0.683-B
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW) - #7	CSS	0	0	2	0	0	0	0	1.5	0.5	1	2	0	0.476-A	0.532-A
Lemoli Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #8	TS	0	1	0	0	1	0	1	2	d	1	2	d	0.546-A	0.548-A
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9															
- Without Improvements	TS	0	0	0	2	0	2	1	3	0	0	2	1	0.688-B	0.618-B
- With Improvements	TS	0	0	0	2	0	2	**2**	**2**	0	0	2	1	0.535-A	0.520-A
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10															
- Without Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	2	d	1	2	d	0.776-C	0.713-C
- With Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	**2.5**	**0.5**	1	**2.5**	**0.5**	0.721-C	0.685-B
El Camino College East Entrance (EW) - #11	TS	1	2.5	0.5	1	2.5	0.5	0	1	0	0	1	0	0.599-A	0.524-A
Redondo Beach Boulevard (EW) - #12															
- Without Improvements	TS	1	2	1	1	2	1	1	2	1	1	2.5	0.5	0.895-D	0.871-D
- With Improvements	TS	1	**2.5**	**0.5**	1	**2.5**	**0.5**	1	2	1	1	2.5	0.5	0.855-D	0.832-D
Artesia Boulevard (EW) - #13															
- Without Improvements	TS	1	2	1	1	2.5	0.5	1	2	1	2	2	d	0.905-E	0.971-E
- With Improvements	TS	1	**2.5**	**0.5**	1	2.5	0.5	1	2	1	2	2	d	0.846-D	0.930-E
182nd Street (EW) - #14															
- Without Improvements	TS	1	2	1>	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.885-D	1.104-F
- With Improvements	TS	1	**2.5**	**1.5>**	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.881-D	0.906-E
I-405 Freeway SB Ramps (EW) - #15	TS	1	3	0	0	3	0	0.5	0	1.5	0	0	0	1.021-F	0.861-D
I-405 Freeway NB Ramps (NS) at:															
182nd Street (EW) - #16	TS	1.5	0	0.5	0	0	0	0	1.5	0.5	1	2	0	0.685-B	0.872-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; d = Defacto Right Turn; **1** = Improvement

[2] ICU-LOS = Intersection Capacity Utilization - Level of Service

[3] TS = Traffic Signal; CSS = Cross Street Stop

Table 10

Year 2020 With Project Intersection Capacity Utilization and Level of Service

Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour ICU-LOS[2]	
		Northbound			Southbound			Eastbound			Westbound				
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
Hawthorne Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #1	TS	2	3	d	2	3	1	1	2	1	1	2	1	0.831-D	0.820-D
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2															
- Without Improvements	TS	0	0	1	1	0	1	0	2	d	0	2	0	0.772-C	0.833-D
- With Improvements	TS	0	0	1	1	0	1	0	**2.5**	**0.5**	0	2	0	0.704-C	0.789-C
I-405 Freeway NB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #3	CSS	0	0	0	0	0	0	1	2	0	0	2	d	0.627-B	0.568-A
Prairie Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #4	TS	1	2	d	1	2	d	1	2	d	1	2	d	0.784-C	0.812-D
Redondo Beach Boulevard (EW) - #5															
- Without Improvements	TS	1	2	1	1	2	d	1	2	1	1	2	1	0.956-E	0.975-E
- With Improvements	TS	1	2	1	1	2	d	1	**2.5**	**0.5**	1	2	1	0.913-E	0.954-E
Yukon Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #6	TS	0	1	0	0.5	0.5	d	1	2	d	1	2	d	0.767-C	0.712-C
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW) - #7	**TS**	**1**	0	**1**	0	0	0	0	1.5	0.5	1	2	0	0.570-A	0.635-B
Lemoli Avenue (NS) at:															
Manhattan Beach Boulevard (EW) - #8	TS	0	1	0	0	1	0	1	2	d	1	2	d	0.581-A	0.611-B
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9															
- Without Improvements	TS	0	0	0	2	0	2	1	3	0	0	2	1	0.743-C	0.668-B
- With Improvements	TS	0	0	0	2	0	2	**2**	**2**	0	0	2	1	0.580-A	0.530-A
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10															
- Without Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	2	d	1	2	d	0.849-D	0.784-C
- With Improvements	TS	1	2.5	0.5	1	2.5	0.5	1	**2.5**	**0.5**	1	**2.5**	**0.5**	0.794-C	0.749-C
El Camino College East Entrance (EW) - #11	TS	1	2.5	0.5	1	2.5	0.5	0	1	0	0	1	0	0.603-B	0.532-A
Redondo Beach Boulevard (EW) - #12															
- Without Improvements	TS	1	2	1	1	2	1	1	2	1	1	2.5	0.5	0.915-E	0.893-D
- With Improvements	TS	1	**2.5**	**0.5**	1	**2.5**	**0.5**	1	2	1	1	2.5	0.5	0.874-D	0.820-D
Artesia Boulevard (EW) - #13															
- Without Improvements	TS	1	2	1	1	2.5	0.5	1	2	1	2	2	d	0.934-E	0.995-E
- With Improvements	TS	1	**2.5**	**0.5**	1	2.5	0.5	1	2	1	2	2	d	0.867-D	0.948-E
182nd Street (EW) - #14															
- Without Improvements	TS	1	2	1>	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.896-D	1.114-F
- With Improvements	TS	1	**2.5**	**1.5>**	1	2.5	0.5	1	1.5	0.5	1.5	1	0.5	0.893-D	0.919-E
I-405 Freeway SB Ramps (EW) - #15	TS	1	3	0	0	3	0	0.5	0	1.5	0	0	0	1.023-F	0.866-D
I-405 Freeway NB Ramps (NS) at:															
182nd Street (EW) - #16	TS	1.5	0	0.5	0	0	0	0	1.5	0.5	1	2	0	0.699-B	0.884-D

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right Turn Overlap; d = Defacto Right Turn; **1** = Improvement

[2] ICU-LOS = Intersection Capacity Utilization - Level of Service

[3] TS = Traffic Signal; CSS = Cross Street Stop

Table 11

Year 2020 Project Traffic Contribution

Intersection	Peak Hour	Year 2020 Without Project: Intersection Capacity Utilization	Year 2020 Without Project: Level of Service	Year 2020 With Project, Without Mitigation: Intersection Capacity Utilization	Without Mitigation: Level of Service	Without Mitigation: Project Impact	Without Mitigation: Significant Impact[1]	With Mitigation: Intersection Capacity Utilization	With Mitigation: Level of Service	With Mitigation: Project Impact	With Mitigation: Significant Impact[1]
Hawthorne Boulevard (NS) at:											
Manhattan Beach Boulevard (EW) - #1	Morning	0.828	D	0.831	D	0.003	No				
	Evening	0.810	D	0.820	D	0.010	No				
I-405 Freeway SB Ramps (NS) at:											
Redondo Beach Boulevard (EW) - #2	Morning	0.740	C	0.772	C	0.032	No	0.704	C	-0.036	No
	Evening	0.808	D	0.833	D	0.025	Yes	0.789	C	-0.019	No
I-405 Freeway NB Ramps (NS) at:											
Redondo Beach Boulevard (EW) - #3	Morning	0.622	B	0.627	B	0.005	No				
	Evening	0.553	A	0.568	A	0.015	No				
Prairie Avenue (NS) at:											
Manhattan Beach Boulevard (EW) - #4	Morning	0.766	C	0.784	C	0.018	No				
	Evening	0.797	C	0.812	D	0.015	No				
Redondo Beach Boulevard (EW) - #5	Morning	0.937	E	0.956	E	0.019	Yes	0.913	E	-0.024	No
	Evening	0.959	E	0.975	E	0.016	Yes	0.954	E	-0.005	No
Yukon Avenue (NS) at:											
Redondo Beach Boulevard (EW) - #6	Morning	0.734	C	0.767	C	0.033	No				
	Evening	0.683	B	0.712	C	0.029	No				
El Camino College NW Entrance (NS) at:											
Manhattan Beach Boulevard (EW) - #7	Morning	0.476	A	0.570	A	0.094	No				
	Evening	0.532	A	0.635	B	0.103	No				
Lemoli Avenue (NS) at:											
Manhattan Beach Boulevard (EW) - #8	Morning	0.546	A	0.581	A	0.035	No				
	Evening	0.548	A	0.611	B	0.063	No				
El Camino College SW Entrance (NS) at:											
Redondo Beach Boulevard (EW) - #9	Morning	0.688	B	0.743	C	0.055	Yes	0.580	A	-0.108	No
	Evening	0.618	B	0.668	B	0.050	No	0.530	A	-0.088	No
Crenshaw Boulevard (NS) at:											
Manhattan Beach Boulevard (EW) - #10	Morning	0.776	C	0.849	D	0.073	Yes	0.794	C	0.018	No
	Evening	0.713	C	0.784	C	0.071	Yes	0.749	C	0.036	No
El Camino College East Entrance (EW) - #11	Morning	0.599	A	0.603	B	0.004	No				
	Evening	0.524	A	0.532	A	0.008	No				
Redondo Beach Boulevard (EW) - #12	Morning	0.895	D	0.915	E	0.020	Yes	0.874	D	-0.021	No
	Evening	0.871	D	0.893	D	0.022	Yes	0.850	D	-0.021	No
Artesia Boulevard (EW) - #13	Morning	0.905	E	0.934	E	0.029	Yes	0.867	D	-0.038	No
	Evening	0.971	E	0.995	E	0.024	Yes	0.948	E	-0.023	No
182nd Street (EW) - #14	Morning	0.885	D	0.896	D	0.011	No	0.893	D	0.008	No
	Evening	1.104	F	1.114	F	0.010	Yes	0.919	E	-0.185	No
I-405 Freeway SB Ramps (EW) - #15	Morning	1.021	F	1.023	F	0.002	No				
	Evening	0.861	D	0.866	D	0.005	No				
I-405 Freeway NB Ramps (NS) at:											
182nd Street (EW) - #16	Morning	0.685	B	0.699	B	0.014	No				
	Evening	0.872	D	0.884	D	0.012	No				

[1] In Los Angeles County, impact is considered significant if the project related increase in the volume to capacity ratio equals or exceeds the thresholds shown below:

Significant Impact Threshold for Intersections		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91-more	0.01 or more

Table 12

Project Fairshare Traffic Contribution

Intersection	Improvement	Total Cost	Existing Traffic		Year 2020 With Project		Project Traffic		Total New Traffic		Project % of New Traffic			Project Cost Share	Jurisdiction(s)
			Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	Average		
I-405 Freeway SB Ramps (NS) at:															
Redondo Beach Boulevard (EW) - #2	Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane	$ 5,000	2,264	2,544	2,388	2,658	62	53	124	114	50.0%	46.5%	48.3%	$ 2,415	CALTRANS
Prairie Avenue (NS) at:															
Redondo Beach Boulevard (EW) - #5	Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane	$ 5,000	4,832	5,016	5,027	5,206	88	86	195	190	45.1%	45.3%	45.2%	$ 2,260	County of Los Angeles/City of Lawndale
El Camino College NW Entrance (NS) at:															
Manhattan Beach Boulevard (EW)[1] - #7	Install Traffic Signal	$ 150,000	--	--	--	--	--	--	--	--	--	--	--	$ 150,000	County of Los Angeles
El Camino College SW Entrance (NS) at:															
Redondo Beach Boulevard (EW) - #9	Restripe EB Through Lane to additional EB Left Turn Lane	$ 50,000	2,891	2,840	3,132	3,072	166	165	241	232	68.9%	71.1%	70.0%	$ 35,000	County of Los Angeles/City of Torrance
Crenshaw Boulevard (NS) at:															
Manhattan Beach Boulevard (EW) - #10	Restripe EB Right Turn Lane to Shared EB Through/Right Turn Lane	$ 5,000	3,574	3,816	3,826	4,065	164	166	252	249	65.1%	66.7%	65.9%	$ 3,295	County of Los Angeles/City of Gardena
	Restripe WB Right Turn Lane to Shared WB Through/Right Turn Lane	$ 5,000	3,574	3,816	3,826	4,065	164	166	252	249	65.1%	66.7%	65.9%	$ 3,295	County of Los Angeles/City of Gardena
Redondo Beach Boulevard (EW) - #12	Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane	$ 5,000	4,784	4,820	5,085	5,114	182	183	301	294	60.5%	62.2%	61.4%	$ 3,070	County of Los Angeles/City of Torrance
	Restripe SB Right Turn Lane to Shared SB Through/Right Turn Lane	$ 5,000	4,784	4,820	5,085	5,114	182	183	301	294	60.5%	62.2%	61.4%	$ 3,070	County of Los Angeles/City of Torrance
Artesia Boulevard (EW) - #13	Restripe NB Right Turn Lane to Shared NB Through/Right Turn Lane	$ 5,000	4,988	5,147	5,193	5,354	119	117	205	207	58.0%	56.5%	57.3%	$ 2,865	City of Torrance
182nd Street (EW) - #14	Construct NB Shared Through/Right Turn Lane	$ 255,000	4,855	5,163	5,029	5,346	91	92	174	183	52.3%	50.3%	51.3%	$ 130,815	City of Torrance
Total		$ 490,000												$ 336,085	

[1] 100% Project Cost

Figure 29
Year 2020 Without Project Average Daily Traffic Volumes

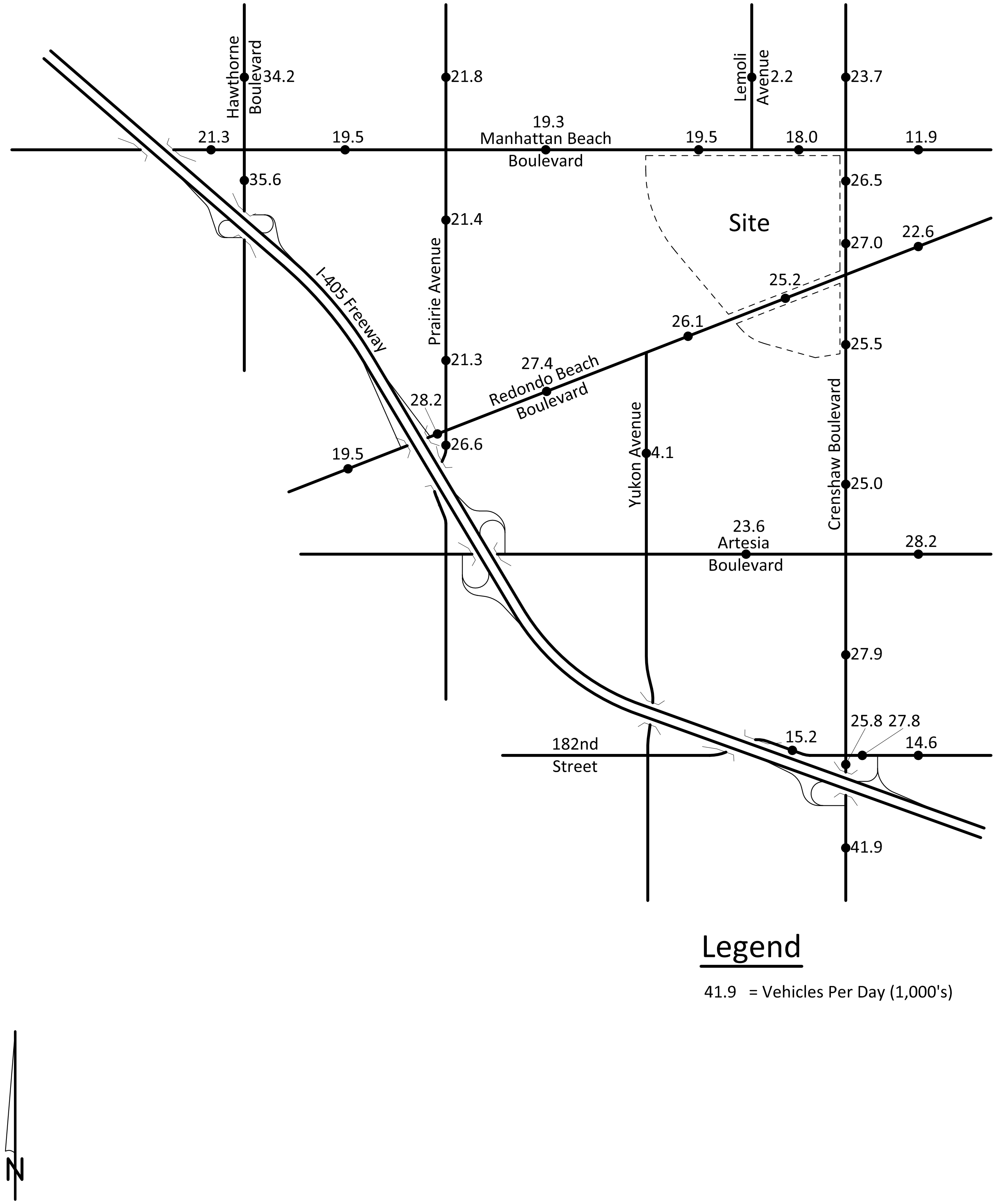

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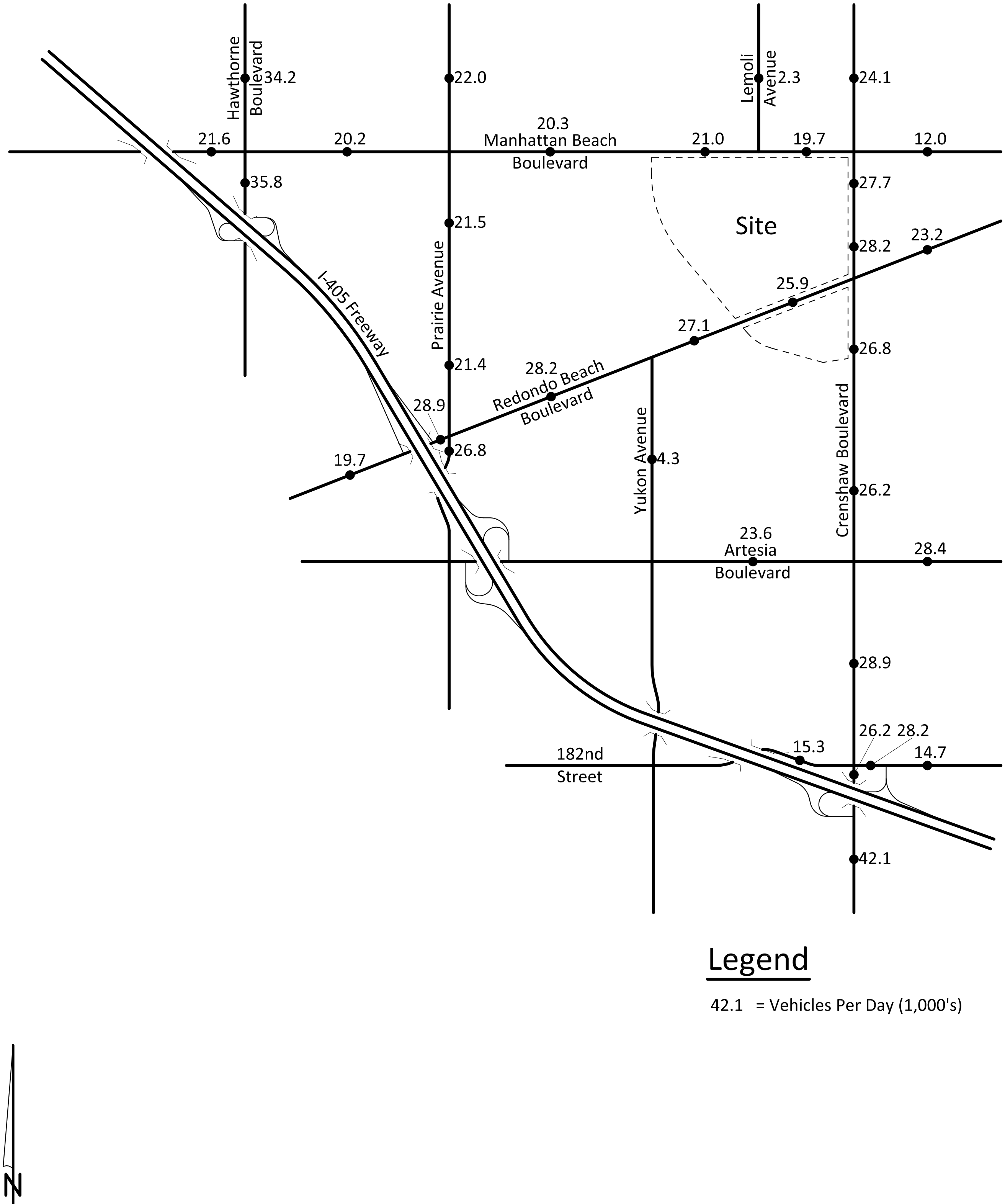
Figure 30
Year 2020 With Project Average Daily Traffic Volumes



Legend

42.1 = Vehicles Per Day (1,000's)

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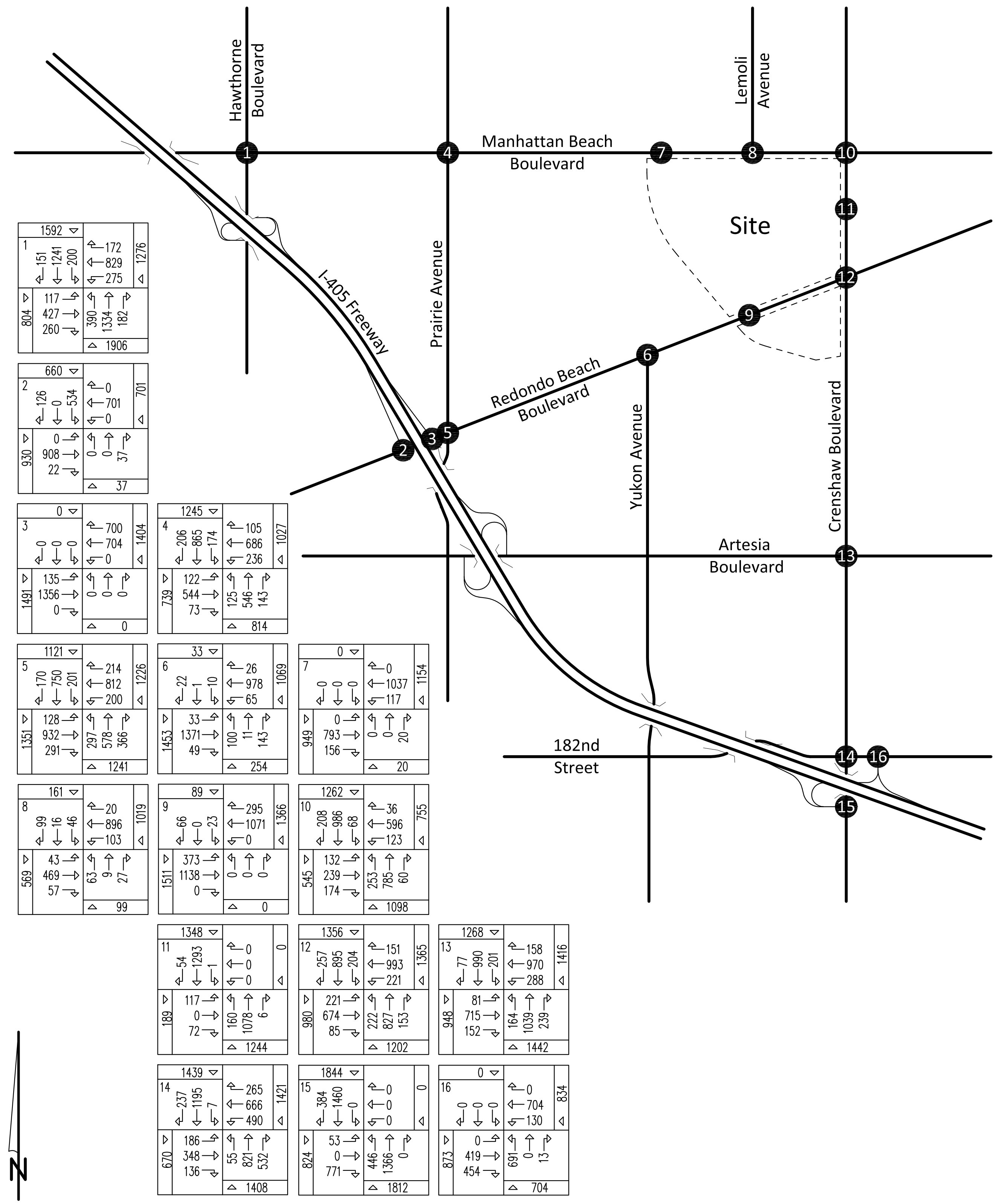
Figure 31
Year 2020 Without Project
Morning Peak Hour Intersection Turning Movement Volumes



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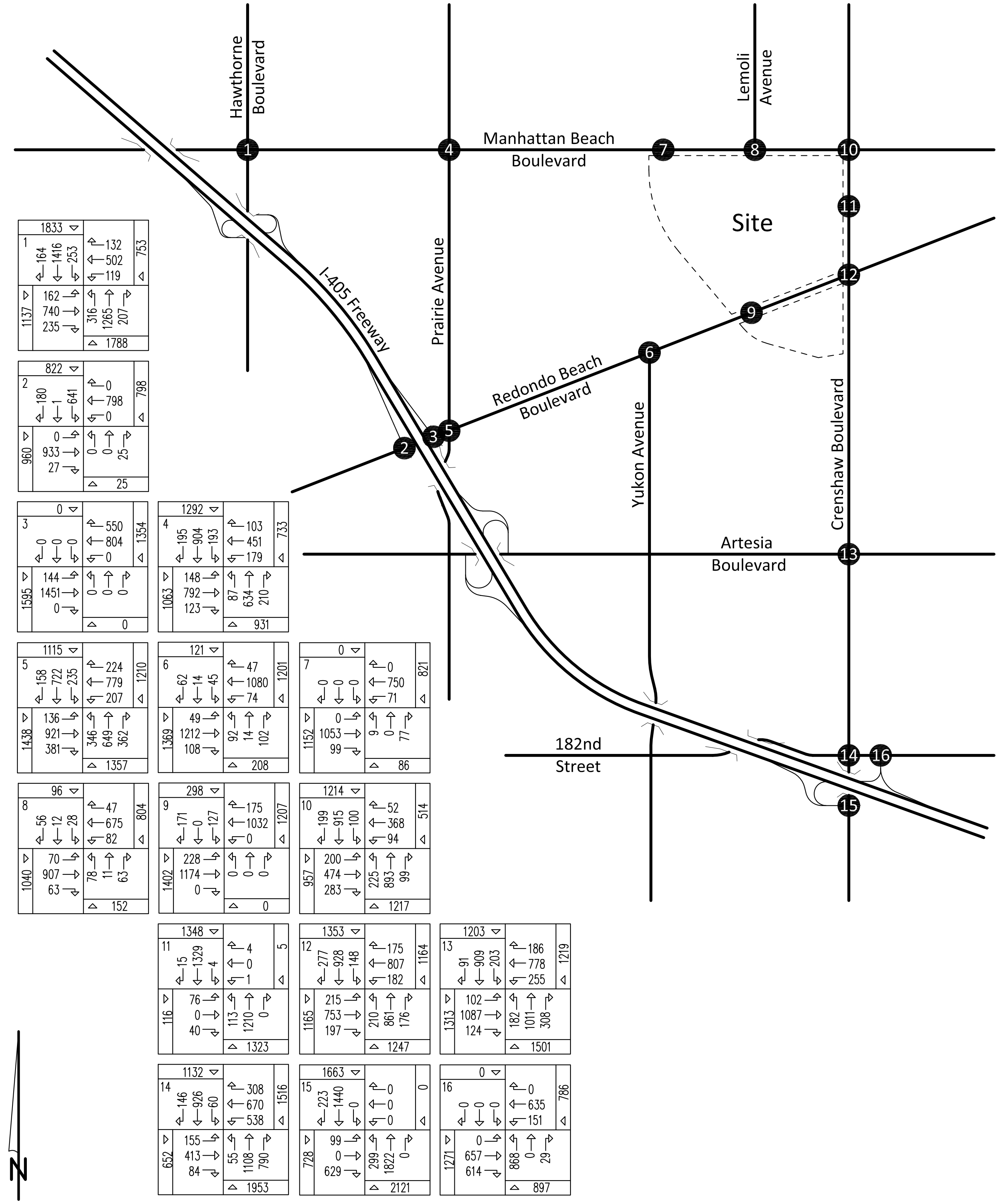
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

Figure 32
Year 2020 Without Project
Evening Peak Hour Intersection Turning Movement Volumes



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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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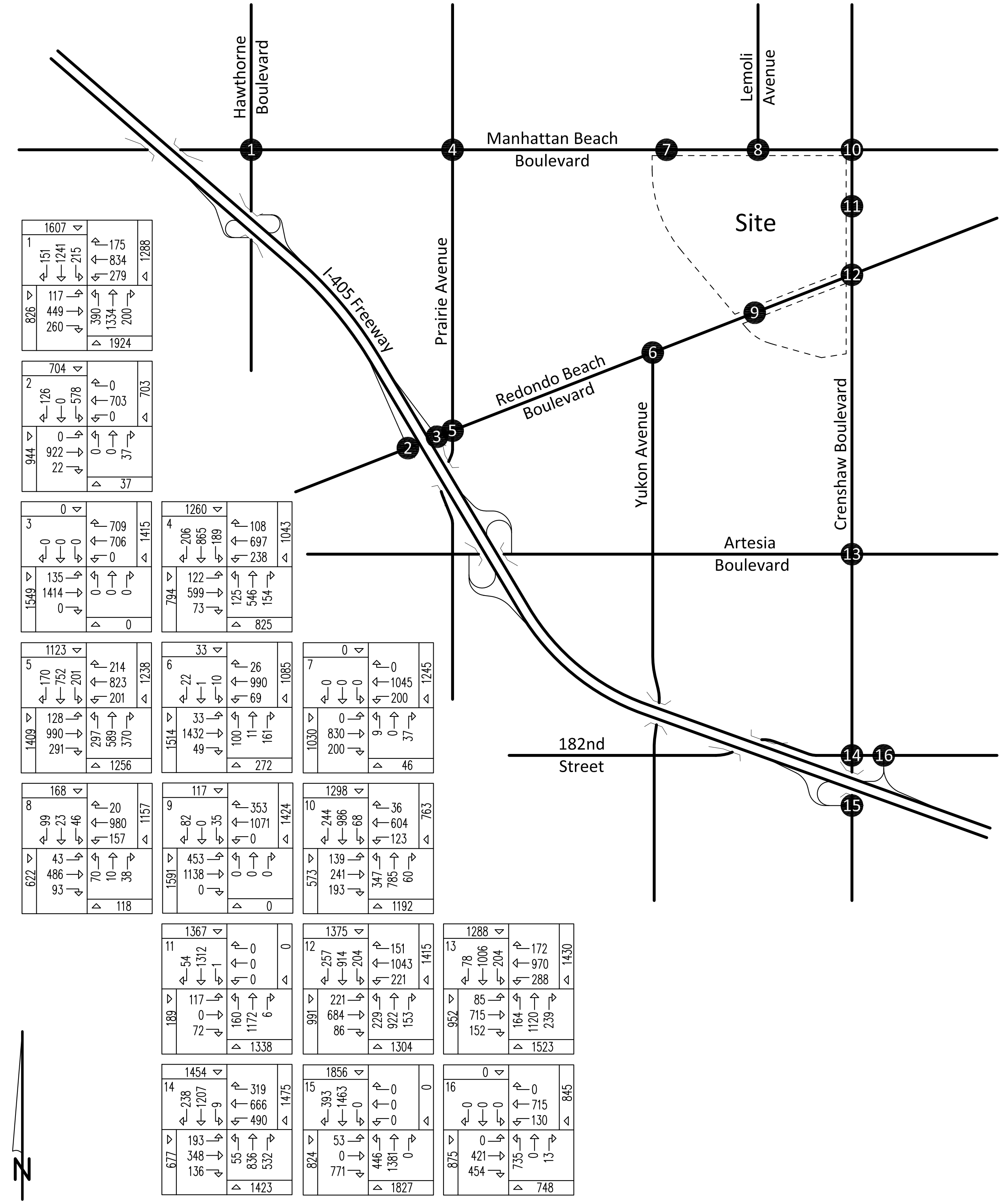
Figure 33
Year 2020 With Project
Morning Peak Hour Intersection Turning Movement Volumes



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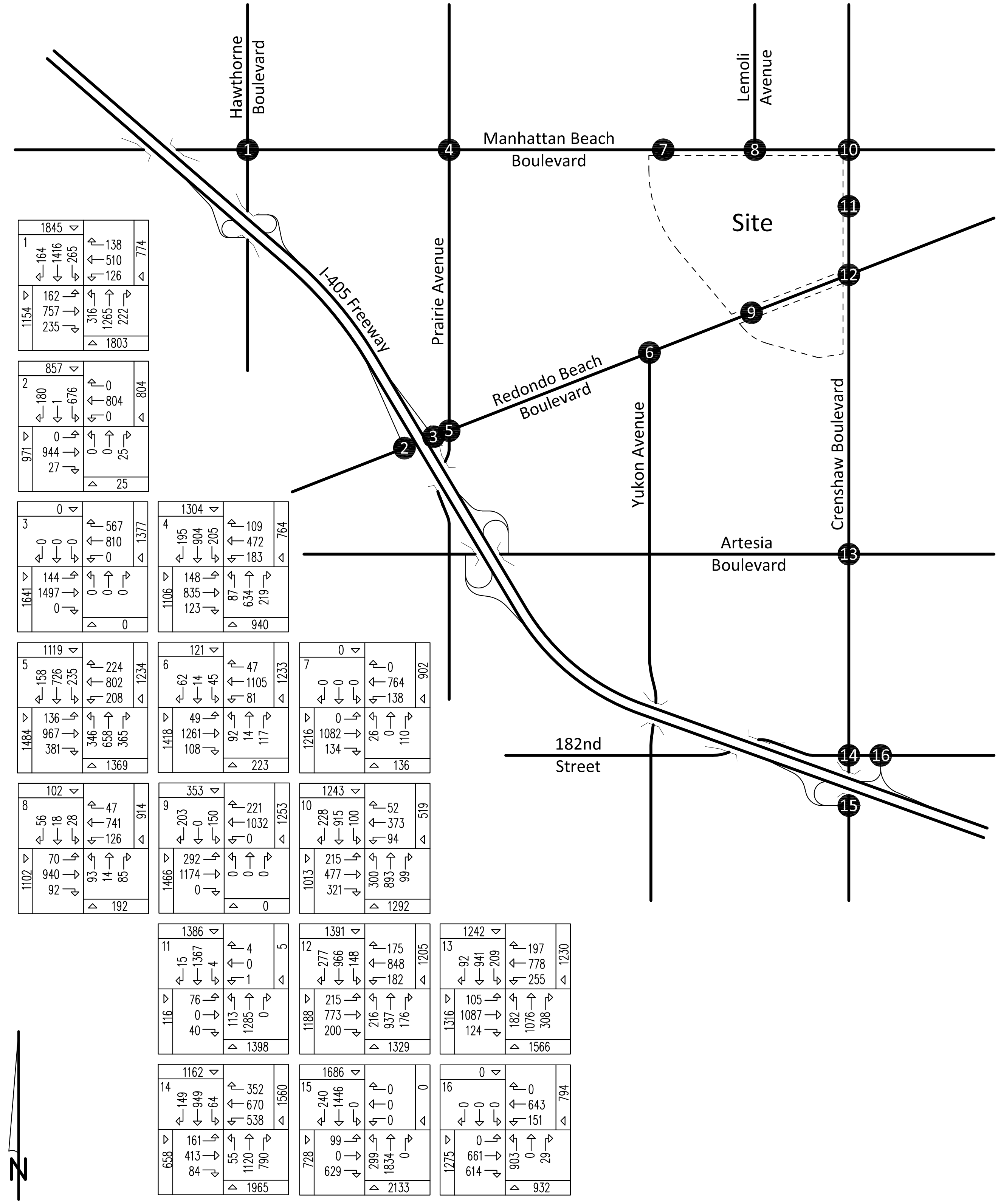
KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 34
Year 2020 With Project
Evening Peak Hour Intersection Turning Movement Volumes



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KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

X. Recommendations

A. On-Site Mitigation Measures

1. The sight distance at each project access on campus shall be reviewed with respect to California Department of Transportation/County of Los Angeles standards in conjunction with the preparation of final grading, landscape, and street improvement plans. Facilities Planning and Services shall monitor compliance.

2. The college shall implement the circulation recommendations included on Figure 35 concurrent with adjacent development on campus. Facilities Planning and Services shall monitor compliance.

3. The college shall implement the Transportation Demand Management mitigation measures required by the Los Angeles County Congestion Management Program for projects of 100,000 or more square feet of floor space. Facilities Planning and Services shall monitor compliance.

4. The college shall implement on-site traffic signing and striping in conjunction with detailed construction plans for the project. Facilities Planning and Services shall monitor compliance.

B. Off-Site Mitigation Measures

1. Prior to Year 2020, the California Department of Transportation shall implement the lane improvements at the I-405 Freeway SB Ramps/Redondo Beach Boulevard intersection (see Table 12). The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The California Department of Transportation shall monitor compliance.

2. Prior to Year 2020, the County of Los Angeles/City of Lawndale shall implement the lane improvements at the Prairie Avenue/Redondo Beach Boulevard intersection (see Table 12) through their Capital Improvement Program. The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Public Works Department of the County of Los Angeles/Engineering Department of the City of Lawndale shall monitor compliance.

3. Prior to Year 2020, the college shall implement the lane improvements at the El Camino College NW Entrance/Manhattan Beach Boulevard intersection (see Table 12). The Public Works Department of the County of Los Angeles shall monitor compliance.

4. Prior to Year 2020, the college shall implement the lane improvements at the El Camino College SW Entrance/Redondo Beach Boulevard and Crenshaw Boulevard/Redondo Beach Boulevard intersections (see Table 12). The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway

improvements. The Public Works Department of the County of Los Angeles/Engineering Department of the City of Torrance shall monitor compliance.

5. Prior to Year 2020, the County of Los Angeles/City of Gardena shall implement the lane improvements at the Crenshaw Boulevard/Manhattan Beach Boulevard intersection (see Table 12) through their Capital Improvement Program. The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Public Works Department of the County of Los Angeles/Engineering Department of the City of Gardena shall monitor compliance.

6. Prior to Year 2020, the City of Torrance shall implement the lane improvements at the Crenshaw Boulevard/Artesia Boulevard and Crenshaw Boulevard/182nd Street intersections (see Table 12) through their Capital Improvement Program. The college shall contribute its fair share cost for these improvements (less any offsets from gas tax funds for roadway improvements. The Engineering Department of the City of Torrance shall monitor compliance.

C. <u>Construction Mitigation Measures</u>

1. Contractors shall submit traffic handling plans to Facilities Planning and Services and to the Campus Police Department prior to commencement of demolition or grading. The plans and documents shall comply with the *Work Area Traffic Control Handbook (WATCH)*. Facilities Planning and Services shall approve the final plans and monitor compliance.

2. Demolition and construction contracts shall include plans for temporary sidewalk closures, pedestrian safety on adjacent sidewalks, and vehicle and pedestrian safety along the project perimeter, along construction equipment haul routes on campus and near on-site construction parking areas. These plans shall be reviewed by the Campus Police Division and approved by Facilities Planning and Services. Facilities Planning and Services shall monitor compliance.

3. Construction contractors shall post a flag person at locations near a construction site during major truck hauling activities to protect pedestrians from conflicts with heavy equipment entering or leaving the project site. Facilities Planning and Services shall monitor compliance.

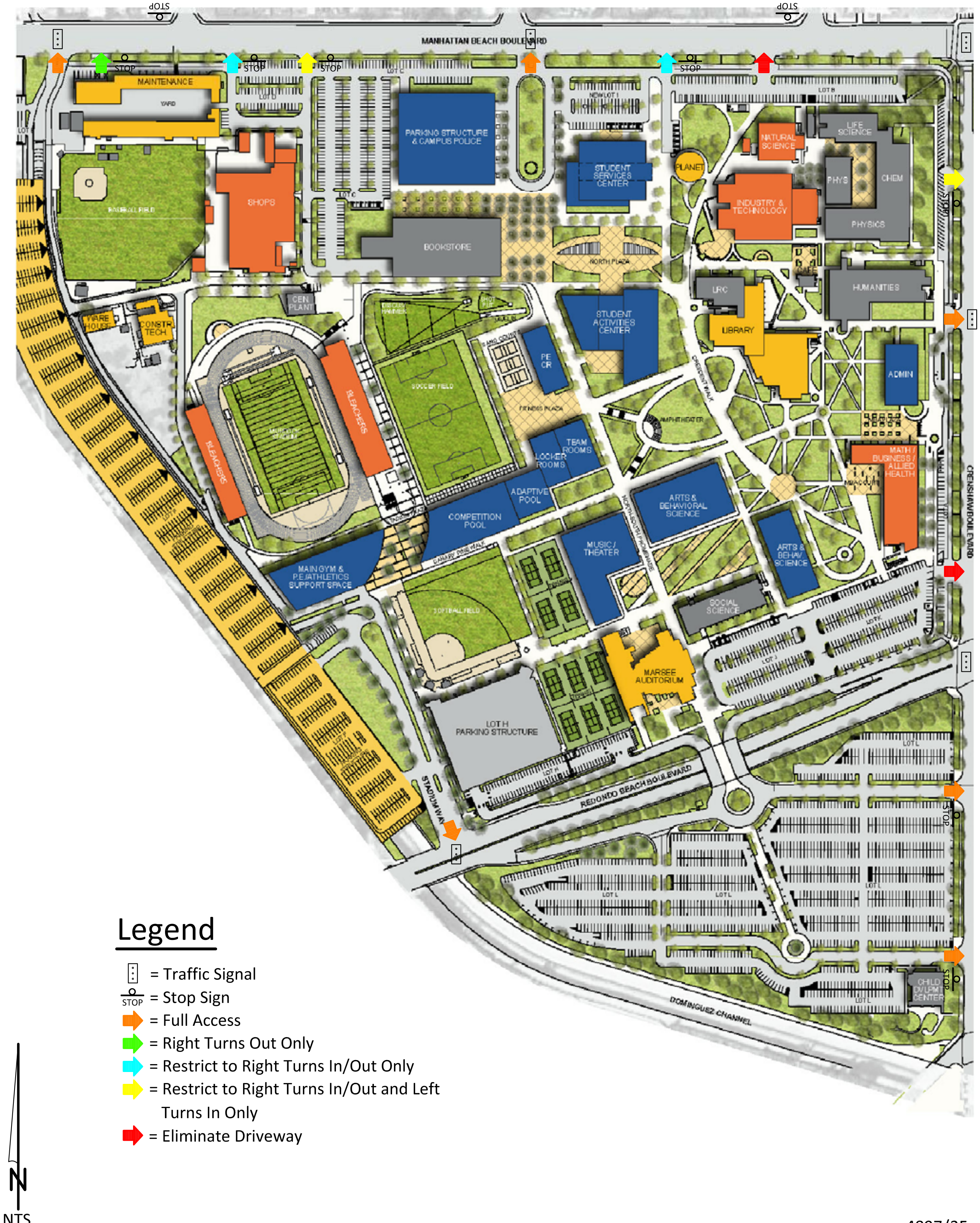
4. Each project construction site shall be adequately barricaded with temporary fencing to secure construction equipment, minimize trespassing, vandalism, short-cut attractions, and reduce hazards during demolition and construction. Facilities Planning and Services shall monitor compliance.

5. The college shall consult with the effected cities on a truck haul route plan for all major earth hauling activities with more than eighty (80) trucks per day shall be established. Hauling of earth materials shall only occur between 9:00 AM and 2:00 PM Monday through Friday and between 8:00 AM and 5:00 PM on Saturdays. Light duty trucks with a weight of no more than 8,500 pounds are exempted from this restriction. Facilities Planning and Services shall ensure compliance.

D. <u>Transportation System Management Actions</u>

1. Schedule/fee information for the Los Angeles County Metropolitan Transportation Authority (MTA), Torrance Transit, Municipal Area Express (MAX), and the Gardena Municipal Bus Line shall be made available for students for each term. The college shall offer students discount bus passes for transit lines which offer them. Facilities Planning and Services shall monitor compliance.

Figure 35
Circulation Recommendations



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Appendices

Appendix A – Glossary of Transportation Terms

Appendix B – Traffic Count Worksheets

Appendix C – Explanation and Calculation of Intersection Capacity Utilization

Appendix D – Traffic Signal Warrant Worksheet

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quality of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Traffic Count Worksheets

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Lawndale
N/S: Hawthorne Boulevard
E/W: Manhattan Beach Boulevard
Weather: Sunny

File Name : LNDHAMAAM
Site Code : 00000006
Start Date : 9/18/2012

Groups Printed- Total Volume

	Hawthorne Boulevard Southbound				Manhattan Beach Boulevard Westbound				Hawthorne Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	180	15	212	29	147	17	193	66	180	18	264	7	51	30	88	757
07:15 AM	27	192	35	254	61	166	31	258	83	235	31	349	24	95	36	155	1016
07:30 AM	52	324	40	416	70	198	43	311	116	345	41	502	26	93	43	162	1391
07:45 AM	58	319	38	415	86	251	42	379	106	320	51	477	30	113	67	210	1481
Total	154	1015	128	1297	246	762	133	1141	371	1080	141	1592	87	352	176	615	4645
08:00 AM	47	319	32	398	52	171	48	271	86	347	47	480	28	122	72	222	1371
08:15 AM	40	258	38	336	62	189	36	287	76	300	40	416	31	86	74	191	1230
08:30 AM	46	222	35	303	49	167	27	243	81	261	24	366	34	98	69	201	1113
08:45 AM	30	208	21	259	45	145	32	222	87	224	17	328	31	90	48	169	978
Total	163	1007	126	1296	208	672	143	1023	330	1132	128	1590	124	396	263	783	4692
Grand Total	317	2022	254	2593	454	1434	276	2164	701	2212	269	3182	211	748	439	1398	9337
Apprch %	12.2	78	9.8		21	66.3	12.8		22	69.5	8.5		15.1	53.5	31.4		
Total %	3.4	21.7	2.7	27.8	4.9	15.4	3	23.2	7.5	23.7	2.9	34.1	2.3	8	4.7	15	

	Hawthorne Boulevard Southbound				Manhattan Beach Boulevard Westbound				Hawthorne Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	52	**324**	**40**	**416**	70	198	43	311	**116**	345	41	**502**	26	93	43	162	1391
07:45 AM	**58**	319	38	415	**86**	**251**	42	**379**	106	320	**51**	477	30	113	67	210	**1481**
08:00 AM	47	319	32	398	52	171	**48**	271	86	**347**	47	480	28	**122**	72	**222**	1371
08:15 AM	40	258	38	336	62	189	36	287	76	300	40	416	**31**	86	**74**	191	1230
Total Volume	197	1220	148	1565	270	809	169	1248	384	1312	179	1875	115	414	256	785	5473
% App. Total	12.6	78	9.5		21.6	64.8	13.5		20.5	70	9.5		14.6	52.7	32.6		
PHF	.849	.941	.925	.941	.785	.806	.880	.823	.828	.945	.877	.934	.927	.848	.865	.884	.924

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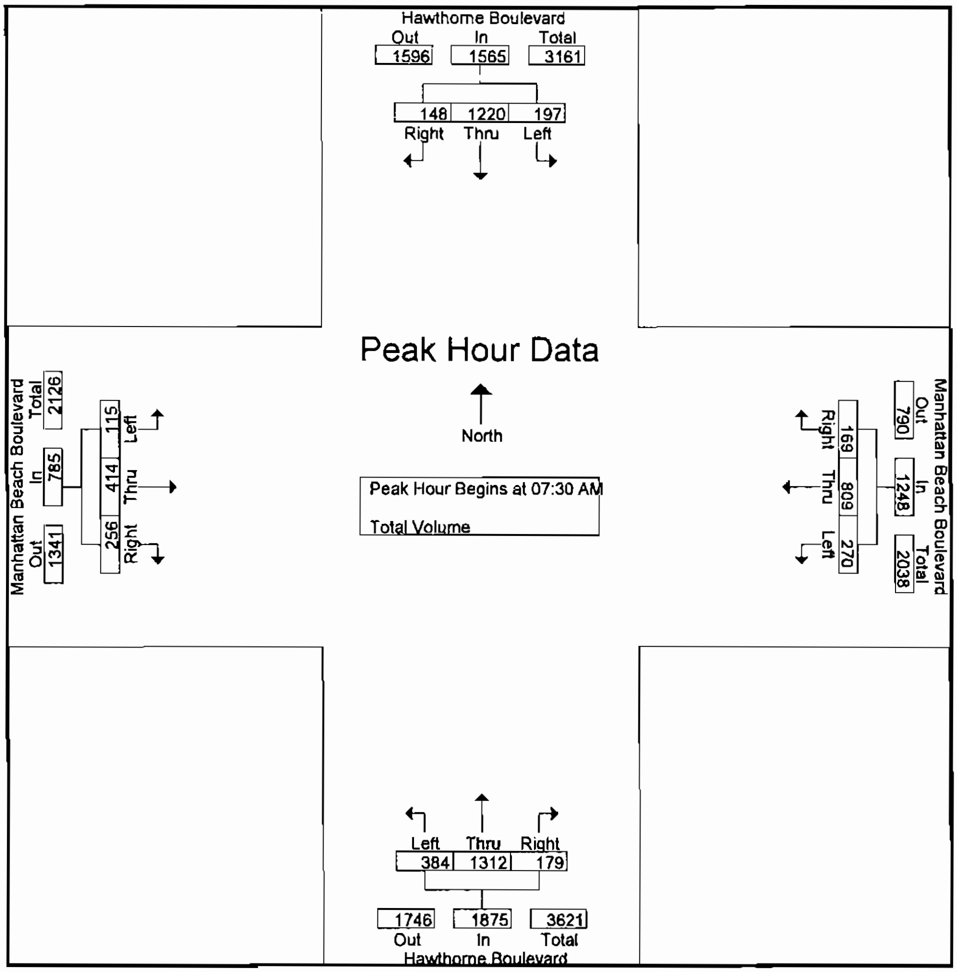
City of Lawndale
N/S: Hawthorne Boulevard
E/W: Manhattan Beach Boulevard
Weather: Sunny

File Name : LNDHAMAAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:45 AM			
+0 mins.	52	**324**	**40**	**416**	70	198	43	311	**116**	345	**41**	**502**	30	113	67	210
+15 mins.	**58**	319	38	415	**86**	**251**	42	**379**	106	320	**51**	477	28	**122**	72	222
+30 mins.	47	319	32	398	52	171	**48**	271	86	**347**	47	480	31	86	**74**	191
+45 mins.	40	258	38	336	62	189	36	287	76	300	40	416	**34**	98	69	201
Total Volume	197	1220	148	1565	270	809	169	1248	384	1312	179	1875	123	419	282	824
% App. Total	12.6	78	9.5		21.6	64.8	13.5		20.5	70	9.5		14.9	50.8	34.2	
PHF	.849	.941	.925	.941	.785	.806	.880	.823	.828	.945	.877	.934	.904	.859	.953	.928

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City of Lawndale
N/S: Hawthorne Boulevard
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File Name : LNDHAMAPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Hawthorne Boulevard Southbound				Manhattan Beach Boulevard Westbound				Hawthorne Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	48	264	25	337	26	94	32	152	59	330	52	441	33	148	62	243	1173
04:15 PM	54	253	25	332	34	119	28	181	59	289	54	402	37	158	65	260	1175
04:30 PM	53	269	34	356	38	121	37	196	69	306	48	423	36	134	68	238	1213
04:45 PM	44	274	43	361	26	120	30	176	52	295	43	390	42	176	64	282	1209
Total	199	1060	127	1386	124	454	127	705	239	1220	197	1656	148	616	259	1023	4770
05:00 PM	62	319	40	421	33	105	37	175	76	320	47	443	32	191	59	282	1321
05:15 PM	42	315	40	397	33	128	30	191	81	286	51	418	41	173	60	274	1280
05:30 PM	64	396	43	503	23	118	28	169	67	341	57	465	41	170	57	268	1405
05:45 PM	81	362	38	481	28	138	35	201	87	297	49	433	45	189	55	289	1404
Total	249	1392	161	1802	117	489	130	736	311	1244	204	1759	159	723	231	1113	5410
Grand Total	448	2452	288	3188	241	943	257	1441	550	2464	401	3415	307	1339	490	2136	10180
Apprch %	14.1	76.9	9		16.7	65.4	17.8		16.1	72.2	11.7		14.4	62.7	22.9		
Total %	4.4	24.1	2.8	31.3	2.4	9.3	2.5	14.2	5.4	24.2	3.9	33.5	3	13.2	4.8	21	

	Hawthorne Boulevard Southbound				Manhattan Beach Boulevard Westbound				Hawthorne Boulevard Northbound				Manhattan Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	62	319	40	421	**33**	105	**37**	175	76	320	47	443	32	**191**	59	282	1321
05:15 PM	42	315	40	397	33	128	30	191	81	286	51	418	41	173	**60**	274	1280
05:30 PM	64	**396**	**43**	**503**	23	118	28	169	67	**341**	**57**	**465**	41	170	57	268	**1405**
05:45 PM	**81**	362	38	481	28	**138**	35	**201**	**87**	297	49	433	**45**	189	55	**289**	1404
Total Volume	249	1392	161	1802	117	489	130	736	311	1244	204	1759	159	723	231	1113	5410
% App. Total	13.8	77.2	8.9		15.9	66.4	17.7		17.7	70.7	11.6		14.3	65	20.8		
PHF	.769	.879	.936	.896	.886	.886	.878	.915	.894	.912	.895	.946	.883	.946	.963	.963	.963

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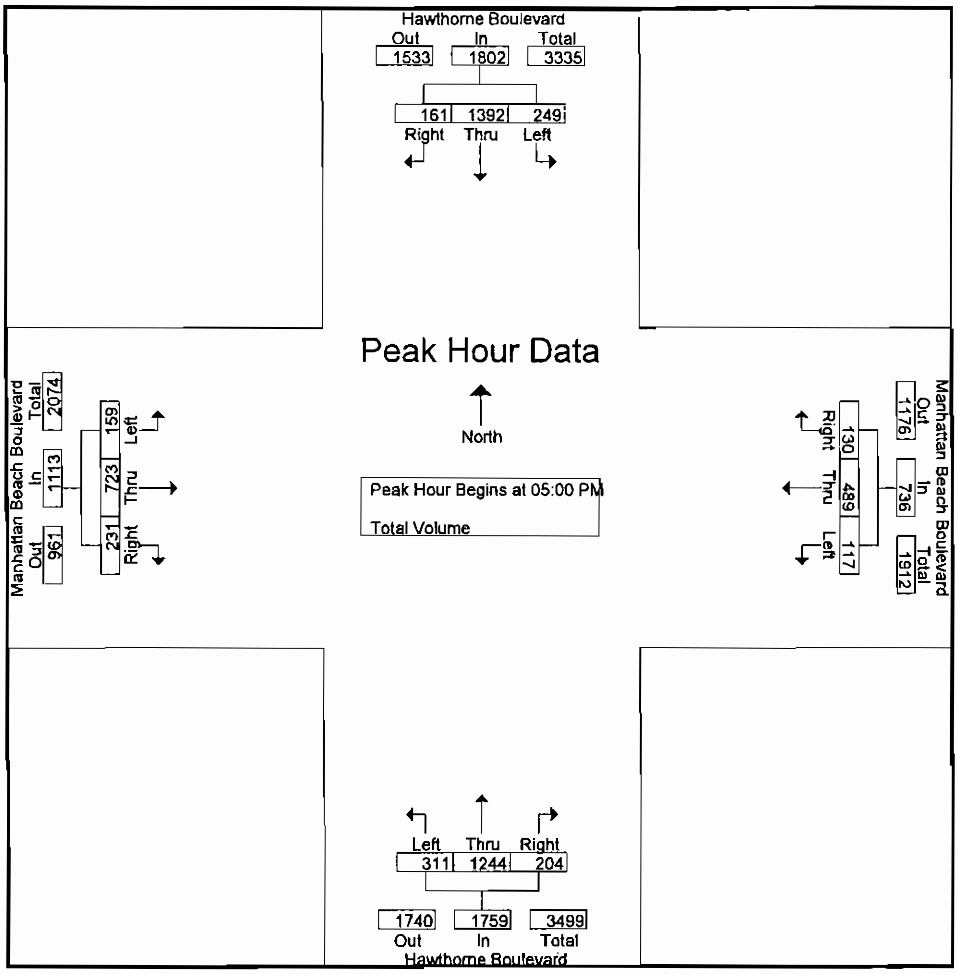

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				05:00 PM				05:00 PM			
+0 mins.	62	319	40	421	38	121	37	196	76	320	47	443	32	191	59	282
+15 mins.	42	315	40	397	26	120	30	176	81	286	51	418	41	173	60	274
+30 mins.	64	396	43	503	33	105	37	175	67	341	57	465	41	170	57	268
+45 mins.	81	362	38	481	33	128	30	191	87	297	49	433	45	189	55	289
Total Volume	249	1392	161	1802	130	474	134	738	311	1244	204	1759	159	723	231	1113
% App. Total	13.8	77.2	8.9		17.6	64.2	18.2		17.7	70.7	11.6		14.3	65	20.8	
PHF	.769	.879	.936	.896	.855	.926	.905	.941	.894	.912	.895	.946	.883	.946	.963	.963

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_001 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	I-405 Freeway SB Ramps			I-405 Freeway SB Ramps			Redondo Beach Blvd			Redondo Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM			4	73	1	13		119	3		99		312
7:15 AM			7	120	0	18		201	7		128		481
7:30 AM			9	136	0	26		260	4		173		608
7:45 AM			8	147	0	41		223	5		175		599
8:00 AM			11	105	0	27		208	3		170		524
8:15 AM			8	137	0	30		189	10		159		533
8:30 AM			13	135	0	42		196	5		138		529
8:45 AM			7	143	0	25		176	5		166		522

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	67	996	1	222	0	1572	42	0	1208	0	4108
APPROACH %'s :	0.00%	0.00%	100.00%	81.71%	0.08%	18.21%	0.00%	97.40%	2.60%	0.00%	100.00%	0.00%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	36	525	0	124	0	880	22	0	677	0	2264
PEAK HR FACTOR :		0.818			0.863			0.854			0.967		0.931

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_001 | **Day:** TUESDAY

City: City of Torrance | **Date:** 09/18/2012

PM

NS/EW Streets:	I-405 Freeway SB Ramps			I-405 Freeway SB Ramps			Redondo Beach Blvd			Redondo Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM			4	113	0	25		217	5		162		526
4:15 PM			4	119	0	45		210	9		191		578
4:30 PM			6	121	0	35		236	6		144		548
4:45 PM			5	155	0	36		180	8		208		592
5:00 PM			5	131	0	50		220	8		207		621
5:15 PM			9	157	1	46		224	4		178		619
5:30 PM			8	168	0	38		221	6		185		626
5:45 PM			3	174	0	43		243	9		206		678
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	44	1138	1	318	0	1751	55	0	1481	0	4788
APPROACH %'s :	0.00%	0.00%	100.00%	78.11%	0.07%	21.83%	0.00%	96.95%	3.05%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	5:00 PM												TOTAL
PEAK HR VOL :	0	0	25	630	1	177	0	908	27	0	776	0	2544
PEAK HR FACTOR :		0.694			0.931			0.928			0.937		0.938

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_002 | **Day:** TUESDAY

City: City of Torrance | **Date:** 09/18/2012

AM

NS/EW Streets:	I-405 Freeway NB Ramps			I-405 Freeway NB Ramps			Redondo Beach Blvd			Redondo Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM							29	171			99	170	469
7:15 AM							28	284			130	173	615
7:30 AM							28	383			177	184	772
7:45 AM							34	352			177	172	735
8:00 AM							31	292			169	169	661
8:15 AM							40	294			157	163	654
8:30 AM							38	314			145	153	650
8:45 AM							28	300			163	144	635

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	256	2390	0	0	1217	1328	5191
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	9.67%	90.33%	0.00%	0.00%	47.82%	52.18%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	133	1321	0	0	680	688	2822
PEAK HR FACTOR :		0.000			0.000			0.884			0.947		0.914

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_002 | **Day:** TUESDAY

City: City of Torrance | **Date:** 09/18/2012

PM

NS/EW Streets:	I-405 Freeway NB Ramps			I-405 Freeway NB Ramps			Redondo Beach Blvd			Redondo Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM							36	301			163	114	614
4:15 PM							37	301			180	124	642
4:30 PM							40	304			145	128	617
4:45 PM							32	318			205	129	684
5:00 PM							33	318			208	117	676
5:15 PM							34	352			181	141	708
5:30 PM							40	353			188	142	723
5:45 PM							35	394			205	141	775

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	287	2641	0	0	1475	1036	5439
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	9.80%	90.20%	0.00%	0.00%	58.74%	41.26%	

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL. :	0	0	0	0	0	0	142	1417	0	0	782	541	2882
PEAK HR FACTOR :		0.000			0.000			0.909			0.956		0.930

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_003 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	Prairie Ave			Prairie Ave			Manhattan Beach Blvd			Manhattan Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	28	116	23	10	130	23	17	59	7	43	103	12	571
7:15 AM	43	141	28	43	217	42	23	104	17	51	134	10	853
7:30 AM	27	121	38	50	240	47	24	128	25	84	181	29	994
7:45 AM	30	128	40	42	200	54	33	163	18	45	179	35	967
8:00 AM	23	147	35	36	194	60	40	134	12	52	175	29	937
8:15 AM	26	128	30	30	204	45	27	95	16	46	133	21	801
8:30 AM	36	123	39	24	222	37	22	87	14	49	123	12	788
8:45 AM	23	122	30	33	204	44	45	125	19	37	127	15	824

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	236	1026	263	268	1611	352	231	895	128	407	1155	163	6735
APPROACH %'s :	15.48%	67.28%	17.25%	12.01%	72.21%	15.78%	18.42%	71.37%	10.21%	23.59%	66.96%	9.45%	
PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL. :	123	537	141	171	851	203	120	529	72	232	669	103	3751
PEAK HR FACTOR :		0.945			0.909			0.842			0.854		0.943

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_003 | **Day:** TUESDAY

City: City of Torrance | **Date:** 09/18/2012

PM

NS/EW Streets:	Prairie Ave			Prairie Ave			Manhattan Beach Blvd			Manhattan Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	16	153	34	28	187	41	37	136	27	39	99	22	819
4:15 PM	27	169	49	19	193	31	42	148	28	48	65	30	849
4:30 PM	19	141	51	28	186	29	39	156	35	43	96	26	849
4:45 PM	23	152	39	32	211	33	31	148	28	38	120	16	871
5:00 PM	21	160	39	32	201	42	37	192	23	47	116	28	938
5:15 PM	24	151	34	42	197	40	41	169	38	34	120	20	910
5:30 PM	25	162	72	45	255	48	34	202	29	41	111	33	1057
5:45 PM	16	150	62	71	236	62	34	211	31	54	92	20	1039

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	171	1238	380	297	1666	326	295	1362	239	344	819	195	7332
APPROACH %'s :	9.56%	69.20%	21.24%	12.98%	72.78%	14.24%	15.56%	71.84%	12.61%	25.33%	60.31%	14.36%	

PEAK HR START TIME :	5:00 PM												TOTAL
PEAK HR VOL :	86	623	207	190	889	192	146	774	121	176	439	101	3944
PEAK HR FACTOR :		0.884			0.861			0.943			0.937		0.933

CONTROL :

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Torrance
N/S: Prairie Avenue
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORPRREAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Prairie Avenue Southbound				Redondo Beach Boulevard Westbound				Prairie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	24	133	45	202	34	164	35	233	79	104	45	228	21	136	47	204	867
07:15 AM	43	183	31	257	43	171	34	248	77	137	64	278	18	182	56	256	1039
07:30 AM	57	194	44	295	59	201	49	309	76	121	106	303	32	254	58	344	1251
07:45 AM	49	195	36	280	52	216	65	333	76	131	110	317	37	272	65	374	1304
Total	173	705	156	1034	188	752	183	1123	308	493	325	1126	108	844	226	1178	4461
08:00 AM	48	164	43	255	45	197	53	295	78	163	83	324	26	193	71	290	1164
08:15 AM	44	185	44	273	41	172	43	256	62	153	61	276	31	185	92	308	1113
08:30 AM	59	164	41	264	49	192	44	285	73	135	58	266	24	209	78	311	1126
08:45 AM	50	189	28	267	33	184	45	262	66	144	73	283	28	219	88	335	1147
Total	201	702	156	1059	168	745	185	1098	279	595	275	1149	109	806	329	1244	4550
Grand Total	374	1407	312	2093	356	1497	368	2221	587	1088	600	2275	217	1650	555	2422	9011
Apprch %	17.9	67.2	14.9		16	67.4	16.6		25.8	47.8	26.4		9	68.1	22.9		
Total %	4.2	15.6	3.5	23.2	4	16.6	4.1	24.6	6.5	12.1	6.7	25.2	2.4	18.3	6.2	26.9	

	Prairie Avenue Southbound				Redondo Beach Boulevard Westbound				Prairie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**57**	194	**44**	**295**	**59**	201	49	309	76	121	106	303	32	254	58	344	1251
07:45 AM	49	**195**	36	280	52	**216**	**65**	**333**	76	131	**110**	317	**37**	**272**	65	**374**	**1304**
08:00 AM	48	164	43	255	45	197	53	295	**78**	**163**	83	**324**	26	193	71	290	1164
08:15 AM	44	185	44	273	41	172	43	256	62	153	61	276	31	185	**92**	308	1113
Total Volume	198	738	167	1103	197	786	210	1193	292	568	360	1220	126	904	286	1316	4832
% App. Total	18	66.9	15.1		16.5	65.9	17.6		23.9	46.6	29.5		9.6	68.7	21.7		
PHF	.868	.946	.949	.935	.835	.910	.808	.896	.936	.871	.818	.941	.851	.831	.777	.880	.926

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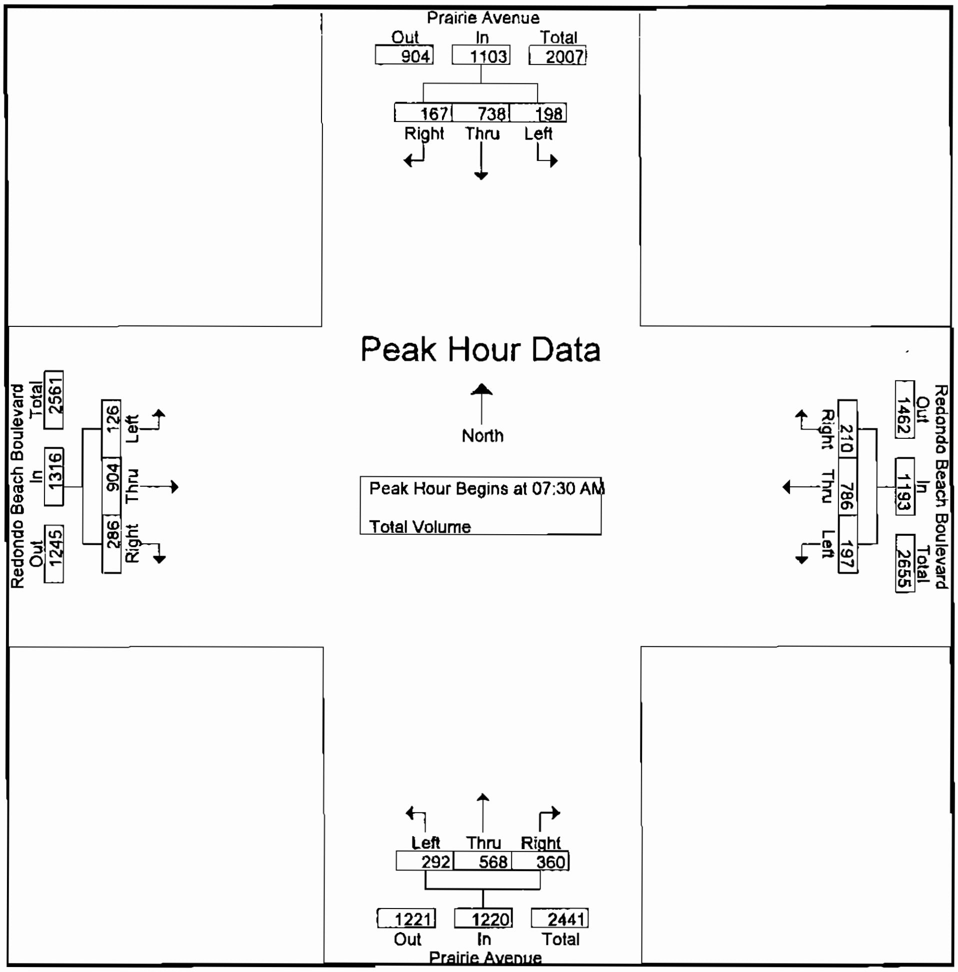
City of Torrance
N/S: Prairie Avenue
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORPRREAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	**57**	194	**44**	295	**59**	201	49	309	77	137	64	278	32	254	58	344
+15 mins.	49	**195**	36	280	52	**216**	**65**	**333**	76	121	106	303	**37**	**272**	65	**374**
+30 mins.	48	164	43	255	45	197	53	295	76	131	**110**	317	26	193	71	290
+45 mins.	44	185	44	273	41	172	43	256	**78**	**163**	83	**324**	31	185	**92**	308
Total Volume	198	738	167	1103	197	786	210	1193	307	552	363	1222	126	904	286	1316
% App. Total	18	66.9	15.1		16.5	65.9	17.6		25.1	45.2	29.7		9.6	68.7	21.7	
PHF	.868	.946	.949	.935	.835	.910	.808	.896	.984	.847	.825	.943	.851	.831	.777	.880

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City of Torrance
N/S: Prairie Avenue
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORPRREPM
Site Code : 00000006
Start Date : 9/18/2012

Groups Printed- Total Volume

	Prairie Avenue Southbound				Redondo Beach Boulevard Westbound				Prairie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	40	145	39	224	50	167	46	263	63	146	60	269	39	178	58	275	1031
04:15 PM	52	154	43	249	44	179	37	260	72	152	47	271	29	167	73	269	1049
04:30 PM	39	173	36	248	40	183	43	266	85	173	69	327	40	155	70	265	1106
04:45 PM	65	163	45	273	47	195	44	286	63	187	56	306	31	191	74	296	1161
Total	196	635	163	994	181	724	170	1075	283	658	232	1173	139	691	275	1105	4347
05:00 PM	49	174	38	261	45	193	57	295	80	144	64	288	26	205	72	303	1147
05:15 PM	60	183	40	283	56	196	55	307	94	148	78	320	44	220	97	361	1271
05:30 PM	62	185	38	285	49	179	59	287	81	198	119	398	36	233	100	369	1339
05:45 PM	60	168	39	267	54	189	49	292	85	148	95	328	28	238	106	372	1259
Total	231	710	155	1096	204	757	220	1181	340	638	356	1334	134	896	375	1405	5016
Grand Total	427	1345	318	2090	385	1481	390	2256	623	1296	588	2507	273	1587	650	2510	9363
Apprch %	20.4	64.4	15.2		17.1	65.6	17.3		24.9	51.7	23.5		10.9	63.2	25.9		
Total %	4.6	14.4	3.4	22.3	4.1	15.8	4.2	24.1	6.7	13.8	6.3	26.8	2.9	16.9	6.9	26.8	

	Prairie Avenue Southbound				Redondo Beach Boulevard Westbound				Prairie Avenue Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	49	174	38	261	45	193	57	295	80	144	64	288	26	205	72	303	1147
05:15 PM	60	183	40	283	56	196	55	307	94	148	78	320	44	220	97	361	1271
05:30 PM	62	185	38	285	49	179	59	287	81	198	119	398	36	233	100	369	1339
05:45 PM	60	168	39	267	54	189	49	292	85	148	95	328	28	238	106	372	1259
Total Volume	231	710	155	1096	204	757	220	1181	340	638	356	1334	134	896	375	1405	5016
% App. Total	21.1	64.8	14.1		17.3	64.1	18.6		25.5	47.8	26.7		9.5	63.8	26.7		
PHF	.931	.959	.969	.961	.911	.966	.932	.962	.904	.806	.748	.838	.761	.941	.884	.944	.937

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City of Torrance
N/S: Prairie Avenue
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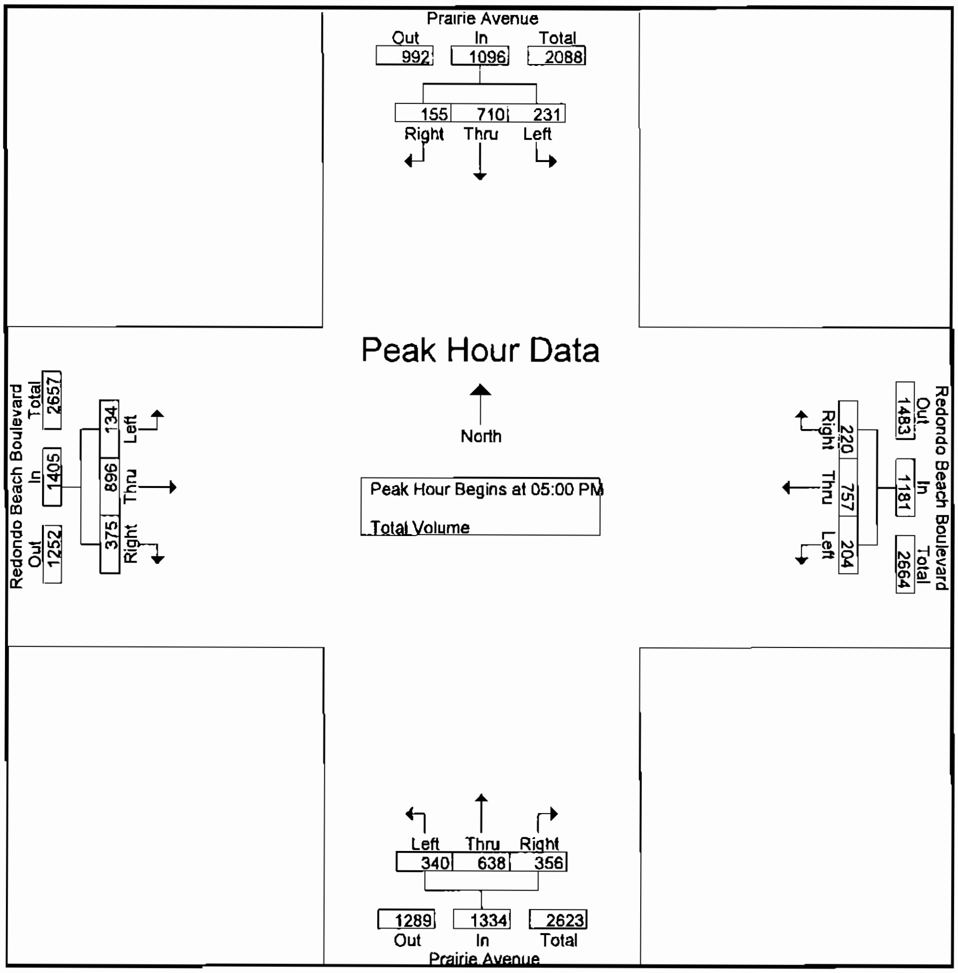
File Name : TORPRREPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**65**	163	**45**	273	45	193	57	295	80	144	64	288	26	205	72	303
+15 mins.	49	174	38	261	**56**	**196**	55	**307**	**94**	148	78	320	**44**	220	97	361
+30 mins.	60	183	40	283	49	179	**59**	287	81	**198**	**119**	**398**	36	233	100	369
+45 mins.	62	**185**	38	**285**	54	189	49	292	85	148	95	328	28	**238**	**106**	**372**
Total Volume	236	705	161	1102	204	757	220	1181	340	638	356	1334	134	896	375	1405
% App. Total	21.4	64	14.6		17.3	64.1	18.6		25.5	47.8	26.7		9.5	63.8	26.7	
PHF	.908	.953	.894	.967	.911	.966	.932	.962	.904	.806	.748	.838	.761	.941	.884	.944

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_004 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	Yukon Ave			Yukon Ave			Redondo Beach Blvd			Redondo Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	15	0	11	5	3	4	2	160	4	5	142	5	356
7:15 AM	21	5	26	4	0	4	6	280	9	9	230	6	600
7:30 AM	23	0	36	3	0	6	7	419	12	24	264	6	800
7:45 AM	33	3	54	1	0	5	10	368	11	22	255	12	774
8:00 AM	21	3	25	2	1	7	9	268	16	9	200	2	563
8:15 AM	20	0	28	2	0	2	6	262	16	9	224	9	578
8:30 AM	31	3	21	6	0	4	4	285	23	12	224	1	614
8:45 AM	24	3	25	6	0	6	11	307	18	10	179	8	597

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	188	17	226	29	4	38	55	2349	109	100	1718	49	4882
APPROACH %'s :	43.62%	3.94%	52.44%	40.85%	5.63%	53.52%	2.19%	93.47%	4.34%	5.36%	92.02%	2.62%	

PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL :	98	11	141	10	1	22	32	1335	48	64	949	26	2737
PEAK HR FACTOR :		0.694			0.825			0.808			0.884		0.855

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_004 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

PM

NS/EW Streets:	Yukon Ave			Yukon Ave			Redondo Beach Blvd			Redondo Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	26	5	15	9	2	6	11	237	27	13	201	12	564
4:15 PM	20	2	15	7	2	16	9	220	18	25	254	9	597
4:30 PM	17	4	19	11	2	11	13	253	21	14	244	16	625
4:45 PM	16	9	15	14	6	11	16	245	22	25	270	22	671
5:00 PM	20	3	18	14	6	18	21	260	22	21	292	11	706
5:15 PM	26	5	23	11	1	8	8	305	17	14	249	8	675
5:30 PM	24	1	29	10	2	13	9	296	43	17	265	11	720
5:45 PM	20	5	30	9	5	22	10	321	24	21	247	16	730

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	169	34	164	85	26	105	97	2137	194	150	2022	105	5288
APPROACH %'s :	46.05%	9.26%	44.69%	39.35%	12.04%	48.61%	4.00%	88.01%	7.99%	6.59%	88.80%	4.61%	

PEAK HR START TIME :	5:00 PM												**TOTAL**
PEAK HR VOL. :	90	14	100	44	14	61	48	1182	106	73	1053	46	2831
PEAK HR FACTOR :		0.927			0.783			0.941			0.904		0.970

CONTROL :

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City of Torrance
N/S: El Camino College NW Driveway
E/W: Manhattan Beach Boulevard
Weather: Sunny

File Name : TORNDWMBAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Manhattan Beach Boulevard Westbound			El Camino College Northwest Driveway Northbound			Manhattan Beach Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	19	162	181	0	2	2	105	7	112	295
07:15 AM	29	231	260	0	1	1	138	32	170	431
07:30 AM	41	284	325	0	0	0	192	64	256	581
07:45 AM	37	295	332	0	5	5	207	42	249	586
Total	126	972	1098	0	8	8	642	145	787	1893
08:00 AM	21	208	229	0	5	5	188	22	210	444
08:15 AM	16	227	243	0	10	10	187	25	212	465
08:30 AM	23	173	196	1	10	11	137	25	162	369
08:45 AM	20	159	179	3	11	14	170	49	219	412
Total	80	767	847	4	36	40	682	121	803	1690
Grand Total	206	1739	1945	4	44	48	1324	266	1590	3583
Apprch %	10.6	89.4		8.3	91.7		83.3	16.7		
Total %	5.7	48.5	54.3	0.1	1.2	1.3	37	7.4	44.4	

	Manhattan Beach Boulevard Westbound			El Camino College Northwest Driveway Northbound			Manhattan Beach Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**41**	284	325	0	0	0	192	**64**	**256**	581
07:45 AM	37	**295**	**332**	0	5	5	**207**	42	249	**586**
08:00 AM	21	208	229	0	5	5	188	22	210	444
08:15 AM	16	227	243	0	**10**	**10**	187	25	212	465
Total Volume	115	1014	1129	0	20	20	774	153	927	2076
% App. Total	10.2	89.8		0	100		83.5	16.5		
PHF	.701	.859	.850	.000	.500	.500	.935	.598	.905	.886

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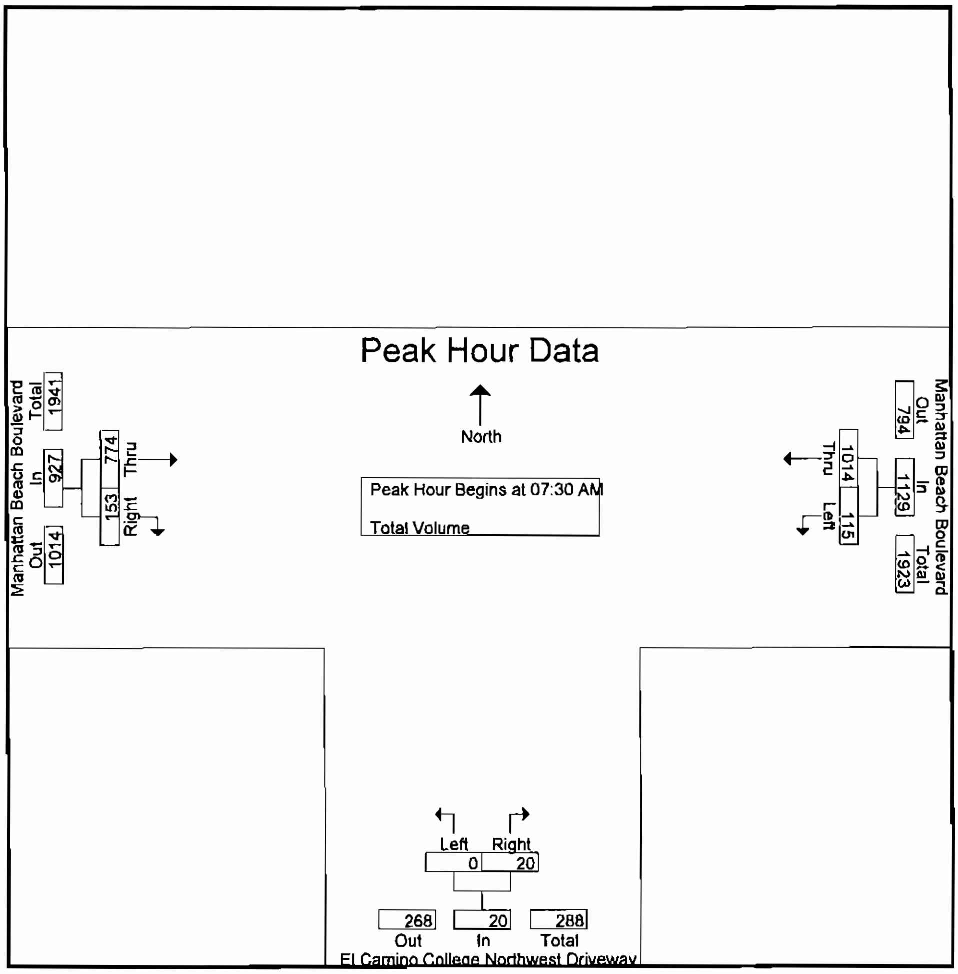
City of Torrance
N/S: El Camino College NW Driveway
E/W: Manhattan Beach Boulevard
Weather: Sunny

File Name : TORNDWMBAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			08:00 AM			07:30 AM		
+0 mins.	29	231	260	0	5	5	192	**64**	**256**
+15 mins.	**41**	284	325	0	10	10	**207**	42	249
+30 mins.	37	**295**	**332**	1	10	11	188	22	210
+45 mins.	21	208	229	**3**	**11**	**14**	187	25	212
Total Volume	128	1018	1146	4	36	40	774	153	927
% App. Total	11.2	88.8		10	90		83.5	16.5	
PHF	.780	.863	.863	.333	.818	.714	.935	.598	.905

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City of Torrance
N/S: El Camino College NW Driveway
E/W: Manhattan Beach Boulevard
Weather: Sunny

File Name : TORNDWMBPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Manhattan Beach Boulevard Westbound			El Camino College Northwest Driveway Northbound			Manhattan Beach Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	145	147	0	27	27	190	6	196	370
04:15 PM	2	168	170	2	20	22	185	3	188	380
04:30 PM	6	153	159	2	16	18	220	10	230	407
04:45 PM	11	187	198	1	19	20	215	11	226	444
Total	21	653	674	5	82	87	810	30	840	1601
05:00 PM	11	158	169	5	19	24	217	7	224	417
05:15 PM	13	182	195	2	15	17	244	26	270	482
05:30 PM	25	184	209	0	12	12	271	29	300	521
05:45 PM	21	209	230	2	30	32	299	35	334	596
Total	70	733	803	9	76	85	1031	97	1128	2016
Grand Total	91	1386	1477	14	158	172	1841	127	1968	3617
Apprch %	6.2	93.8		8.1	91.9		93.5	6.5		
Total %	2.5	38.3	40.8	0.4	4.4	4.8	50.9	3.5	54.4	

	Manhattan Beach Boulevard Westbound			El Camino College Northwest Driveway Northbound			Manhattan Beach Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	11	158	169	5	19	24	217	7	224	417
05:15 PM	13	182	195	2	15	17	244	26	270	482
05:30 PM	25	184	209	0	12	12	271	29	300	521
05:45 PM	21	209	230	2	30	32	299	35	334	596
Total Volume	70	733	803	9	76	85	1031	97	1128	2016
% App. Total	8.7	91.3		10.6	89.4		91.4	8.6		
PHF	.700	.877	.873	.450	.633	.664	.862	.693	.844	.846

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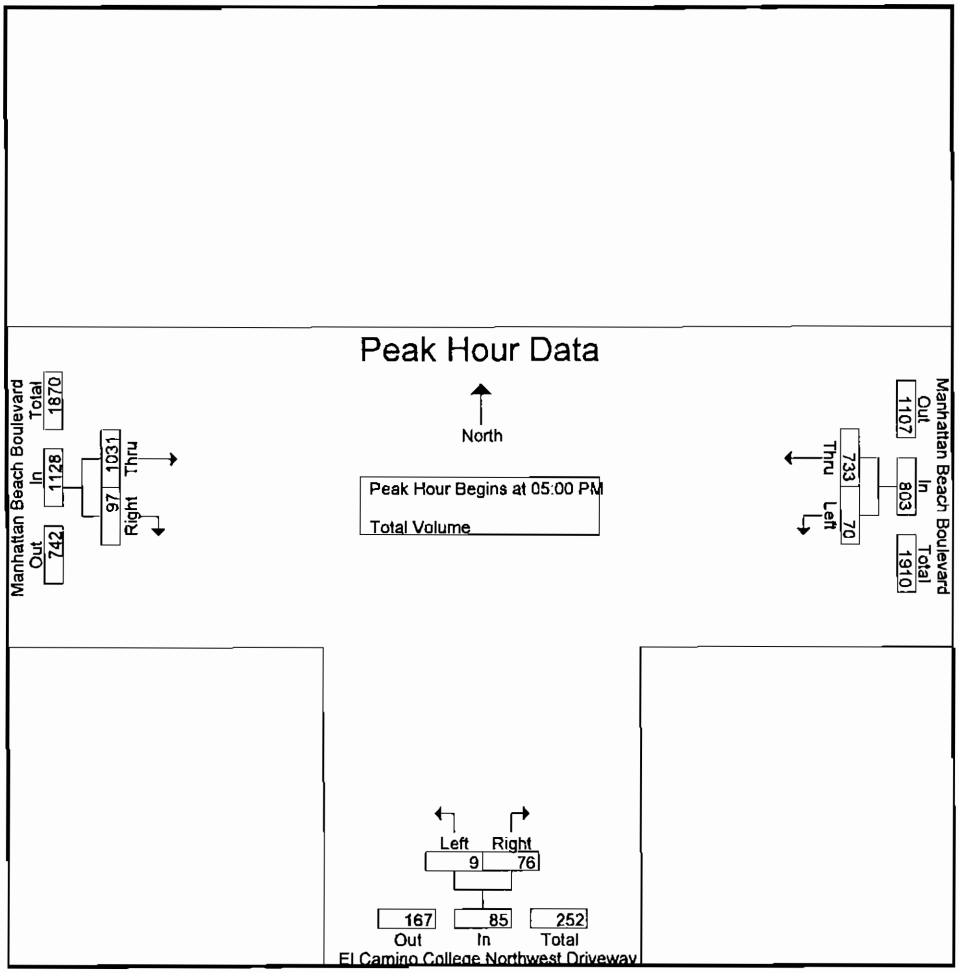
City of Torrance
N/S: El Camino College NW Driveway
E/W: Manhattan Beach Boulevard
Weather: Sunny

File Name : TORNDWMBPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM			04:00 PM			05:00 PM		
+0 mins.	11	158	169	0	27	27	217	7	224
+15 mins.	13	182	195	2	20	22	244	26	270
+30 mins.	25	184	209	2	16	18	271	29	300
+45 mins.	21	209	230	1	19	20	299	35	334
Total Volume	70	733	803	5	82	87	1031	97	1128
% App. Total	8.7	91.3		5.7	94.3		91.4	8.6	
PHF	.700	.877	.873	.625	.759	.806	.862	.693	.844

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_005 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	Lemoli Ave			Lemoli Ave			Manhattan Beach Blvd			Manhattan Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	6	1	2	9	1	13	8	60	3	12	157	5	277
7:15 AM	7	3	5	9	1	28	8	96	14	17	199	2	389
7:30 AM	25	3	10	9	9	29	7	99	26	41	212	3	473
7:45 AM	21	1	6	18	3	21	13	134	11	29	243	10	510
8:00 AM	9	2	6	9	3	19	14	126	5	14	221	5	433
8:15 AM	8	1	8	9	1	21	8	117	6	10	175	4	368
8:30 AM	4	2	5	4	0	10	6	99	8	8	157	7	310
8:45 AM	11	3	5	6	1	14	17	130	6	13	184	10	400

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	91	16	47	73	19	155	81	861	79	144	1548	46	3160
APPROACH %'s :	59.09%	10.39%	30.52%	29.55%	7.69%	62.75%	7.93%	84.33%	7.74%	8.29%	89.07%	2.65%	

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	62	9	27	45	16	97	42	455	56	101	875	20	1805
PEAK HR FACTOR :		0.645			0.840			0.875			0.883		0.885

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_005 | **Day:** TUESDAY

City: City of Torrance | **Date:** 09/18/2012

PM

NS/EW Streets:	Lemoli Ave			Lemoli Ave			Manhattan Beach Blvd			Manhattan Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	13	1	10	5	2	9	15	169	6	11	122	9	372
4:15 PM	17	4	13	3	2	7	17	201	10	13	116	7	410
4:30 PM	21	1	24	7	0	11	21	199	10	13	132	13	452
4:45 PM	17	1	12	13	0	14	20	203	14	11	149	8	462
5:00 PM	18	1	16	6	3	11	15	200	10	14	153	10	457
5:15 PM	18	3	12	7	0	10	11	203	18	16	146	13	457
5:30 PM	15	2	20	9	2	20	22	238	13	27	182	14	564
5:45 PM	26	5	14	6	7	14	21	246	21	24	178	9	571

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	145	18	121	56	16	96	142	1659	102	129	1178	83	3745
APPROACH %'s :	51.06%	6.34%	42.61%	33.33%	9.52%	57.14%	7.46%	87.18%	5.36%	9.28%	84.75%	5.97%	

PEAK HR START TIME :	5:00 PM												TOTAL
PEAK HR VOL :	77	11	62	28	12	55	69	887	62	81	659	46	2049
PEAK HR FACTOR :		0.833			0.766			0.884			0.881		0.897

CONTROL :

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Torrance
N/S: El Camino College SW Driveway
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORSDWRBAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	El Camino College Southwest Driveway Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	0	5	5	175	33	208	26	150	176	389
07:15 AM	3	8	11	207	65	272	82	203	285	568
07:30 AM	2	17	19	282	93	375	141	239	380	774
07:45 AM	5	24	29	298	80	378	103	330	433	840
Total	10	54	64	962	271	1233	352	922	1274	2571
08:00 AM	6	9	15	250	56	306	63	272	335	656
08:15 AM	10	15	25	210	61	271	60	265	325	621
08:30 AM	10	23	33	240	69	309	66	255	321	663
08:45 AM	16	27	43	214	88	302	91	267	358	703
Total	42	74	116	914	274	1188	280	1059	1339	2643
Grand Total	52	128	180	1876	545	2421	632	1981	2613	5214
Apprch %	28.9	71.1		77.5	22.5		24.2	75.8		
Total %	1	2.5	3.5	36	10.5	46.4	12.1	38	50.1	

	El Camino College Southwest Driveway Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	2	17	19	282	**93**	375	**141**	239	380	774
07:45 AM	5	**24**	**29**	**298**	80	**378**	103	**330**	**433**	**840**
08:00 AM	6	9	15	250	56	306	63	272	335	656
08:15 AM	**10**	15	25	210	61	271	60	265	325	621
Total Volume	23	65	88	1040	290	1330	367	1106	1473	2891
% App. Total	26.1	73.9		78.2	21.8		24.9	75.1		
PHF	.575	.677	.759	.872	.780	.880	.651	.838	.850	.860

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City of Torrance
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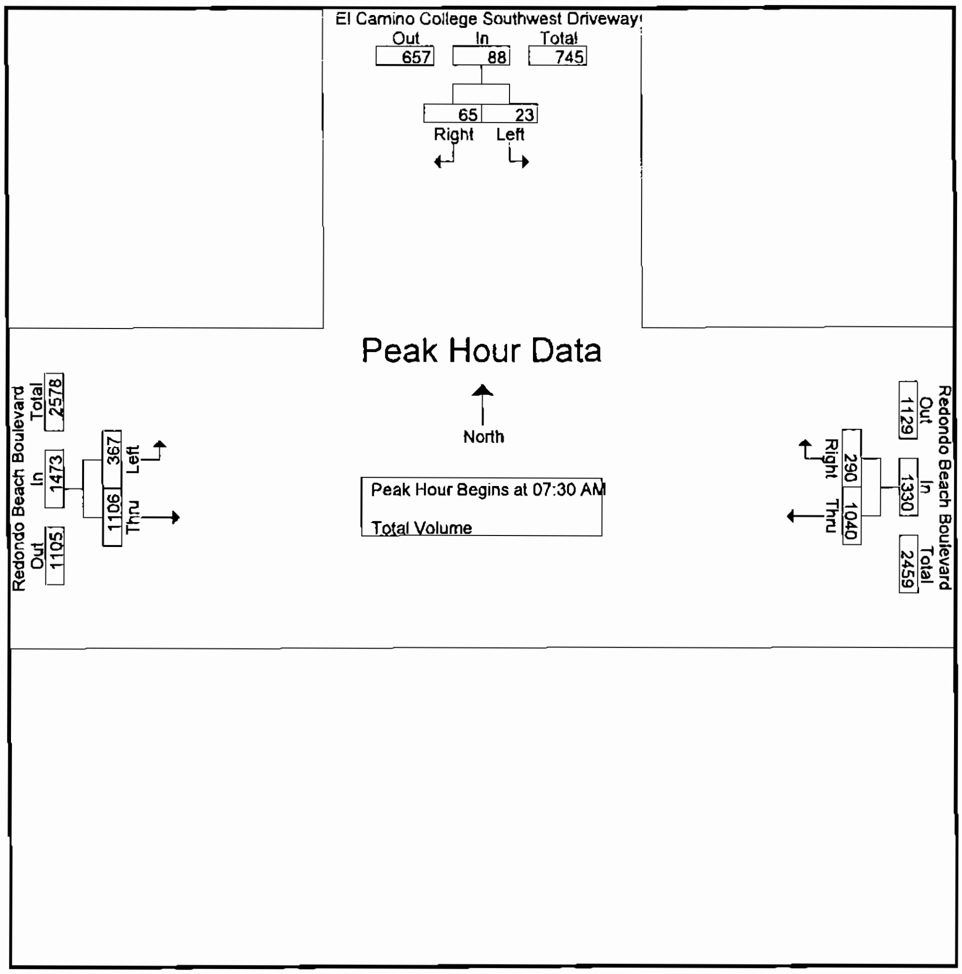
Weather: Sunny

File Name : TORSDWRBAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak **1** of 1

Peak Hour for Each Approach Begins at:

	08:00 AM			07:15 AM			07:30 AM		
+0 mins.	6	9	15	207	65	272	**141**	239	380
+15 mins.	10	15	25	282	**93**	375	103	**330**	**433**
+30 mins.	10	23	33	**298**	80	**378**	63	272	335
+45 mins.	**16**	**27**	**43**	250	56	306	60	265	325
Total Volume	42	74	116	1037	294	1331	367	1106	1473
% App. Total	36.2	63.8		77.9	22.1		24.9	75.1	
PHF	.656	.685	.674	.870	.790	.880	.651	.838	.850

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City of Torrance
N/S: El Camino College SW Driveway
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORSDWRBPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	El Camino College Southwest Driveway Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	42	72	114	194	9	203	16	228	244	561
04:15 PM	45	67	112	202	9	211	18	218	236	559
04:30 PM	41	64	105	220	17	237	19	231	250	592
04:45 PM	38	41	79	242	20	262	27	235	262	603
Total	166	244	410	858	55	913	80	912	992	2315
05:00 PM	23	44	67	244	23	267	27	270	297	631
05:15 PM	40	46	86	251	43	294	36	298	334	714
05:30 PM	32	26	58	262	51	313	80	288	368	739
05:45 PM	30	52	82	249	55	304	81	289	370	756
Total	125	168	293	1006	172	1178	224	1145	1369	2840
Grand Total	291	412	703	1864	227	2091	304	2057	2361	5155
Apprch %	41.4	58.6		89.1	10.9		12.9	87.1		
Total %	5.6	8	13.6	36.2	4.4	40.6	5.9	39.9	45.8	

	El Camino College Southwest Driveway Southbound			Redondo Beach Boulevard Westbound			Redondo Beach Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	23	44	67	244	23	267	27	270	297	631
05:15 PM	**40**	46	**86**	251	43	294	36	**298**	334	714
05:30 PM	32	26	58	**262**	51	**313**	80	288	368	739
05:45 PM	30	**52**	82	249	**55**	304	**81**	289	**370**	**756**
Total Volume	125	168	293	1006	172	1178	224	1145	1369	2840
% App. Total	42.7	57.3		85.4	14.6		16.4	83.6		
PHF	.781	.808	.852	.960	.782	.941	.691	.961	.925	.939

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City of Torrance
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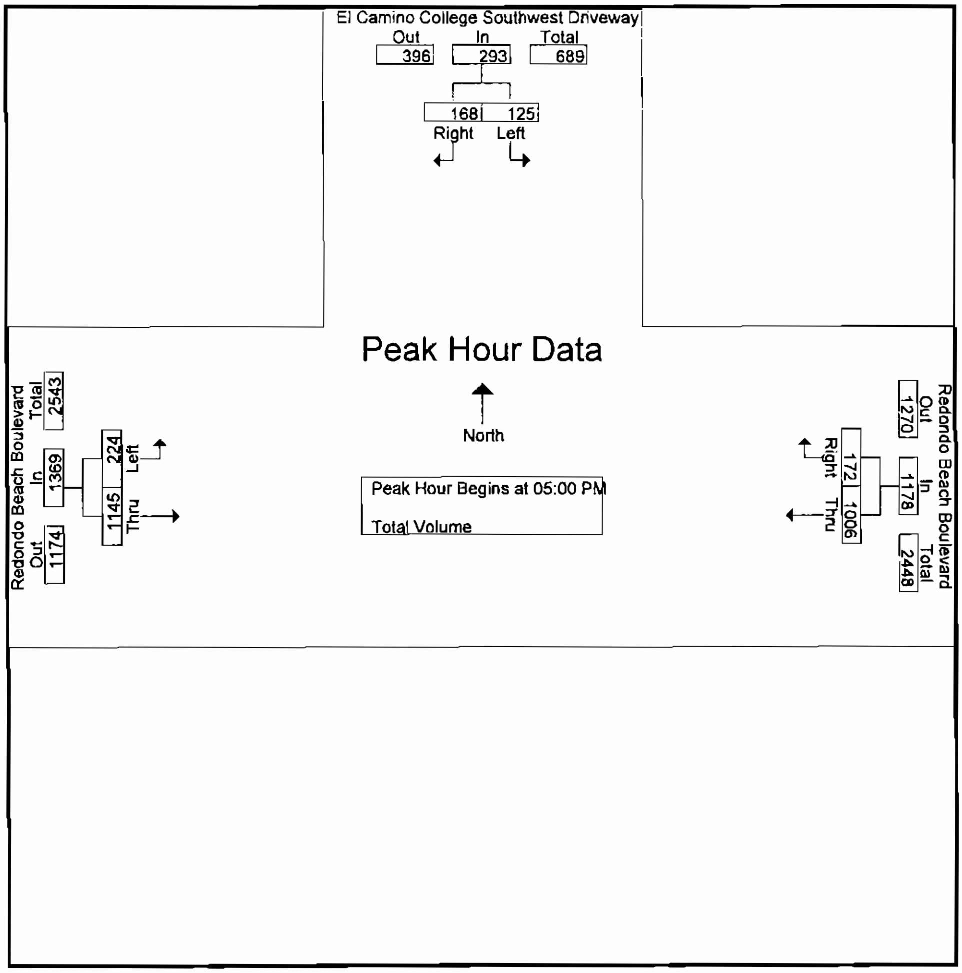
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORSDWRBPM
Site Code : 00000006
Start Date : 9/18/2012



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			05:00 PM		
+0 mins.	42	**72**	**114**	244	23	267	27	270	297
+15 mins.	**45**	67	112	251	43	294	36	**298**	334
+30 mins.	41	64	105	**262**	51	313	80	288	368
+45 mins.	38	41	79	249	**55**	304	**81**	289	**370**
Total Volume	166	244	410	1006	172	1178	224	1145	1369
% App. Total	40.5	59.5		85.4	14.6		16.4	83.6	
PHF	.922	.847	.899	.960	.782	.941	.691	.961	.925

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_006 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	Crenshaw Blvd			Crenshaw Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	59	141	11	12	143	37	16	31	27	18	84	9	588
7:15 AM	52	146	9	11	234	44	21	46	31	27	135	7	763
7:30 AM	66	171	16	19	295	53	39	38	56	33	143	9	938
7:45 AM	62	198	12	17	241	58	33	75	50	25	175	10	956
8:00 AM	69	250	22	20	193	50	37	70	34	36	127	9	917
8:15 AM	46	178	13	24	199	35	32	55	40	18	113	7	760
8:30 AM	49	174	8	18	173	46	29	67	36	30	82	13	725
8:45 AM	62	192	14	11	206	46	37	54	40	30	89	9	790

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	465	1450	105	132	1684	369	244	436	314	217	948	73	6437
APPROACH %'s :	23.02%	71.78%	5.20%	6.04%	77.07%	16.89%	24.55%	43.86%	31.59%	17.53%	76.58%	5.90%	

PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL :	249	765	59	67	963	205	130	229	171	121	580	35	3574
PEAK HR FACTOR :		0.787			0.841			0.839			0.876		0.935

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_006 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

PM

NS/EW Streets:	Crenshaw Blvd			Crenshaw Blvd			Manhattan Beach Blvd			Manhattan Beach Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	47	227	24	21	190	34	40	88	51	12	60	13	807
4:15 PM	50	194	19	13	151	24	56	116	41	12	68	11	755
4:30 PM	54	209	27	18	208	43	46	127	66	17	62	11	888
4:45 PM	48	201	22	20	209	47	46	136	65	21	81	13	909
5:00 PM	46	216	31	32	200	54	52	99	64	20	71	13	898
5:15 PM	50	229	28	22	227	44	53	118	51	20	81	10	933
5:30 PM	65	228	23	25	215	52	38	126	86	24	101	18	1001
5:45 PM	60	200	15	19	253	46	54	118	77	28	104	10	984

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	420	1704	189	170	1653	344	385	928	501	154	628	99	7175
APPROACH %'s :	18.16%	73.67%	8.17%	7.84%	76.28%	15.87%	21.22%	51.16%	27.62%	17.48%	71.28%	11.24%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	221	873	97	98	895	196	197	461	278	92	357	51	3816
PEAK HR FACTOR :	0.942			0.935			0.936			0.874			0.953

CONTROL :

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(951) 268-6268

City of Torrance
N/S: Crenshaw Boulevard
E/W: El Camino College Entrance
Weather: Sunny

File Name : TORCRECAM
Site Code : 00000015
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Crenshaw Boulevard Southbound				Private Driveway Westbound				Crenshaw Boulevard Northbound				El Camino College Entrance Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	245	10	255	0	0	0	0	29	202	1	232	9	0	7	16	503
07:15 AM	0	276	9	285	0	0	0	0	31	218	0	249	16	0	8	24	558
07:30 AM	0	364	18	382	0	0	0	0	60	207	2	269	32	0	21	53	704
07:45 AM	0	329	20	349	0	0	0	0	50	289	3	342	39	0	28	67	758
Total	0	1214	57	1271	0	0	0	0	170	916	6	1092	96	0	64	160	2523
08:00 AM	1	297	9	307	0	0	0	0	27	315	1	343	23	0	15	38	688
08:15 AM	0	275	6	281	0	0	0	0	20	242	0	262	21	0	7	28	571
08:30 AM	0	299	9	308	0	0	0	0	16	250	0	266	15	0	5	20	594
08:45 AM	1	305	15	321	0	0	0	0	34	237	1	272	20	0	12	32	625
Total	2	1176	39	1217	0	0	0	0	97	1044	2	1143	79	0	39	118	2478
Grand Total	2	2390	96	2488	0	0	0	0	267	1960	8	2235	175	0	103	278	5001
Apprch %	0.1	96.1	3.9		0	0	0		11.9	87.7	0.4		62.9	0	37.1		
Total %	0	47.8	1.9	49.8	0	0	0	0	5.3	39.2	0.2	44.7	3.5	0	2.1	5.6	

	Crenshaw Boulevard Southbound				Private Driveway Westbound				Crenshaw Boulevard Northbound				El Camino College Entrance Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	**364**	18	**382**	0	0	0	0	**60**	207	2	269	32	0	21	53	704
07:45 AM	0	329	**20**	349	0	0	0	0	50	289	**3**	342	**39**	0	**28**	**67**	**758**
08:00 AM	**1**	297	9	307	0	0	0	0	27	**315**	1	**343**	23	0	15	38	688
08:15 AM	0	275	6	281	0	0	0	0	20	242	0	262	21	0	7	28	571
Total Volume	1	1265	53	1319	0	0	0	0	157	1053	6	1216	115	0	71	186	2721
% App. Total	0.1	95.9	4		0	0	0		12.9	86.6	0.5		61.8	0	38.2		
PHF	.250	.869	.663	.863	.000	.000	.000	.000	.654	.836	.500	.886	.737	.000	.634	.694	.897

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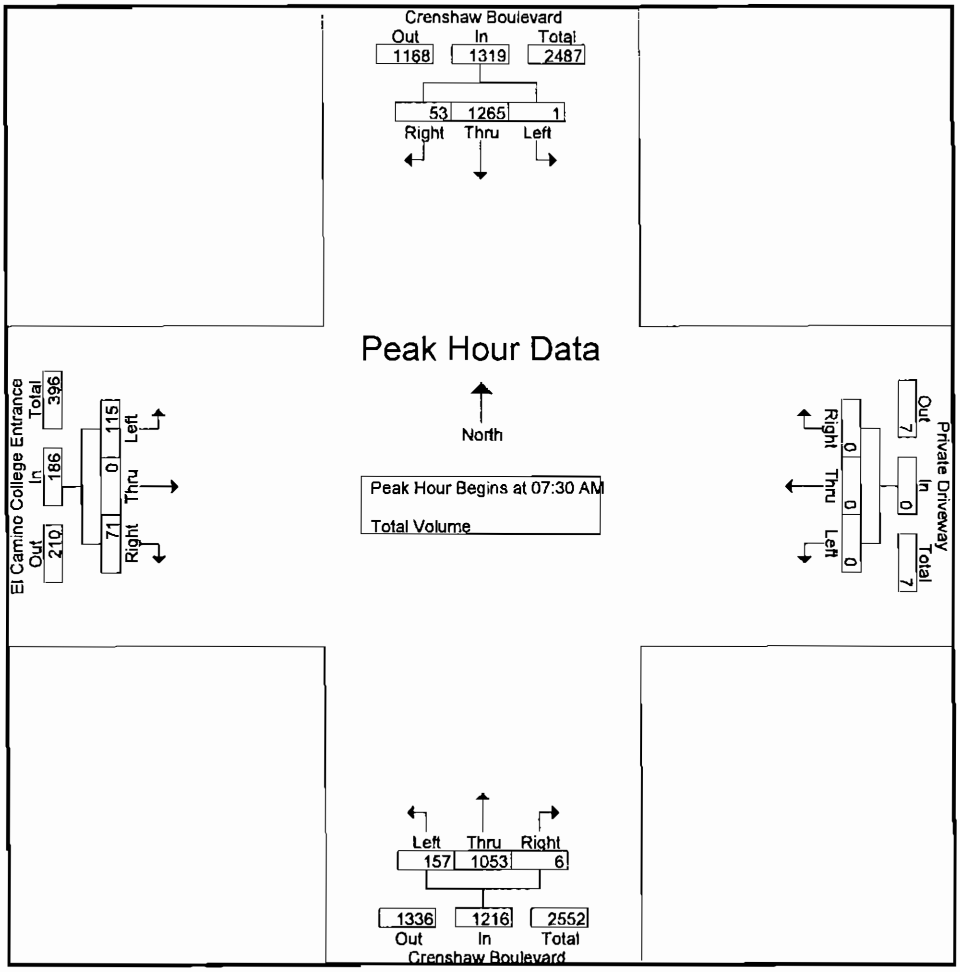
City of Torrance
N/S: Crenshaw Boulevard
E/W: El Camino College Entrance
Weather: Sunny

File Name : TORCRECAM
Site Code : 00000015
Start Date : 9/18/2012



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	0	276	9	285	0	0	0	0	**60**	207	2	269	32	0	21	53
+15 mins.	0	**364**	18	**382**	0	0	0	0	50	289	**3**	342	**39**	0	**28**	**67**
+30 mins.	0	329	**20**	349	0	0	0	0	27	**315**	1	**343**	23	0	15	38
+45 mins.	**1**	297	9	307	0	0	0	0	20	242	0	262	21	0	7	28
Total Volume	1	1266	56	1323	0	0	0	0	157	1053	6	1216	115	0	71	186
% App. Total	0.1	95.7	4.2		0	0	0		12.9	86.6	0.5		61.8	0	38.2	
PHF	.250	.870	.700	.866	.000	.000	.000	.000	.654	.836	.500	.886	.737	.000	.634	.694

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City of Torrance
N/S: Crenshaw Boulevard
E/W: El Camino College Entrance
Weather: Sunny

File Name : TORCRECPM
Site Code : 00000015
Start Date : 9/18/2012

Groups Printed- Total Volume

	Crenshaw Boulevard Southbound				Private Driveway Westbound				Crenshaw Boulevard Northbound				El Camino College Entrance Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	275	4	282	0	0	0	0	27	250	0	277	24	0	7	31	590
04:15 PM	0	236	1	237	0	0	1	1	17	277	0	294	7	0	10	17	549
04:30 PM	2	304	6	312	0	0	1	1	30	288	0	318	16	0	4	20	651
04:45 PM	3	296	6	305	0	0	0	0	26	252	0	278	23	0	8	31	614
Total	8	1111	17	1136	0	0	2	2	100	1067	0	1167	70	0	29	99	2404
05:00 PM	0	282	4	286	0	0	1	1	25	283	0	308	20	0	10	30	625
05:15 PM	0	305	3	308	0	0	0	0	13	304	0	317	12	0	7	19	644
05:30 PM	1	318	2	321	0	0	0	0	36	313	0	349	14	0	14	28	698
05:45 PM	3	397	6	406	1	0	3	4	37	285	0	322	29	0	8	37	769
Total	4	1302	15	1321	1	0	4	5	111	1185	0	1296	75	0	39	114	2736
Grand Total	12	2413	32	2457	1	0	6	7	211	2252	0	2463	145	0	68	213	5140
Apprch %	0.5	98.2	1.3		14.3	0	85.7		8.6	91.4	0		68.1	0	31.9		
Total %	0.2	46.9	0.6	47.8	0	0	0.1	0.1	4.1	43.8	0	47.9	2.8	0	1.3	4.1	

	Crenshaw Boulevard Southbound				Private Driveway Westbound				Crenshaw Boulevard Northbound				El Camino College Entrance Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	282	4	286	0	0	1	1	25	283	0	308	20	0	10	30	625
05:15 PM	0	305	3	308	0	0	0	0	13	304	0	317	12	0	7	19	644
05:30 PM	1	318	2	321	0	0	0	0	36	313	0	349	14	0	14	28	698
05:45 PM	3	397	6	406	1	0	3	4	37	285	0	322	29	0	8	37	769
Total Volume	4	1302	15	1321	1	0	4	5	111	1185	0	1296	75	0	39	114	2736
% App. Total	0.3	98.6	1.1		20	0	80		8.6	91.4	0		65.8	0	34.2		
PHF	.333	.820	.625	.813	.250	.000	.333	.313	.750	.946	.000	.928	.647	.000	.696	.770	.889

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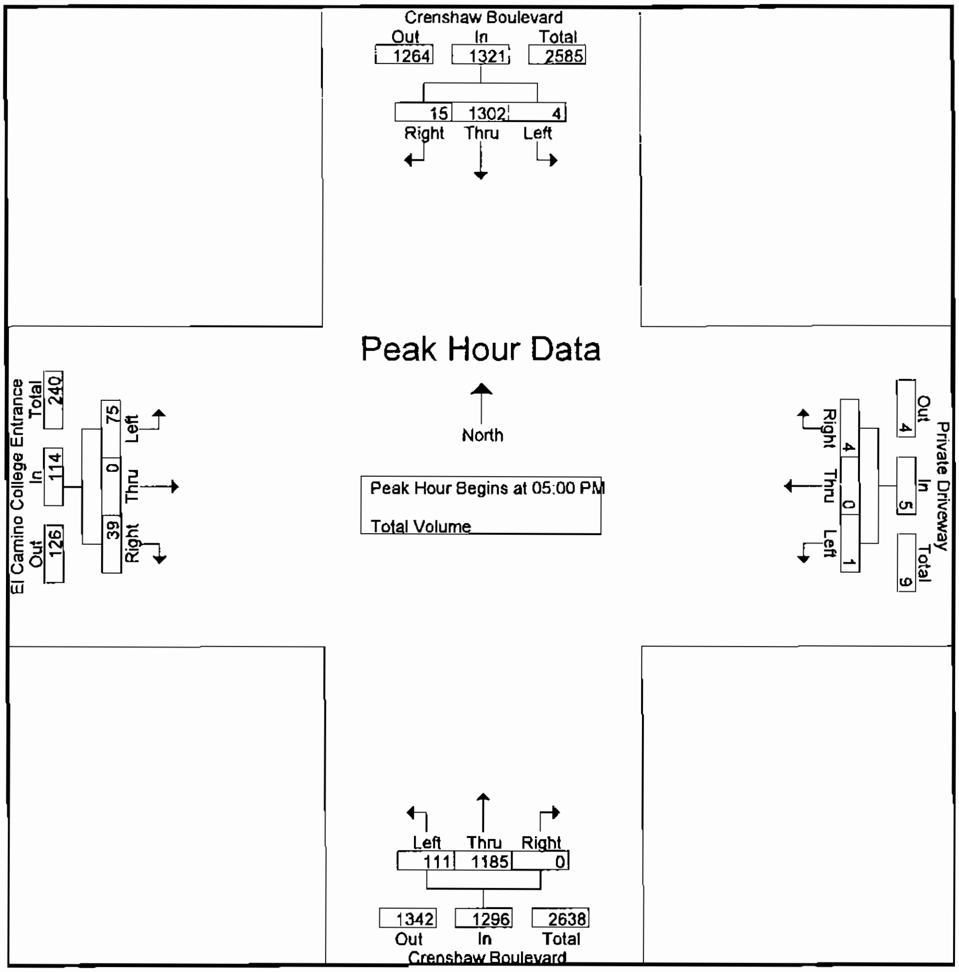
City of Torrance
N/S: Crenshaw Boulevard
E/W: El Camino College Entrance
Weather: Sunny

File Name : TORCRECPM
Site Code : 00000015
Start Date : 9/18/2012



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	282	4	286	0	0	1	1	25	283	0	308	20	0	10	30
+15 mins.	0	305	3	308	0	0	0	0	13	304	0	317	12	0	7	19
+30 mins.	1	318	2	321	0	0	0	0	36	**313**	0	**349**	14	0	**14**	28
+45 mins.	**3**	**397**	**6**	**406**	**1**	0	**3**	**4**	**37**	285	0	322	**29**	0	8	**37**
Total Volume	4	1302	15	1321	1	0	4	5	111	1185	0	1296	75	0	39	114
% App. Total	0.3	98.6	1.1		20	0	80		8.6	91.4	0		65.8	0	34.2	
PHF	.333	.820	.625	.813	.250	.000	.333	.313	.750	.946	.000	.928	.647	.000	.696	.770

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City of Torrance
N/S: Crenshaw Boulevard
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORCRRBAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Crenshaw Boulevard Southbound				Redondo Beach Boulevard Westbound				Crenshaw Boulevard Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	29	146	34	209	26	153	14	193	51	171	20	242	29	76	13	118	762
07:15 AM	26	188	54	268	40	213	49	302	52	175	30	257	30	100	23	153	980
07:30 AM	25	252	78	355	69	290	29	388	68	176	27	271	52	105	12	169	1183
07:45 AM	51	223	77	351	60	275	41	376	52	202	37	291	58	193	23	274	1292
Total	131	809	243	1183	195	931	133	1259	223	724	114	1061	169	474	71	714	4217
08:00 AM	65	213	58	336	44	195	40	279	45	245	45	335	60	152	23	235	1185
08:15 AM	54	192	40	286	44	204	33	281	53	190	41	284	47	200	26	273	1124
08:30 AM	57	191	60	308	39	209	40	288	59	174	45	278	46	140	36	222	1096
08:45 AM	58	182	54	294	38	179	32	249	80	173	46	299	38	131	38	207	1049
Total	234	778	212	1224	165	787	145	1097	237	782	177	1196	191	623	123	937	4454
Grand Total	365	1587	455	2407	360	1718	278	2356	460	1506	291	2257	360	1097	194	1651	8671
Apprch %	15.2	65.9	18.9		15.3	72.9	11.8		20.4	66.7	12.9		21.8	66.4	11.8		
Total %	4.2	18.3	5.2	27.8	4.2	19.8	3.2	27.2	5.3	17.4	3.4	26	4.2	12.7	2.2	19	

	Crenshaw Boulevard Southbound				Redondo Beach Boulevard Westbound				Crenshaw Boulevard Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	25	252	**78**	**355**	**69**	**290**	29	**388**	**68**	176	27	271	52	105	12	169	1183
07:45 AM	51	223	77	351	60	275	**41**	376	52	202	37	291	58	193	23	**274**	**1292**
08:00 AM	**65**	213	58	336	44	195	40	279	45	**245**	**45**	**335**	**60**	152	23	235	1185
08:15 AM	54	192	40	286	44	204	33	281	53	190	41	284	47	**200**	**26**	273	1124
Total Volume	195	880	253	1328	217	964	143	1324	218	813	150	1181	217	650	84	951	4784
% App. Total	14.7	66.3	19.1		16.4	72.8	10.8		18.5	68.8	12.7		22.8	68.3	8.8		
PHF	.750	.873	.811	.935	.786	.831	.872	.853	.801	.830	.833	.881	.904	.813	.808	.868	.926

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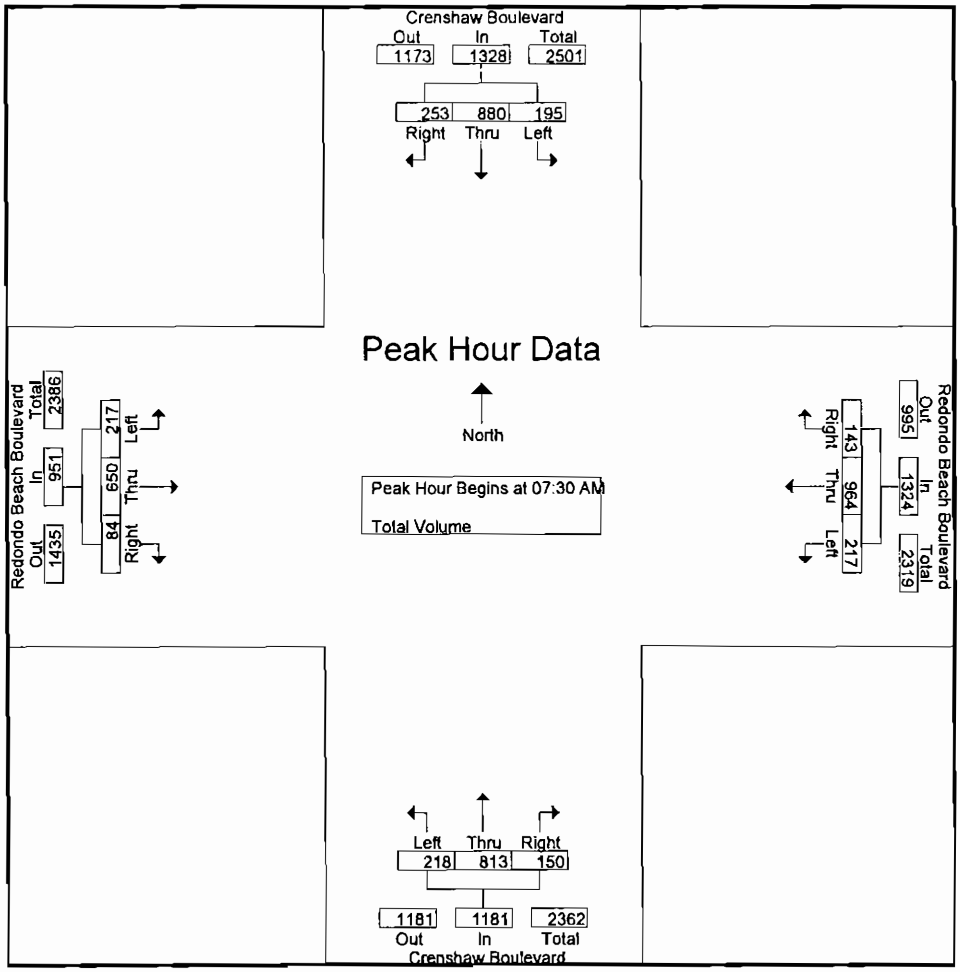
City of Torrance
N/S: Crenshaw Boulevard
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORCRRBAM
Site Code : 00000006
Start Date : 9/18/2012



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				08:00 AM				07:45 AM			
+0 mins.	25	252	**78**	**355**	40	213	**49**	302	45	**245**	45	**335**	58	193	23	**274**
+15 mins.	51	223	77	351	**69**	**290**	29	**388**	53	190	41	284	**60**	152	23	235
+30 mins.	**65**	213	58	336	60	275	41	376	59	174	45	278	47	**200**	26	273
+45 mins.	54	192	40	286	44	195	40	279	**80**	173	**46**	299	46	140	**36**	222
Total Volume	195	880	253	1328	213	973	159	1345	237	782	177	1196	211	685	108	1004
% App. Total	14.7	66.3	19.1		15.8	72.3	11.8		19.8	65.4	14.8		21	68.2	10.8	
PHF	.750	.873	.811	.935	.772	.839	.811	.867	.741	.798	.962	.893	.879	.856	.750	.916

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City of Torrance
N/S: Crenshaw Boulevard
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORCRRBPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Crenshaw Boulevard Southbound				Redondo Beach Boulevard Westbound				Crenshaw Boulevard Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	32	185	53	270	23	127	34	184	30	177	42	249	44	189	53	286	989
04:15 PM	36	178	42	256	32	132	32	196	34	207	34	275	39	160	52	251	978
04:30 PM	36	191	61	288	20	164	46	230	38	208	30	276	46	156	51	253	1047
04:45 PM	30	203	60	293	32	164	39	235	42	190	51	283	52	138	54	244	1055
Total	134	757	216	1107	107	587	151	845	144	782	157	1083	181	643	210	1034	4069
05:00 PM	29	193	64	286	27	186	39	252	58	211	42	311	42	180	49	271	1120
05:15 PM	33	234	60	327	52	198	40	290	41	207	41	289	59	208	52	319	1225
05:30 PM	42	234	68	344	54	212	41	307	55	224	39	318	50	177	41	268	1237
05:45 PM	37	252	80	369	46	189	47	282	53	205	51	309	60	166	52	278	1238
Total	141	913	272	1326	179	785	167	1131	207	847	173	1227	211	731	194	1136	4820
Grand Total	275	1670	488	2433	286	1372	318	1976	351	1629	330	2310	392	1374	404	2170	8889
Apprch %	11.3	68.6	20.1		14.5	69.4	16.1		15.2	70.5	14.3		18.1	63.3	18.6		
Total %	3.1	18.8	5.5	27.4	3.2	15.4	3.6	22.2	3.9	18.3	3.7	26	4.4	15.5	4.5	24.4	

	Crenshaw Boulevard Southbound				Redondo Beach Boulevard Westbound				Crenshaw Boulevard Northbound				Redondo Beach Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	29	193	64	286	27	186	39	252	**58**	211	42	311	42	180	49	271	1120
05:15 PM	33	234	60	327	52	198	40	290	41	207	41	289	59	**208**	**52**	**319**	1225
05:30 PM	**42**	234	68	344	**54**	**212**	41	**307**	55	**224**	39	**318**	50	177	41	268	1237
05:45 PM	37	**252**	**80**	**369**	46	189	**47**	282	53	205	**51**	309	**60**	166	52	278	**1238**
Total Volume	141	913	272	1326	179	785	167	1131	207	847	173	1227	211	731	194	1136	4820
% App. Total	10.6	68.9	20.5		15.8	69.4	14.8		16.9	69	14.1		18.6	64.3	17.1		
PHF	.839	.906	.850	.898	.829	.926	.888	.921	.892	.945	.848	.965	.879	.879	.933	.890	.973

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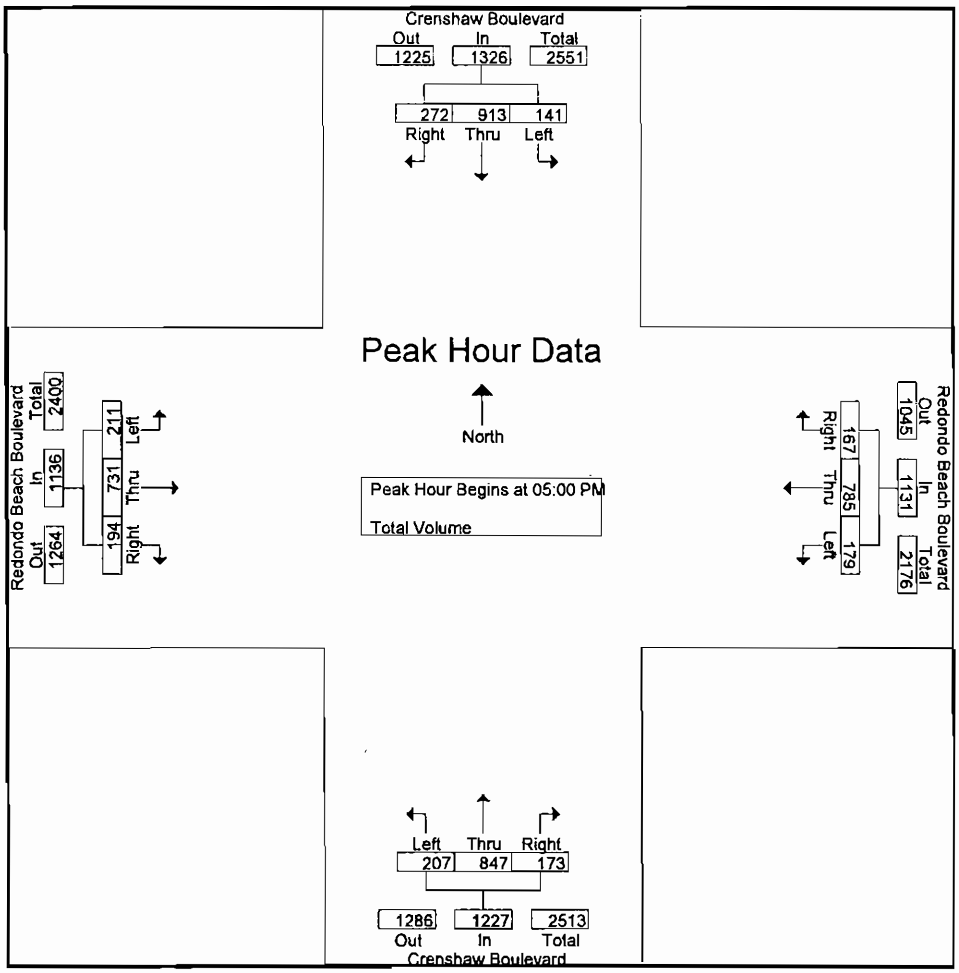
City of Torrance
N/S: Crenshaw Boulevard
E/W: Redondo Beach Boulevard
Weather: Sunny

File Name : TORCRRBPM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	29	193	64	286	27	186	39	252	**58**	211	42	311	42	180	49	271
+15 mins.	33	234	60	327	52	198	40	290	41	207	41	289	59	**208**	**52**	**319**
+30 mins.	**42**	234	68	344	**54**	**212**	41	**307**	55	**224**	39	**318**	50	177	41	268
+45 mins.	37	**252**	**80**	**369**	46	189	**47**	282	53	205	**51**	309	**60**	166	52	278
Total Volume	141	913	272	1326	179	785	167	1131	207	847	173	1227	211	731	194	1136
% App. Total	10.6	68.9	20.5		15.8	69.4	14.8		16.9	69	14.1		18.6	64.3	17.1	
PHF	.839	.906	.850	.898	.829	.926	.888	.921	.892	.945	.848	.965	.879	.879	.933	.890

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City of Torrance
N/S: Crenshaw Boulevard
E/W: Artesia Boulevard
Weather: Sunny

File Name : TORCRARAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Crenshaw Boulevard Southbound				Artesia Boulevard Westbound				Crenshaw Boulevard Northbound				Artesia Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	30	145	10	185	43	234	48	325	24	182	31	237	7	131	19	157	904
07:15 AM	49	209	19	277	66	235	55	356	34	255	36	325	12	144	30	186	1144
07:30 AM	45	295	24	364	97	235	44	376	48	275	55	378	20	146	37	203	1321
07:45 AM	57	254	17	328	74	273	37	384	42	246	92	380	32	223	38	293	1385
Total	181	903	70	1154	280	977	184	1441	148	958	214	1320	71	644	124	839	4754
08:00 AM	47	216	16	279	46	210	19	275	37	246	52	335	16	189	44	249	1138
08:15 AM	37	203	17	257	48	241	21	310	37	204	32	273	12	162	42	216	1056
08:30 AM	25	212	17	254	48	194	39	281	39	215	43	297	18	138	35	191	1023
08:45 AM	44	227	18	289	42	211	35	288	32	257	37	326	19	157	31	207	1110
Total	153	858	68	1079	184	856	114	1154	145	922	164	1231	65	646	152	863	4327
Grand Total	334	1761	138	2233	464	1833	298	2595	293	1880	378	2551	136	1290	276	1702	9081
Apprch %	15	78.9	6.2		17.9	70.6	11.5		11.5	73.7	14.8		8	75.8	16.2		
Total %	3.7	19.4	1.5	24.6	5.1	20.2	3.3	28.6	3.2	20.7	4.2	28.1	1.5	14.2	3	18.7	

	Crenshaw Boulevard Southbound				Artesia Boulevard Westbound				Crenshaw Boulevard Northbound				Artesia Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	49	209	19	277	66	235	**55**	356	34	255	36	325	12	**144**	30	186	1144
07:30 AM	45	**295**	**24**	**364**	**97**	235	44	376	**48**	**275**	55	378	20	146	37	203	1321
07:45 AM	**57**	254	17	328	74	**273**	37	**384**	42	246	**92**	**380**	**32**	**223**	38	**293**	**1385**
08:00 AM	47	216	16	279	46	210	19	275	37	246	52	335	16	189	**44**	249	1138
Total Volume	198	974	76	1248	283	953	155	1391	161	1022	235	1418	80	702	149	931	4988
% App. Total	15.9	78	6.1		20.3	68.5	11.1		11.4	72.1	16.6		8.6	75.4	16		
PHF	.868	.825	.792	.857	.729	.873	.705	.906	.839	.929	.639	.933	.625	.787	.847	.794	.900

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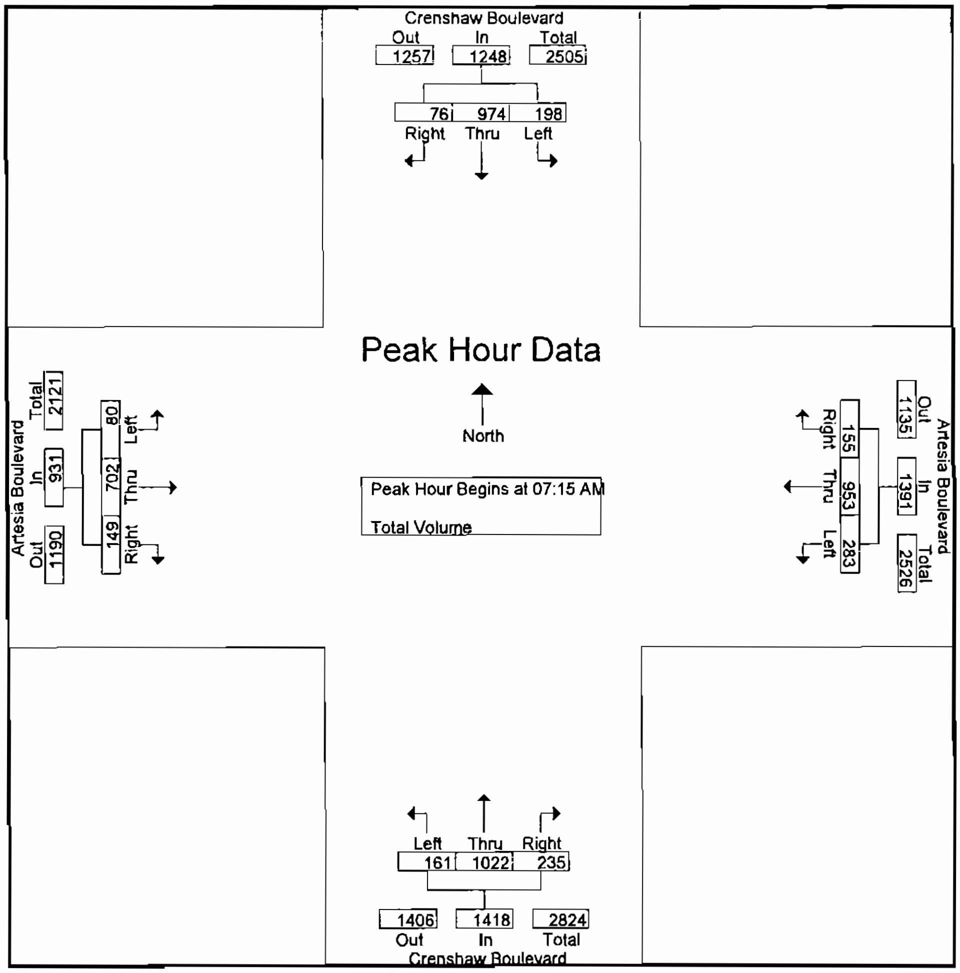
City of Torrance
N/S: Crenshaw Boulevard
E/W: Artesia Boulevard
Weather: Sunny

File Name : TORCRARAM
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:30 AM			
+0 mins.	49	209	19	277	43	234	48	325	34	255	36	325	20	146	37	203
+15 mins.	45	**295**	**24**	**364**	66	235	**55**	356	**48**	**275**	55	378	**32**	**223**	38	**293**
+30 mins.	**57**	254	17	328	**97**	235	44	376	42	246	**92**	**380**	16	189	**44**	249
+45 mins.	47	216	16	279	74	**273**	37	**384**	37	246	52	335	12	162	42	216
Total Volume	198	974	76	1248	280	977	184	1441	161	1022	235	1418	80	720	161	961
% App. Total	15.9	78	6.1		19.4	67.8	12.8		11.4	72.1	16.6		8.3	74.9	16.8	
PHF	.868	.825	.792	.857	.722	.895	.836	.938	.839	.929	.639	.933	.625	.807	.915	.820

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City of Torrance
N/S: Crenshaw Boulevard
E/W: Artesia Boulevard
Weather: Sunny

File Name : TORCRARpm
Site Code : 00000006
Start Date : 9/18/2012
Page No : 1

Groups Printed- Total Volume

	Crenshaw Boulevard Southbound				Artesia Boulevard Westbound				Crenshaw Boulevard Northbound				Artesia Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	62	229	32	323	35	155	26	216	43	225	68	336	18	220	22	260	1135
04:15 PM	45	191	26	262	55	162	39	256	45	189	51	285	22	255	32	309	1112
04:30 PM	58	254	19	331	43	171	33	247	34	241	72	347	21	255	34	310	1235
04:45 PM	66	246	25	337	39	163	45	247	38	233	79	350	21	227	25	273	1207
Total	231	920	102	1253	172	651	143	966	160	888	270	1318	82	957	113	1152	4689
05:00 PM	38	212	19	269	64	189	35	288	42	207	58	307	19	274	34	327	1191
05:15 PM	57	244	22	323	62	179	39	280	49	275	81	405	31	225	25	281	1289
05:30 PM	64	203	20	287	65	210	60	335	38	220	90	348	27	302	39	368	1338
05:45 PM	41	235	28	304	60	186	49	295	50	292	74	416	23	267	24	314	1329
Total	200	894	89	1183	251	764	183	1198	179	994	303	1476	100	1068	122	1290	5147
Grand Total	431	1814	191	2436	423	1415	326	2164	339	1882	573	2794	182	2025	235	2442	9836
Apprch %	17.7	74.5	7.8		19.5	65.4	15.1		12.1	67.4	20.5		7.5	82.9	9.6		
Total %	4.4	18.4	1.9	24.8	4.3	14.4	3.3	22	3.4	19.1	5.8	28.4	1.9	20.6	2.4	24.8	

	Crenshaw Boulevard Southbound				Artesia Boulevard Westbound				Crenshaw Boulevard Northbound				Artesia Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	38	212	19	269	64	189	35	288	42	207	58	307	19	274	34	327	1191
05:15 PM	57	**244**	22	**323**	62	179	39	280	49	275	81	405	**31**	225	25	281	1289
05:30 PM	**64**	203	20	287	**65**	**210**	**60**	**335**	38	220	**90**	348	27	**302**	**39**	**368**	**1338**
05:45 PM	41	235	**28**	304	60	186	49	295	**50**	**292**	74	**416**	23	267	24	314	1329
Total Volume	200	894	89	1183	251	764	183	1198	179	994	303	1476	100	1068	122	1290	5147
% App. Total	16.9	75.6	7.5		21	63.8	15.3		12.1	67.3	20.5		7.8	82.8	9.5		
PHF	.781	.916	.795	.916	.965	.910	.763	.894	.895	.851	.842	.887	.806	.884	.782	.876	.962

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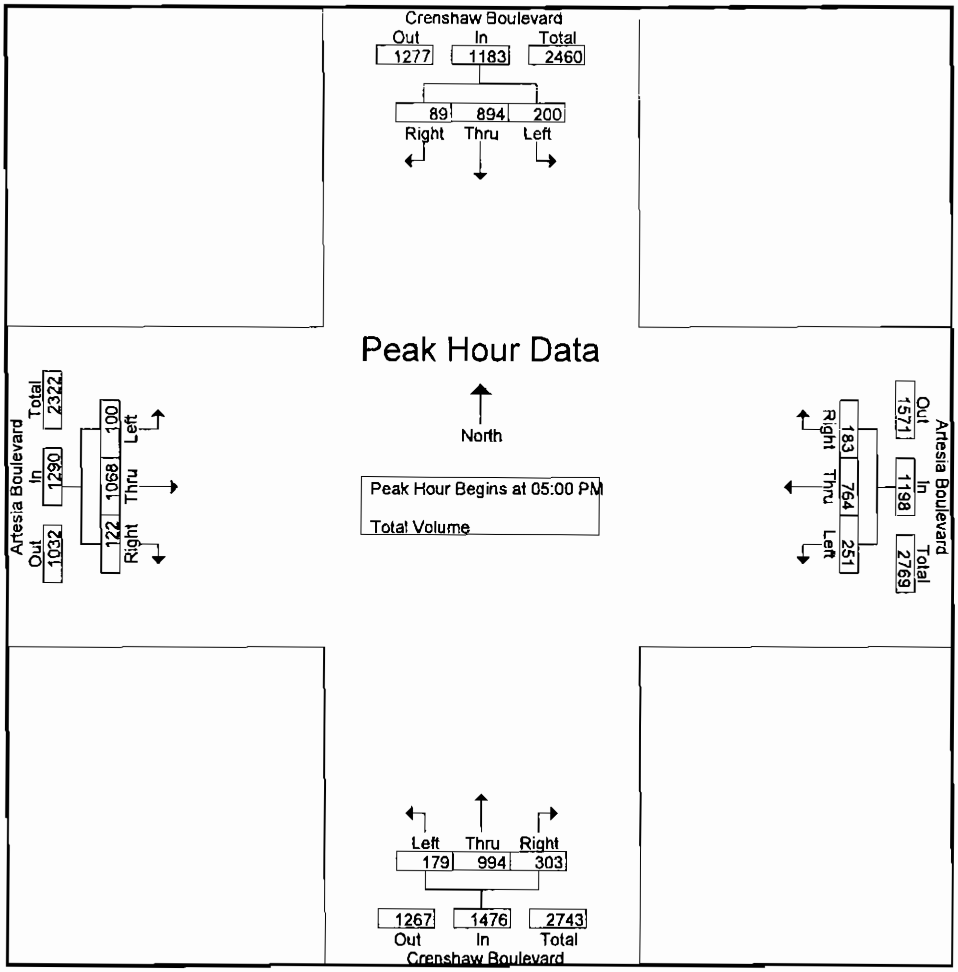
City of Torrance
N/S: Crenshaw Boulevard
E/W: Artesia Boulevard
Weather: Sunny

File Name : TORCRARpm
Site Code : 00000006
Start Date : 9/18/2012
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	58	**254**	19	331	64	189	35	288	42	207	58	307	19	274	34	327
+15 mins.	**66**	246	**25**	**337**	62	179	39	280	49	275	81	405	**31**	225	25	281
+30 mins.	38	212	19	269	**65**	**210**	**60**	**335**	38	220	**90**	348	27	**302**	**39**	**368**
+45 mins.	57	244	22	323	60	186	49	295	**50**	**292**	74	**416**	23	267	24	314
Total Volume	219	956	85	1260	251	764	183	1198	179	994	303	1476	100	1068	122	1290
% App. Total	17.4	75.9	6.7		21	63.8	15.3		12.1	67.3	20.5		7.8	82.8	9.5	
PHF	.830	.941	.850	.935	.965	.910	.763	.894	.895	.851	.842	.887	.806	.884	.782	.876

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_007 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	10	163	111	1	185	24	23	52	45	72	85	51	822
7:15 AM	11	220	123	3	234	37	33	50	37	87	151	85	1071
7:30 AM	11	237	132	2	285	102	54	78	29	86	185	69	1270
7:45 AM	15	199	118	1	287	79	65	97	31	124	214	62	1292
8:00 AM	15	204	156	1	309	27	41	84	38	134	114	61	1184
8:15 AM	13	167	117	3	294	25	23	82	36	138	142	69	1109
8:30 AM	14	194	124	1	250	24	26	77	24	102	136	53	1025
8:45 AM	12	181	121	9	230	28	31	99	45	129	123	112	1120

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	101	1565	1002	21	2074	346	296	619	285	872	1150	562	8893
APPROACH %'s :	3.79%	58.66%	37.56%	0.86%	84.97%	14.17%	24.67%	51.58%	23.75%	33.75%	44.50%	21.75%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	54	807	523	7	1175	233	183	341	134	482	655	261	4855
PEAK HR FACTOR :		0.911			0.909			0.852			0.874		0.939

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_007 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

PM

NS/EW Streets:	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	12	227	193	17	279	36	37	81	19	112	126	70	1209
4:15 PM	9	198	179	14	217	38	38	84	28	141	159	77	1182
4:30 PM	16	258	227	16	256	40	30	88	20	137	134	58	1280
4:45 PM	7	243	188	16	236	35	33	102	12	171	147	88	1278
5:00 PM	15	255	204	15	230	31	33	97	24	119	163	54	1240
5:15 PM	10	304	200	15	216	36	42	102	19	122	192	92	1350
5:30 PM	22	288	185	13	229	42	44	103	28	117	155	69	1295
5:45 PM	18	223	177	15	208	46	34	99	28	139	187	67	1241
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	109	1996	1553	121	1871	304	291	756	178	1058	1263	575	10075
APPROACH %'s :	2.98%	54.57%	42.45%	5.27%	81.49%	13.24%	23.76%	61.71%	14.53%	36.53%	43.61%	19.85%	
PEAK HR START TIME :	445 PM												**TOTAL**
PEAK HR VOL :	54	1090	777	59	911	144	152	404	83	529	657	303	5163
PEAK HR FACTOR :		0.934			0.970			0.913			0.917		0.956

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_008 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	Crenshaw Blvd			Crenshaw Blvd			I-405 Freeway SB Ramps			I-405 Freeway SB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	117	269			188	120	10		135				839
7:15 AM	131	345			252	94	9		168				999
7:30 AM	118	381			324	83	17		174				1097
7:45 AM	103	320			349	113	13		180				1078
8:00 AM	118	350			376	80	7		206				1137
8:15 AM	100	292			387	102	15		198				1094
8:30 AM	118	299			320	77	15		175				1004
8:45 AM	96	296			317	92	18		205				1024

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	901	2552	0	0	2513	761	104	0	1441	0	0	0	8272
APPROACH %'s :	26.09%	73.91%	0.00%	0.00%	76.76%	23.24%	6.73%	0.00%	93.27%	#DIV/0!	#DIV/0!	#DIV/0!	

PEAK HR START TIME :	7:30 AM												TOTAL
PEAK HR VOL :	439	1343	0	0	1436	378	52	0	758	0	0	0	4406
PEAK HR FACTOR :		0.893			0.927			0.951			0.000		0.969

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_008 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

PM

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
NS/EW Streets:	Crenshaw Blvd			Crenshaw Blvd			I-405 Freeway SB Ramps			I-405 Freeway SB Ramps			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	59	408			351	71	14		134				1037
4:15 PM	76	385			344	61	18		166				1050
4:30 PM	86	461			373	53	20		143				1136
4:45 PM	70	388			374	60	29		151				1072
5:00 PM	68	457			336	56	24		161				1102
5:15 PM	70	486			333	50	24		164				1127
5:30 PM	59	451			345	58	22		162				1097
5:45 PM	79	386			349	54	25		186				1079

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	567	3422	0	0	2805	463	176	0	1267	0	0	0	8700
APPROACH %'s :	14.21%	85.79%	0.00%	0.00%	85.83%	14.17%	12.20%	0.00%	87.80%	#DIV/0!	#DIV/0!	#DIV/0!	

PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	294	1792	0	0	1416	219	97	0	619	0	0	0	4437
PEAK HR FACTOR :		0.938			0.942			0.952			0.000		0.976

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_009 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

AM

NS/EW Streets:	I-405 Freeway NB Ramps			I-405 Freeway NB Ramps			182nd St			182nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
7:00 AM	120		1					63	103	25	103		415
7:15 AM	153		2					54	115	32	160		516
7:30 AM	149		2					91	120	29	204		595
7:45 AM	186		3					113	97	47	196		642
8:00 AM	154		4					101	128	26	137		550
8:15 AM	191		4					106	101	26	155		583
8:30 AM	165		2					101	110	22	152		552
8:45 AM	215		1					124	100	20	160		620

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1333	0	19	0	0	0	0	753	874	227	1267	0	4473
APPROACH %'s :	98.59%	0.00%	1.41%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	46.28%	53.72%	15.19%	84.81%	0.00%	

PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	680	0	13	0	0	0	0	411	446	128	692	0	2370
PEAK HR FACTOR :		0.888			0.000			0.936			0.844		0.923

CONTROL :

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: CA12_5371_009 **Day:** TUESDAY

City: City of Torrance **Date:** 09/18/2012

PM

NS/EW Streets:	I-405 Freeway NB Ramps			I-405 Freeway NB Ramps			182nd St			182nd St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:													
4:00 PM	208		2					130	162	25	128		655
4:15 PM	248		12					140	140	41	116		697
4:30 PM	208		8					186	148	37	142		729
4:45 PM	252		8					151	133	32	145		721
5:00 PM	187		7					164	163	38	158		717
5:15 PM	207		6					143	160	41	177		734
5:30 PM	174		6					166	152	34	165		697
5:45 PM	208		8					158	147	32	186		739

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1692	0	57	0	0	0	0	1238	1205	280	1217	0	5689
APPROACH %'s :	96.74%	0.00%	3.26%	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	50.68%	49.32%	18.70%	81.30%	0.00%	

PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	854	0	29	0	0	0	0	644	604	148	622	0	2901
PEAK HR FACTOR :		0.849			0.000			0.934			0.883		0.988

CONTROL :

APPENDIX C

Explanation and Calculation of Intersection Capacity Utilization

EXPLANATION AND CALCULATION OF INTERSECTION CAPACITY UTILIZATION

Overview

The ability of a roadway to carry traffic is referred to as capacity. The capacity is usually greater between intersections and less at intersections because traffic flows continuously between them and only during the green phase at them. Capacity at intersections is best defined in terms of vehicles per lane per hour of green. If capacity is 1600 vehicles per lane per hour of green, and if the green phase is 50 percent of the cycle and there are three lanes, then the capacity is 1600 times 50 percent times 3 lanes, or 2400 vehicles per hour for that approach.

The technique used to compare the volume and capacity at an intersection is known as Intersection Capacity Utilization. Intersection Capacity Utilization, usually expressed as a decimal, is the proportion of an hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. If an intersection is operating at 80 percent of capacity (i.e., an Intersection Capacity Utilization of 80 percent), then 20 percent of the signal cycle is not used. The signal could show red on all indications 20 percent of the time and the signal would just accommodate approaching traffic.

Intersection Capacity Utilization analysis consists of (a) determining the proportion of signal time needed to serve each conflicting movement of traffic, (b) summing the times for the movements, and (c) comparing the total time required to the total time available. For example, if for north-south traffic the northbound traffic is 1600 vehicles per hour, the southbound traffic is 1200 vehicles per hour, and the capacity of either direction is 3200 vehicles per hour, then the northbound traffic is critical and requires 1600/3200 or 50 percent of the signal time. If for east-west traffic, 30 percent of the signal time is required, then it can be seen that the Intersection Capacity Utilization is 50 plus 30, or 80 percent. When left turn arrows (left turn phasing) exist, they are incorporated into the analysis. The critical movements are usually the heavy left turn movements and the opposing through movements.

The Intersection Capacity Utilization technique is an ideal tool to quantify existing as well as future intersection operation. The impact of adding a lane can be quickly determined by examining the effect the lane has on the Intersection Capacity Utilization.

Intersection Capacity Utilization Worksheets That Follow This Discussion

The Intersection Capacity Utilization worksheet table contains the following information:

1. Peak hour turning movement volumes.

2. Number of lanes that serve each movement.

3. For right turn lanes, whether the lane is a free right turn lane, whether it has a right turn arrow, and the percent of right turns on red that are assumed.

4. Capacity assumed per lane.

5. Capacity available to serve each movement (number of lanes times capacity per lane).

6. Volume to capacity ratio for each movement.

7. Whether the movement's volume to capacity ratio is critical and adds to the Intersection Capacity Utilization value.

8. The yellow time or clearance interval assumed.

9. Adjustments for right turn movements.

10. The Intersection Capacity Utilization and Level of Service.

The Intersection Capacity Utilization Worksheet also has two graphics on the same page. These two graphics show the following:

1. Peak hour turning movement volumes.

2. Number of lanes that serve each movement.

3. The approach and exit leg volumes.

4. The two-way leg volumes.

5. An estimate of daily traffic volumes that is fairly close to actual counts and is based strictly on the peak hour leg volumes multiplied by a factor.

6. Percent of daily traffic in peak hours.

7. Percent of peak hour leg volume that is inbound versus outbound.

A more detailed discussion of Intersection Capacity Utilization and Level of Service follows.

Level of Service

Level of Service is used to describe the quality of traffic flow. Levels of Service A to C operate quite well. Level of Service C is typically the standard to which rural roadways are designed.

Level of Service D is characterized by fairly restricted traffic flow. Level of Service D is the standard to which urban roadways are typically designed. Level of Service E is the maximum volume a facility can accommodate and will result in possible stoppages of momentary duration. Level of Service F occurs when a facility is overloaded and is characterized by stop-and-go traffic with stoppages of long duration.

A description of the various Levels of Service appears at the end of the Intersection Capacity Utilization description, along with the relationship between Intersection Capacity Utilization and Level of Service.

Signalized and Unsignalized Intersections

Although calculating an Intersection Capacity Utilization value for an unsignalized intersection is invalid, the presumption is that a signal can be installed and the calculation shows whether the geometrics are capable of accommodating the expected volumes with a signal. A traffic signal becomes warranted before Level of Service D is reached for a signalized intersection.

Signal Timing

The Intersection Capacity Utilization calculation assumes that a signal is properly timed. It is possible to have an Intersection Capacity Utilization well below 100 percent, yet have severe traffic congestion. This would occur if one or more movements is not getting sufficient green time to satisfy its demand, and excess green time exists on other movements. This is an operational problem that should be remedied.

Lane Capacity

Capacity is often defined in terms of roadway width; however, standard lanes have approximately the same capacity whether they are 11 or 14 feet wide. Our data indicates a typical lane, whether a through lane or a left turn lane, has a capacity of approximately 1750 vehicles per hour of green time, with nearly all locations showing a capacity greater than 1600 vehicles per hour of green per lane. Right turn lanes have a slightly lower capacity; however 1600 vehicles per hour is a valid capacity assumption for right turn lanes.

This finding is published in the August, 1978 issue of ITE Journal in the article entitled, "Another Look at Signalized Intersection Capacity" by William Kunzman, P.E. A capacity of 1600 vehicles per hour per lane with no yellow time penalty, or 1700 vehicles per hour with a 3 or 5 percent yellow time penalty is reasonable.

Yellow Time

The yellow time can either be assumed to be completely used and no penalty applied, or it can be assumed to be only partially usable. Total yellow time accounts for approximately 10 percent of a signal cycle, and a penalty of 3 to 5 percent is reasonable.

During peak hour traffic operation the yellow times are nearly completely used. If there is no left turn phasing, the left turn vehicles completely use the yellow time. Even if there is left turn phasing, the through traffic continues to enter the intersection on the yellow until just a split second before the red.

Shared Lanes

Shared lanes occur in many locations. A shared lane is often found at the end of an off ramp where the ramp forms an intersection with the cross street. Often at a diamond interchange off ramp, there are three lanes. In the case of a diamond interchange, the middle lane is sometimes shared, and the driver can turn left, go through, or turn right from that lane.

If one assumes a three lane off ramp as described above, and if one assumes that each lane has 1600 capacity, and if one assumes that there are 1000 left turns per hour, 500 right turns per hour, and 100 through vehicles per hour, then how should one assume that the three lanes operate. There are three ways that it is done.

One way is to just assume that all 1600 vehicles (1000 plus 500 plus 100) are served simultaneously by three lanes. When this is done, the capacity is 3 times 1600 or 4800, and the amount of green time needed to serve the ramp is 1600 vehicles divided by 4800 capacity or 33.3 percent. This assumption effectively assumes perfect lane distribution between the three lanes that is not realistic. It also means a left turn can be made from the right lane.

Another way is to equally split the capacity of a shared lane and in this case to assume there are 1.33 left turn lanes, 1.33 right turn lanes, and 0.33 through lanes. With this assumption, the critical movement is the left turns and the 1000 left turns are served by a capacity of 1.33 times 1600, or 2133. The volume to capacity ratio of the critical move is 1000 divided by 2133 or 46.9 percent.

The first method results in a critical move of 33.3 percent and the second method results in a critical move of 46.9 percent. Neither is very accurate, and the difference in the calculated Level of Service will be approximately 1.5 Levels of Service (one Level of Service is 10 percent).

The way Kunzman Associates, Inc. does it is to assign fractional lanes in a reasonable way. In this example, it would be assumed that there is 1.1 right turn lanes, 0.2 through lanes, and 1.7 left turn lanes. The volume to capacity ratios for each movement would be 31.3 percent for the through traffic, 28.4 percent for the right turn movement, and 36.8 percent for the left turn movement. The critical movement would be the 36.8 percent for the left turns.

Right Turn on Red

Kunzman Associates, Inc. software treats right turn lanes in one of five different ways. Each right turn lane is classified into one of five cases. The five cases are (1) free right turn lane, (2) right turn lane with separate right turn arrow, (3) standard right turn lane with no right turns on red allowed, (4) standard right turn lane with a certain percentage of right turns on red allowed, and (5) separate right turn arrow and a certain percentage of right turns on red allowed.

Free Right Turn Lane

If it is a free right turn lane, then it is given a capacity of one full lane with continuous or 100 percent green time. A Free right turn lane occurs when there is a separate approach lane for right turning vehicles, there is a separate departure lane for the right turning vehicles after they turn and are exiting the intersection, and the through cross street traffic does not interfere with the vehicles after they turn right.

Separate Right Turn Arrow

If there is a separate right turn arrow, then it is assumed that vehicles are given a green indication and can proceed on what is known as the left turn overlap.

The left turn overlap for a northbound right turn is the westbound left turn. When the left turn overlap has a green indication, the right turn lane is also given a green arrow indication. Thus, if there is a northbound right turn arrow, then it can be turned green for the period of time that the westbound left turns are proceeding.

If there are more right turns than can be accommodated during the northbound through green and the time that the northbound right turn arrow is on, then an adjustment is made to the Intersection Capacity Utilization to account for the green time that needs to be added to the northbound through green to accommodate the northbound right turns.

Standard Right Turn Lane, No Right Turns on Red

A standard right turn lane, with no right turn on red assumed, proceeds only when there is a green indication displayed for the adjacent through movement. If additional green time is needed above that amount of time, then in the Intersection Capacity Utilization calculation a right turn adjustment green time is added above the green time that is needed to serve the adjacent through movement.

Standard Right Turn Lane, With Right Turns on Red

A standard right turn lane with say 20 percent of the right turns allowed to turn right on a red indication is calculated the same as the standard right turn case where there is no right turn on red allowed, except that the right turn adjustment is reduced to account for the 20 percent of the right turning vehicles that can logically turn right on a red light. The right turns on red are never allowed to exceed the time the overlap left turns take plus the unused part of the green cycle that the cross street traffic moving from left to right has.

As an example of how 20 percent of the cars are allowed to turn right on a red indication, assume that the northbound right turn volume needs 40 percent of the signal cycle to be satisfied. To allow 20 percent of the northbound right turns to turn right on red, then during 8 percent of the signal cycle (40 percent of signal cycle times 20 percent that can turn right on red) right turns on red will be allowed if it is feasible.

For this example, assume that 15 percent of the signal cycle is green for the northbound through traffic, and that means that 15 percent of the signal cycle is available to satisfy northbound right turns. After the northbound through traffic has received its green, 25 percent of the signal cycle is still needed to satisfy the northbound right turns (40 percent of the signal cycle minus the 15 percent of the signal cycle that the northbound through used).

Assume that the westbound left turns require a green time of 6 percent of the signal cycle. This 6 percent of the signal cycle is used by northbound right turns on red. After accounting for the northbound right turns that occur on the westbound overlap left turn, 19 percent of the signal cycle is still needed for the northbound right turns (25 percent of the cycle was needed after the northbound through green time was accounted for [see above paragraph], and 6 percent was served during the westbound left turn overlap). Also, at this point 6 percent of the signal cycle has been used for northbound right turns on red, and still 2 percent more of the right turns will be allowed to occur on the red if there is unused eastbound through green time.

For purpose of this example, assume that the westbound through green is critical, and that 15 percent of the signal cycle is unused by eastbound through traffic. Thus, 2 percent more of the signal cycle can be used by the northbound right turns on red since there is 15 seconds of unused green time being given to the eastbound through traffic.

At this point, 8 percent of the signal cycle was available to serve northbound right turning vehicles on red, and 15 percent of the signal cycle was available to serve right turning vehicles on the northbound through green. So 23 percent of the signal cycle has been available for northbound right turns.

Because 40 percent of the signal cycle is needed to serve northbound right turns, there is still a need for 17 percent more of the signal cycle to be available for northbound right turns. What this means is the northbound through traffic green time is increased by 17 percent of the cycle length to serve the unserved right turn volume, and a 17 percent adjustment is added to the Intersection Capacity Utilization to account for the northbound right turns that were not served on the northbound through green time or when right turns on red were assumed.

Separate Right Turn Arrow, With Right Turns on Red

A right turn lane with a separate right turn arrow, plus a certain percentage of right turns allowed on red is calculated the same way as a standard right turn lane with a certain percentage of right turns allowed on red, except the turns which occur on the right turn arrow are not counted as part of the percentage of right turns that occur on red.

Critical Lane Method

Intersection Capacity Utilization parallels another calculation procedure known as the Critical Lane Method with one exception. Critical Lane Method dimensions capacity in terms of standardized vehicles per hour per lane. A Critical Lane Method result of 800 vehicles per hour means that the intersection operates as though 800 vehicles were using a single lane continuously. If one assumes a lane capacity of 1600 vehicles per hour, then a Critical Lane Method calculation resulting in 800 vehicles per hour is the same as an Intersection Capacity Utilization calculation of 50 percent since 800/1600 is 50 percent. It is our opinion that the Critical Lane Method is inferior to the Intersection Capacity Utilization method simply because a statement such as "The Critical Lane Method value is 800 vehicles per hour" means little to most persons, whereas a statement such as "The Intersection Capacity Utilization is 50 percent" communicates clearly. Critical Lane Method results directly correspond to Intersection Capacity Utilization results. The correspondence is as follows, assuming a lane capacity of 1600 vehicles per hour and no clearance interval.

Critical Lane Method Result	Intersection Capacity Utilization Result
800 vehicles per hour	50 percent
960 vehicles per hour	60 percent
1120 vehicles per hour	70 percent
1280 vehicles per hour	80 percent
1440 vehicles per hour	90 percent
1600 vehicles per hour	100 percent
1760 vehicles per hour	110 percent

INTERSECTION CAPACITY UTILIZATION
LEVEL OF SERVICE DESCRIPTION[1]

Level of Service	Description	Volume to Capacity Ratio
A	Level of Service A occurs when progression is extremely favorable and vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0.600 and below
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average delay.	0.601 to 0.700
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	0.701 to 0.800
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	0.801 to 0.900
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent.	0.901 to 1.000
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs when oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	1.001 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council Washington D.C., 2000.

Existing

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.816
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	384	1312	179	197	1220	148	115	414	256	270	809	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	384	1312	179	197	1220	148	115	414	256	270	809	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	384	1312	179	197	1220	148	115	414	256	270	809	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	384	1312	179	197	1220	148	115	414	256	270	809	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	384	1312	179	197	1220	148	115	414	256	270	809	169
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.13	0.27	0.11	0.07	0.25	0.09	0.07	0.13	0.16	0.17	0.25	0.11
Crit Moves:	****				****				****	****		

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.797
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		2 0 3 0 1			2 0 3 0 1			1 0 2 0 1			1 0 2 0 1	
Volume Module:												
Base Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	1244	204	249	1392	161	159	723	231	117	489	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	311	1244	204	249	1392	161	159	723	231	117	489	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	1244	204	249	1392	161	159	723	231	117	489	130
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.13	0.09	0.29	0.10	0.10	0.23	0.14	0.07	0.15	0.08
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.726
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	1	1 0	0 0	1	0 0	2 0	1	0 0	2 0	0
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	36	525	0	124	0	880	22	0	677	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	36	525	0	124	0	880	22	0	677	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	36	525	0	124	0	880	22	0	677	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	36	525	0	124	0	880	22	0	677	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.33	0.00	0.08	0.00	0.28	0.01	0.00	0.21	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	1	0 1	0 1	0	0 0	2 0	1	0 0	2 0	0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	25	630	1	177	0	908	27	0	776	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	630	1	177	0	908	27	0	776	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	630	1	177	0	908	27	0	776	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	630	1	177	0	908	27	0	776	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.56	0.44	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	899	701	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.39	0.00	0.25	0.00	0.28	0.02	0.00	0.24	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.613
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			0 0 0 0 0			1 0 2 0 0			0 0 2 0 1		
Volume Module:												
Base Vol:	0	0	0	0	0	0	133	1321	0	0	680	688
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	133	1321	0	0	680	688
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	133	1321	0	0	680	688
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	133	1321	0	0	680	688
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	133	1321	0	0	680	688
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.41	0.00	0.00	0.21	0.43
Crit Moves:							****					****

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                          El Camino College Expansion
                                   Existing
                              Evening Peak Hour
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                       Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.543
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100                Level Of Service:                   A
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:   0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0    0  0  0  0  0    1  0  2  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0   142 1417     0     0  782   541
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0   142 1417     0     0  782   541
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0     0     0    0     0   142 1417     0     0  782   541
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0     0    0     0   142 1417     0     0  782   541
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0    0     0     0    0     0   142 1417     0     0  782   541
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  0.00  0.00 0.00  0.00  1.00 2.00  0.00  0.00 2.00  1.00
Final Sat.:     0    0     0     0    0     0  1600 3200     0     0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.09 0.44  0.00  0.00 0.24  0.34
Crit Moves:                                         ****        ****
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El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.753
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	123	537	141	171	851	203	120	529	72	232	669	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	123	537	141	171	851	203	120	529	72	232	669	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	123	537	141	171	851	203	120	529	72	232	669	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	123	537	141	171	851	203	120	529	72	232	669	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	123	537	141	171	851	203	120	529	72	232	669	103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.09	0.11	0.27	0.13	0.08	0.17	0.05	0.15	0.21	0.06
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.783
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	86	623	207	190	889	192	146	774	121	176	439	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	623	207	190	889	192	146	774	121	176	439	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	86	623	207	190	889	192	146	774	121	176	439	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	623	207	190	889	192	146	774	121	176	439	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	86	623	207	190	889	192	146	774	121	176	439	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.13	0.12	0.28	0.12	0.09	0.24	0.08	0.11	0.14	0.06
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.919
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	292	568	360	198	738	167	126	904	286	197	786	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	292	568	360	198	738	167	126	904	286	197	786	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	292	568	360	198	738	167	126	904	286	197	786	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	292	568	360	198	738	167	126	904	286	197	786	210
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.23	0.12	0.23	0.10	0.08	0.28	0.18	0.12	0.25	0.13
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

```
*******************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):         0.942
Loss Time (sec):     10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      100               Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     340   638   356   231   710   155   134   896   375   204   757   220
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  340   638   356   231   710   155   134   896   375   204   757   220
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   340   638   356   231   710   155   134   896   375   204   757   220
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  340   638   356   231   710   155   134   896   375   204   757   220
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  340   638   356   231   710   155   134   896   375   204   757   220
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:  1600  3200  1600  1600  3200  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.21  0.20  0.22  0.14  0.22  0.10  0.08  0.28  0.23  0.13  0.24  0.14
Crit Moves:  ****                    ****              ****        ****
*******************************************************************************
```

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                                   Existing
                               Morning Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.720
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      98    11   141    10     1    22    32  1335    48    64   949    26
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   98    11   141    10     1    22    32  1335    48    64   949    26
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    98    11   141    10     1    22    32  1335    48    64   949    26
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   98    11   141    10     1    22    32  1335    48    64   949    26
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   98    11   141    10     1    22    32  1335    48    64   949    26
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.39  0.04  0.56  0.91  0.09  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:   627    70   902  1455   145  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06  0.16  0.16  0.01  0.01  0.01  0.02  0.42  0.03  0.04  0.30  0.02
Crit Moves:        ****        ****                    ****        ****
********************************************************************************
```

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.670
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	90	14	100	44	14	61	48	1182	106	73	1053	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	14	100	44	14	61	48	1182	106	73	1053	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	14	100	44	14	61	48	1182	106	73	1053	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	14	100	44	14	61	48	1182	106	73	1053	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	14	100	44	14	61	48	1182	106	73	1053	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.44	0.07	0.49	0.76	0.24	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	706	110	784	1214	386	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.13	0.13	0.03	0.04	0.04	0.03	0.37	0.07	0.05	0.33	0.03
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.468
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 2			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	20	0	0	0	0	774	153	115	1014	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	20	0	0	0	0	774	153	115	1014	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	20	0	0	0	0	774	153	115	1014	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	20	0	0	0	0	774	153	115	1014	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	20	0	0	0	0	774	153	115	1014	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	20	0	0	0	0	774	153	115	1014	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00
Final Sat.:	0	0	3200	0	0	0	0	2672	528	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.29	0.29	0.07	0.32	0.00
Crit Moves:			****					****		****		

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.523
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		0 0 1! 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0	
Volume Module:												
Base Vol:	9	0	76	0	0	0	0	1031	97	70	733	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	0	76	0	0	0	0	1031	97	70	733	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	0	76	0	0	0	0	1031	97	70	733	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	0	76	0	0	0	0	1031	97	70	733	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	0	76	0	0	0	0	1031	97	70	733	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	0	76	0	0	0	0	1031	97	70	733	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.21	0.00	1.79	0.00	0.00	0.00	0.00	1.83	0.17	1.00	2.00	0.00
Final Sat.:	339	0	2861	0	0	0	0	2925	275	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.03	0.00	0.00	0.00	0.00	0.35	0.35	0.04	0.23	0.00
Crit Moves:			****					****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                                   Existing
                               Morning Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):          0.537
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        100                Level Of Service:                   A
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     62     9    27    45    16    97    42   455    56   101   875    20
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  62     9    27    45    16    97    42   455    56   101   875    20
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   62     9    27    45    16    97    42   455    56   101   875    20
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  62     9    27    45    16    97    42   455    56   101   875    20
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  62     9    27    45    16    97    42   455    56   101   875    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.63 0.09  0.28  0.28 0.10  0.61  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1012  147   441   456  162   982  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.06  0.06  0.03 0.10  0.10  0.03 0.14  0.04  0.06 0.27  0.01
Crit Moves:  ****                        ****  ****                   ****
********************************************************************************
```

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	77	11	62	28	12	55	69	887	62	81	659	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	11	62	28	12	55	69	887	62	81	659	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	11	62	28	12	55	69	887	62	81	659	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	11	62	28	12	55	69	887	62	81	659	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	11	62	28	12	55	69	887	62	81	659	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.51	0.07	0.41	0.29	0.13	0.58	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	821	117	661	472	202	926	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.09	0.09	0.02	0.06	0.06	0.04	0.28	0.04	0.05	0.21	0.03
Crit Moves:		****		****				****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                                   Existing
                               Morning Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.675
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Permitted         Permitted         Permitted         Permitted
Rights:           Include           Include           Include           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  0  0  0  0    2  0  0  0  2    1  0  3  0  0    0  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:       0     0     0    23     0    65   367  1106     0     0  1040   290
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    23     0    65   367  1106     0     0  1040   290
Added Vol:      0     0     0     0     0     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0    23     0    65   367  1106     0     0  1040   290
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0    23     0    65   367  1106     0     0  1040   290
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0    23     0    65   367  1106     0     0  1040   290
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:    0     0     0    23     0    65   367  1106     0     0  1040   290
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  0.90  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  2.00  1.00  3.00  0.00  0.00  2.00  1.00
Final Sat.:     0     0     0  2880     0  3200  1600  4800     0     0  3200  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.01  0.00  0.02  0.23  0.23  0.00  0.00  0.33  0.18
Crit Moves:                               ****  ****                    ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                         El Camino College Expansion
                                  Existing
                              Evening Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.607
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100               Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0    2  0  0  0  2    1  0  3  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  125     0   168  224  1145     0    0  1006   172
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   0     0     0  125     0   168  224  1145     0    0  1006   172
Added Vol:     0     0     0    0     0     0    0     0     0    0     0     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0     0     0  125     0   168  224  1145     0    0  1006   172
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    0     0     0  125     0   168  224  1145     0    0  1006   172
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  125     0   168  224  1145     0    0  1006   172
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0     0     0  125     0   168  224  1145     0    0  1006   172
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 0.90  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      0.00  0.00  0.00 2.00  0.00  2.00 1.00  3.00  0.00 0.00  2.00  1.00
Final Sat.:    0     0     0 2880     0  3200 1600  4800     0    0  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.00  0.00  0.00 0.04  0.00  0.05 0.14  0.24  0.00 0.00  0.31  0.11
Crit Moves:                              ****  ****                     ****
********************************************************************************
```

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.761
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 0 1	1 0 2 0 1

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	765	59	67	963	205	130	229	171	121	580	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	249	765	59	67	963	205	130	229	171	121	580	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	249	765	59	67	963	205	130	229	171	121	580	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	249	765	59	67	963	205	130	229	171	121	580	35
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.47	0.53	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4456	344	1600	3958	842	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.16	0.17	0.17	0.04	0.24	0.24	0.08	0.07	0.11	0.08	0.18	0.02
Crit Moves:	****				****		****				****	

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--------------------------------------------------------------------------------
                      El Camino College Expansion
                               Existing
                          Evening Peak Hour
--------------------------------------------------------------------------------
                  Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):        0.700
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       100              Level Of Service:                 C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     221  873   97    98  895  196   197  461  278    92  357   51
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:  221  873   97    98  895  196   197  461  278    92  357   51
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:   221  873   97    98  895  196   197  461  278    92  357   51
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:  221  873   97    98  895  196   197  461  278    92  357   51
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:  221  873   97    98  895  196   197  461  278    92  357   51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       1.00 2.70 0.30  1.00 2.46 0.54  1.00 2.00 1.00  1.00 2.00 1.00
Final Sat.:  1600 4320  480  1600 3938  862  1600 3200 1600  1600 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.20 0.20  0.06 0.23 0.23  0.12 0.14 0.17  0.06 0.11 0.03
Crit Moves:  ****                 ****       ****                   ****
********************************************************************************
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--------------------------------------------------------------------------------
                    El Camino College Expansion
                             Existing
                         Morning Peak Hour
--------------------------------------------------------------------------------
                 Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.589
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   0  0  1!  0  0   0  0  1!  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     157 1053     6     1 1265    53   115     0    71     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  157 1053     6     1 1265    53   115     0    71     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   157 1053     6     1 1265    53   115     0    71     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  157 1053     6     1 1265    53   115     0    71     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157 1053     6     1 1265    53   115     0    71     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.98  0.02  1.00 2.88  0.12  0.62 0.00  0.38  0.00 1.00  0.00
Final Sat.:  1600 4773    27  1600 4607   193   989     0   611     0 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.22  0.22  0.00 0.27  0.27  0.07 0.00  0.12  0.00 0.00  0.00
Crit Moves:  ****                   ****                    ****
********************************************************************************
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-------------------------------------------------------------------------------
                          El Camino College Expansion
                                   Existing
                               Evening Peak Ho r
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*******************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.516
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100              Level Of Service:                   A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    0  0  1! 0  0
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     111 1185     0     4 1302    15    75     0    39     1     0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  111 1185     0     4 1302    15    75     0    39     1     0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   111 1185     0     4 1302    15    75     0    39     1     0     4
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  111 1185     0     4 1302    15    75     0    39     1     0     4
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  111 1185     0     4 1302    15    75     0    39     1     0     4
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  1.00 2.97  0.03  0.66 0.00  0.34  0.20 0.00  0.80
Final Sat.:  1600 4800     0  1600 4745    55  1053    0   547   320    0  1280
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.25  0.00  0.00 0.27  0.27  0.05 0.00  0.07  0.00 0.00  0.00
Crit Moves:  ****                    ****                    ****  ****
*******************************************************************************
```

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.877
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		1 0 2 0 1			1 0 2 0 1			1 0 2 0 1			1 0 2 1 0	
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	813	150	195	880	253	217	650	84	217	964	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	813	150	195	880	253	217	650	84	217	964	143
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	813	150	195	880	253	217	650	84	217	964	143
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	813	150	195	880	253	217	650	84	217	964	143
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.61	0.39
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	4180	620
Capacity Analysis Module:												
Vol/Sat:	0.14	0.25	0.09	0.12	0.28	0.16	0.14	0.20	0.05	0.14	0.23	0.23
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.855
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	0 1	1 0	2	0 1	1 0	2	1 0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	207	847	173	141	913	272	211	731	194	179	785	167
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	207	847	173	141	913	272	211	731	194	179	785	167
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	207	847	173	141	913	272	211	731	194	179	785	167
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	207	847	173	141	913	272	211	731	194	179	785	167
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.47	0.53
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3958	842
Capacity Analysis Module:												
Vol/Sat:	0.13	0.26	0.11	0.09	0.29	0.17	0.13	0.23	0.12	0.11	0.20	0.20
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.891
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	161	1022	235	198	974	76	80	702	149	283	953	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1022	235	198	974	76	80	702	149	283	953	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1022	235	198	974	76	80	702	149	283	953	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1022	235	198	974	76	80	702	149	283	953	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1022	235	198	974	76	80	702	149	283	953	155
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.78	0.22	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	4453	347	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.32	0.15	0.12	0.22	0.22	0.05	0.22	0.09	0.10	0.30	0.10
Crit Moves:		****		****			****				****	

El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.957
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	179	994	303	200	894	89	100	1068	122	251	764	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	994	303	200	894	89	100	1068	122	251	764	183
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	994	303	200	894	89	100	1068	122	251	764	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	994	303	200	894	89	100	1068	122	251	764	183
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	179	994	303	200	894	89	100	1068	122	251	764	183
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.73	0.27	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	4365	435	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.31	0.19	0.13	0.20	0.20	0.06	0.33	0.08	0.09	0.24	0.11
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.872
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2 0 1			1 0 2 1 0			1 0 1 1 0			1 1 0 1 0		
Volume Module:												
Base Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	807	523	7	1175	233	183	341	134	482	655	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	807	523	7	1175	233	183	341	134	482	655	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	807	523	7	1175	233	183	341	134	482	655	261
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.50	0.50	1.00	1.44	0.56	1.03	1.41	0.56
Final Sat.:	1600	3200	1600	1600	4006	794	1600	2297	903	1651	2249	900
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.33	0.00	0.29	0.29	0.11	0.15	0.15	0.29	0.29	0.29
Crit Moves:			****	****				****		****		

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                                 Existing
                             Evening Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         1.086
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  F
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:            Ovl            Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    1  0  1  1  0    1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54 1090   777    59  911   144   152  404    83   529  657   303
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54 1090   777    59  911   144   152  404    83   529  657   303
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    54 1090   777    59  911   144   152  404    83   529  657   303
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   54 1090   777    59  911   144   152  404    83   529  657   303
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   54 1090   777    59  911   144   152  404    83   529  657   303
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.59  0.41  1.00 1.66  0.34  1.06 1.32  0.61
Final Sat.:  1600 3200  1600  1600 4145   655  1600 2655   545  1701 2117   982
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.34  0.49  0.04 0.22  0.22  0.10 0.15  0.15  0.31 0.31  0.31
Crit Moves:             ****  ****                   ****       ****
********************************************************************************
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El Camino College Expansion
Existing
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.005
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	3	0 0	0 0	2	1 0	0 0	1!	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	439	1343	0	0	1436	378	52	0	758	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	439	1343	0	0	1436	378	52	0	758	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	439	1343	0	0	1436	378	52	0	758	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.37	0.63	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	3800	1000	205	0	2995	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.27	0.28	0.00	0.00	0.38	0.38	0.03	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****				****			

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---------------------------------------------------------------------------------
                         El Camino College Expansion
                                  Existing
                              Evening Peak Hour
---------------------------------------------------------------------------------

                    Level Of Service Computation Report
         ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*********************************************************************************
Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)
*********************************************************************************
Cycle (sec):           100               Critical Vol./Cap.(X):         0.848
Loss Time (sec):        10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         100               Level Of Service:                  D
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  3  0  0   0  0  2  1  0   0  0  1! 0  1   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     294 1792     0     0 1416   219    97     0   619     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  294 1792     0     0 1416   219    97     0   619     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   294 1792     0     0 1416   219    97     0   619     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  294 1792     0     0 1416   219    97     0   619     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  294 1792     0     0 1416   219    97     0   619     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 2.60  0.40  0.27 0.00  1.73  0.00 0.00  0.00
Final Sat.:  1600 4800     0     0 4157   643   434     0  2766     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.18 0.37  0.00  0.00 0.34  0.34  0.06 0.00  0.22  0.00 0.00  0.00
Crit Moves:  ****                  ****                    ****
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-------------------------------------------------------------------------------
                       El Camino College Expansion
                                Existing
                           Morning Peak Hour
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)
*******************************************************************************
Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.675
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  1! 0  0   0  0  0  0  0   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     680    0    13     0    0     0     0  411   446   128  692     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  680    0    13     0    0     0     0  411   446   128  692     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   680    0    13     0    0     0     0  411   446   128  692     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  680    0    13     0    0     0     0  411   446   128  692     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  680    0    13     0    0     0     0  411   446   128  692     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.96 0.00  0.04  0.00 0.00  0.00  0.00 1.00  1.00  1.00 2.00  0.00
Final Sat.:  3140    0    60     0    0     0     0 1600  1600  1600 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.22 0.00  0.22  0.00 0.00  0.00  0.00 0.26  0.28  0.08 0.22  0.00
Crit Moves:  ****                                         ****  ****
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El Camino College Expansion
Existing
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.858
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	1 0 1! 0 0	0 0 0 0 0	0 0 1 1 0	1 0 2 0 0

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	854	0	29	0	0	0	0	644	604	148	622	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	854	0	29	0	0	0	0	644	604	148	622	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	854	0	29	0	0	0	0	644	604	148	622	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	854	0	29	0	0	0	0	644	604	148	622	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	854	0	29	0	0	0	0	644	604	148	622	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.93	0.00	0.07	0.00	0.00	0.00	0.00	1.03	0.97	1.00	2.00	0.00
Final Sat.:	3095	0	105	0	0	0	0	1651	1549	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.39	0.39	0.09	0.19	0.00
Crit Moves:	****							****		****		

Existing Plus Project

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---------------------------------------------------------------------------
                       El Camino College Expansion
                         Existing Plus Project
                           Morning Peak Hour
---------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
***************************************************************************
Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)
***************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):        0.819
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100               Level Of Service:                 D
***************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Permitted        Permitted        Permitted        Permitted
Rights:         Include          Include          Include          Include
Min. Green:   0     0     0    0     0     0    0     0     0    0     0     0
Lanes:      2  0  3  0  1   2  0  3  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    384 1312   179   197 1220   148   115  414   256   270  809   169
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 384 1312   179   197 1220   148   115  414   256   270  809   169
Added Vol:     0    0    18    15    0     0     0   22     0     4    4     3
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 384 1312   197   212 1220   148   115  436   256   274  813   172
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  384 1312   197   212 1220   148   115  436   256   274  813   172
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 384 1312   197   212 1220   148   115  436   256   274  813   172
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 384 1312   197   212 1220   148   115  436   256   274  813   172
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 0.90 1.00  1.00  0.90 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      2.00 3.00  1.00  2.00 3.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.: 2880 4800  1600  2880 4800  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.13 0.27  0.12  0.07 0.25  0.09  0.07 0.14  0.16  0.17 0.25  0.11
Crit Moves: ****                  ****                    ****  ****
***************************************************************************
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El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.807
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	1244	204	249	1392	161	159	723	231	117	489	130
Added Vol:	0	0	15	12	0	0	0	17	0	7	9	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	311	1244	219	261	1392	161	159	740	231	124	498	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	311	1244	219	261	1392	161	159	740	231	124	498	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	1244	219	261	1392	161	159	740	231	124	498	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	1244	219	261	1392	161	159	740	231	124	498	136
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.14	0.09	0.29	0.10	0.10	0.23	0.14	0.08	0.16	0.09
Crit Moves:	****				****			****		****		

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                        El Camino College Expansion
                          Existing Plus Project
                            Morning Peak Hour
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                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.758
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  1    1  0  0  0  1    0  0  2  0  1    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0    36  525     0   124    0   880    22    0   677     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:    0     0    36  525     0   124    0   880    22    0   677     0
Added Vol:      0     0     0   44     0     0    0    15     0    0     3     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    0     0    36  569     0   124    0   895    22    0   680     0
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:     0     0    36  569     0   124    0   895    22    0   680     0
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    0     0    36  569     0   124    0   895    22    0   680     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:    0     0    36  569     0   124    0   895    22    0   680     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  0.00  1.00 1.00  0.00  1.00 0.00  2.00  1.00 0.00  2.00  0.00
Final Sat.:     0     0  1600 1600     0  1600    0  3200  1600    0  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.02 0.36  0.00  0.08 0.00  0.28  0.01 0.00  0.21  0.00
Crit Moves:              **** ****                   ****       ****
*******************************************************************************
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El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.819
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	1	0 1	0 1	0	0 0	2 0	1	0 0	2 0	0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	25	630	1	177	0	908	27	0	776	0
Added Vol:	0	0	0	35	0	0	0	12	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	665	1	177	0	920	27	0	782	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	665	1	177	0	920	27	0	782	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	665	1	177	0	920	27	0	782	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	665	1	177	0	920	27	0	782	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.58	0.42	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	928	672	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.42	0.00	0.26	0.00	0.29	0.02	0.00	0.24	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing Plus Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.691
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 1			1 0 0 0 1			0 0 2 1 0			0 0 2 0 0		
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	36	525	0	124	0	880	22	0	677	0
Added Vol:	0	0	0	44	0	0	0	15	0	0	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	36	569	0	124	0	895	22	0	680	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	36	569	0	124	0	895	22	0	680	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	36	569	0	124	0	895	22	0	680	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	36	569	0	124	0	895	22	0	680	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.93	0.07	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	4685	115	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.36	0.00	0.08	0.00	0.19	0.19	0.00	0.21	0.00
Crit Moves:			****	****			****				****	

El Camino College Expansion
Existing Plus Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.776
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	0 1	0	1 0	0 0	2	1 0	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	25	630	1	177	0	908	27	0	776	0
Added Vol:	0	0	0	35	0	0	0	12	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	665	1	177	0	920	27	0	782	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	665	1	177	0	920	27	0	782	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	665	1	177	0	920	27	0	782	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	665	1	177	0	920	27	0	782	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.58	0.42	0.00	2.91	0.09	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	928	672	0	4663	137	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.42	0.00	0.26	0.00	0.20	0.20	0.00	0.24	0.00
Crit Moves:			****	****			****				****	

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.619
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 0	0	0 0	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	133	1321	0	0	680	688
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	133	1321	0	0	680	688
Added Vol:	0	0	0	0	0	0	0	58	0	0	3	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	133	1379	0	0	683	697
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	133	1379	0	0	683	697
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	133	1379	0	0	683	697
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	133	1379	0	0	683	697
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.43	0.00	0.00	0.21	0.44
Crit Moves:							****					****

El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.557
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		0 0 0 0 0			0 0 0 0 0			1 0 2 0 0			0 0 2 0 1	
Volume Module:												
Base Vol:	0	0	0	0	0	0	142	1417	0	0	782	541
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	142	1417	0	0	782	541
Added Vol:	0	0	0	0	0	0	0	46	0	0	6	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	142	1463	0	0	788	558
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	142	1463	0	0	788	558
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	142	1463	0	0	788	558
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	142	1463	0	0	788	558
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.46	0.00	0.00	0.25	0.35
Crit Moves:								****		****		

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--------------------------------------------------------------------------------
                      El Camino College Expansion
                        Existing Plus Project
                          Morning Peak Hour
--------------------------------------------------------------------------------
                  Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.771
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0    0    0    0    0    0    0    0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     123  537   141   171  851   203   120  529    72   232  669   103
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  123  537   141   171  851   203   120  529    72   232  669   103
Added Vol:      0    0    11    15    0     0     0   54     0     2   11     3
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  123  537   152   186  851   203   120  583    72   234  680   106
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   123  537   152   186  851   203   120  583    72   234  680   106
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  123  537   152   186  851   203   120  583    72   234  680   106
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  123  537   152   186  851   203   120  583    72   234  680   106
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.17  0.10  0.12 0.27  0.13  0.08 0.18  0.05  0.15 0.21  0.07
Crit Moves:  ****                  ****             ****        ****
********************************************************************************
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El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.800
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	86	623	207	190	889	192	146	774	121	176	439	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	623	207	190	889	192	146	774	121	176	439	101
Added Vol:	0	0	9	12	0	0	0	44	0	4	22	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	623	216	202	889	192	146	818	121	180	461	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	86	623	216	202	889	192	146	818	121	180	461	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	623	216	202	889	192	146	818	121	180	461	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	86	623	216	202	889	192	146	818	121	180	461	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.14	0.13	0.28	0.12	0.09	0.26	0.08	0.11	0.14	0.07
Crit Moves:	****				****			****		****		

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-------------------------------------------------------------------------------
                        El Camino College Expansion
                          Existing Plus Project
                            Morning Peak Hour
-------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.938
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  E
*******************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         1  0  2  0  1   1  0  2  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      292   568   360   198   738   167   126   904   286   197   786   210
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   292   568   360   198   738   167   126   904   286   197   786   210
Added Vol:       0    11     4     0     2     0     0    58     0     1    12     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   292   579   364   198   740   167   126   962   286   198   798   210
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    292   579   364   198   740   167   126   962   286   198   798   210
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   292   579   364   198   740   167   126   962   286   198   798   210
PCE Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   292   579   364   198   740   167   126   962   286   198   798   210
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:   1600  3200  1600  1600  3200  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.18  0.18  0.23  0.12  0.23  0.10  0.08  0.30  0.18  0.12  0.25  0.13
Crit Moves:   ****                    ****              ****        ****
*******************************************************************************
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El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.958
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	340	638	356	231	710	155	134	896	375	204	757	220
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	638	356	231	710	155	134	896	375	204	757	220
Added Vol:	0	9	3	0	4	0	0	46	0	1	23	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	340	647	359	231	714	155	134	942	375	205	780	220
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	647	359	231	714	155	134	942	375	205	780	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	647	359	231	714	155	134	942	375	205	780	220
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	647	359	231	714	155	134	942	375	205	780	220
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.20	0.22	0.14	0.22	0.10	0.08	0.29	0.23	0.13	0.24	0.14
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.898
Loss Time (sec): 10 (Y+R=0.0 sec) | Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 | Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	292	568	360	198	738	167	126	904	286	197	786	210
Added Vol:	0	11	4	0	2	0	0	58	0	1	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	292	579	364	198	740	167	126	962	286	198	798	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	292	579	364	198	740	167	126	962	286	198	798	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	292	579	364	198	740	167	126	962	286	198	798	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	292	579	364	198	740	167	126	962	286	198	798	210
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.31	0.69	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3700	1100	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.23	0.12	0.23	0.10	0.08	0.26	0.26	0.12	0.25	0.13
Crit Moves:	****				****			****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                   Existing Plus Project - With Improvements
                               Evening Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):           100                Critical Vol./Cap.(X):         0.938
Loss Time (sec):        10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:         100                Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     340   638   356   231   710   155   134   896   375   204   757   220
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  340   638   356   231   710   155   134   896   375   204   757   220
Added Vol:      0     9     3     0     4     0     0    46     0     1    23     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  340   647   359   231   714   155   134   942   375   205   780   220
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   340   647   359   231   714   155   134   942   375   205   780   220
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  340   647   359   231   714   155   134   942   375   205   780   220
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  340   647   359   231   714   155   134   942   375   205   780   220
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.15  0.85  1.00  2.00  1.00
Final Sat.:  1600  3200  1600  1600  3200  1600  1600  3433  1367  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.21  0.20  0.22  0.14  0.22  0.10  0.08  0.27  0.27  0.13  0.24  0.14
Crit Moves:  ****                    ****              ****        ****
********************************************************************************
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--------------------------------------------------------------------------------
                        El Camino College Expansion
                          Existing Plus Project
                            Morning Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.753
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  C
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      98    11   141    10     1    22    32  1335    48    64   949    26
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   98    11   141    10     1    22    32  1335    48    64   949    26
Added Vol:      0     0    18     0     0     0     0    62     0     4    12     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   98    11   159    10     1    22    32  1397    48    68   961    26
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    98    11   159    10     1    22    32  1397    48    68   961    26
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   98    11   159    10     1    22    32  1397    48    68   961    26
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   98    11   159    10     1    22    32  1397    48    68   961    26
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.37  0.04  0.59  0.91  0.09  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:   585    66   949  1455   145  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06  0.17  0.17  0.01  0.01  0.01  0.02  0.44  0.03  0.04  0.30  0.02
Crit Moves:        ****  ****                          ****        ****
********************************************************************************
```

El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.699
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	90	14	100	44	14	61	48	1182	106	73	1053	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	14	100	44	14	61	48	1182	106	73	1053	46
Added Vol:	0	0	15	0	0	0	0	49	0	7	25	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	14	115	44	14	61	48	1231	106	80	1078	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	14	115	44	14	61	48	1231	106	80	1078	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	14	115	44	14	61	48	1231	106	80	1078	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	14	115	44	14	61	48	1231	106	80	1078	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.41	0.06	0.53	0.76	0.24	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	658	102	840	1214	386	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.14	0.14	0.03	0.04	0.04	0.03	0.38	0.07	0.05	0.34	0.03
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.562
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	20	0	0	0	0	774	153	115	1014	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	20	0	0	0	0	774	153	115	1014	0
Added Vol:	9	0	17	0	0	0	0	36	44	83	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	0	37	0	0	0	0	810	197	198	1021	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	0	37	0	0	0	0	810	197	198	1021	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	0	37	0	0	0	0	810	197	198	1021	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	0	37	0	0	0	0	810	197	198	1021	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.61	0.39	1.00	2.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	2574	626	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.02	0.00	0.00	0.00	0.00	0.31	0.31	0.12	0.32	0.00
Crit Moves:			****					****		****		

El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	9	0	76	0	0	0	0	1031	97	70	733	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	9	0	76	0	0	0	0	1031	97	70	733	0
Added Vol:	17	0	33	0	0	0	0	29	35	67	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	0	109	0	0	0	0	1060	132	137	748	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	0	109	0	0	0	0	1060	132	137	748	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	0	109	0	0	0	0	1060	132	137	748	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	0	109	0	0	0	0	1060	132	137	748	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.78	0.22	1.00	2.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	2846	354	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.07	0.00	0.00	0.00	0.00	0.37	0.37	0.09	0.23	0.00
Crit Moves:			****					****		****		

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-------------------------------------------------------------------------------
                          El Camino College Expansion
                            Existing Plus Project
                              Morning Peak Hour
-------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.572
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100              Level Of Service:                   A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0    0  0  1! 0  0    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     62     9    27   45    16    97   42   455    56  101   875    20
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:  62     9    27   45    16    97   42   455    56  101   875    20
Added Vol:     7     1    11    0     7     0    0    17    36   54    83     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  69    10    38   45    23    97   42   472    92  155   958    20
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   69    10    38   45    23    97   42   472    92  155   958    20
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  69    10    38   45    23    97   42   472    92  155   958    20
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  69    10    38   45    23    97   42   472    92  155   958    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      0.59  0.09  0.32 0.27  0.14  0.59 1.00  2.00  1.00 1.00  2.00  1.00
Final Sat.:  944   137   520  436   223   941 1600  3200  1600 1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.04  0.07  0.07 0.03  0.10  0.10 0.03  0.15  0.06 0.10  0.30  0.01
Crit Moves: ****                    ****       ****                     ****
*******************************************************************************
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El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	77	11	62	28	12	55	69	887	62	81	659	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	11	62	28	12	55	69	887	62	81	659	46
Added Vol:	15	3	22	0	6	0	0	33	29	44	67	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	14	84	28	18	55	69	920	91	125	726	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	14	84	28	18	55	69	920	91	125	726	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	14	84	28	18	55	69	920	91	125	726	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	14	84	28	18	55	69	920	91	125	726	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.48	0.07	0.44	0.28	0.18	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	775	118	707	444	285	871	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.02	0.06	0.06	0.04	0.29	0.06	0.08	0.23	0.03
Crit Moves:			****	****				****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                             Existing Plus Project
                               Morning Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.730
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   1  0  3  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   23    0    65  367 1106     0    0 1040   290
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:    0    0     0   23    0    65  367 1106     0    0 1040   290
Added Vol:      0    0     0   12    0    16   80    0     0    0    0    58
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0   35    0    81  447 1106     0    0 1040   348
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0    0     0   35    0    81  447 1106     0    0 1040   348
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0    0     0   35    0    81  447 1106     0    0 1040   348
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0    0     0   35    0    81  447 1106     0    0 1040   348
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 0.90 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 2.00 0.00  2.00 1.00 3.00  0.00 0.00 2.00  1.00
Final Sat.:     0    0     0 2880    0  3200 1600 4800     0    0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.01 0.00  0.03 0.28 0.23  0.00 0.00 0.33  0.22
Crit Moves:                             ****  ****                  ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                          Existing Plus Project
                            Evening Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.657
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        0  0  0  0  0   2  0  0  0  2   1  0  3  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    0   125    0  168   224 1145    0     0 1006  172
Growth Adj:  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Initial Bse:    0    0    0   125    0  168   224 1145    0     0 1006  172
Added Vol:      0    0    0    23    0   32    64    0    0     0    0   46
PasserByVol:    0    0    0     0    0    0     0    0    0     0    0    0
Initial Fut:    0    0    0   148    0  200   288 1145    0     0 1006  218
User Adj:    1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
PHF Volume:     0    0    0   148    0  200   288 1145    0     0 1006  218
Reduct Vol:     0    0    0     0    0    0     0    0    0     0    0    0
Reduced Vol:    0    0    0   148    0  200   288 1145    0     0 1006  218
PCE Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
MLF Adj:     1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
FinalVolume:    0    0    0   148    0  200   288 1145    0     0 1006  218
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600
Adjustment:  1.00 1.00 1.00  0.90 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00
Lanes:       0.00 0.00 0.00  2.00 0.00 2.00  1.00 3.00 0.00  0.00 2.00 1.00
Final Sat.:     0    0    0  2880    0 3200  1600 4800    0     0 3200 1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00 0.00  0.05 0.00 0.06  0.18 0.24 0.00  0.00 0.31 0.14
Crit Moves:                            ****  ****                    ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                          El Camino College Expansion
                   Existing Plus Project - With Improvements
                              Morning Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.570
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   2  0  2  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0   23    0    65  367 1106     0    0 1040   290
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0    0     0   23    0    65  367 1106     0    0 1040   290
Added Vol:     0    0     0   12    0    16   80    0     0    0    0    58
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0    0     0   35    0    81  447 1106     0    0 1040   348
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0    0     0   35    0    81  447 1106     0    0 1040   348
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0    0     0   35    0    81  447 1106     0    0 1040   348
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0    0     0   35    0    81  447 1106     0    0 1040   348
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 0.90 1.00  1.00 0.90 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 2.00 0.00  2.00 2.00 2.00  0.00 0.00 2.25  0.75
Final Sat.:    0    0     0 2880    0  3200 2880 3200     0    0 3597  1203
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.01 0.00  0.03 0.16 0.35  0.00 0.00 0.29  0.29
Crit Moves:                             ****  ****                  ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                      El Camino College Expansion
                 Existing Plus Project - With Improvements
                           Evening Peak Hour
--------------------------------------------------------------------------------

                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.520
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Permitted        Permitted         Permitted
Rights:          Include           Include          Include           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   2  0  2  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  125     0   168   224 1145     0     0 1006   172
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0     0     0  125     0   168   224 1145     0     0 1006   172
Added Vol:     0     0     0   23     0    32    64    0     0     0    0    46
PasserByVol:   0     0     0    0     0     0     0    0     0     0    0     0
Initial Fut:   0     0     0  148     0   200   288 1145     0     0 1006   218
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0     0     0  148     0   200   288 1145     0     0 1006   218
Reduct Vol:    0     0     0    0     0     0     0    0     0     0    0     0
Reduced Vol:   0     0     0  148     0   200   288 1145     0     0 1006   218
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0     0     0  148     0   200   288 1145     0     0 1006   218
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  0.90 1.00  1.00  0.90 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  0.00  2.00 0.00  2.00  2.00 2.00  0.00  0.00 2.47  0.53
Final Sat.:    0     0     0  2880    0  3200  2880 3200     0     0 3945   855
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.05 0.00  0.06  0.10 0.36  0.00  0.00 0.25  0.26
Crit Moves:                              ****        ****        ****
********************************************************************************
```

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.834
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2 1 0			1 0 2 1 0			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	765	59	67	963	205	130	229	171	121	580	35
Added Vol:	94	0	0	0	0	36	7	1	19	0	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	343	765	59	67	963	241	137	230	190	121	587	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	343	765	59	67	963	241	137	230	190	121	587	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	765	59	67	963	241	137	230	190	121	587	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	343	765	59	67	963	241	137	230	190	121	587	35
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.40	0.60	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4456	344	1600	3839	961	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.17	0.17	0.04	0.25	0.25	0.09	0.07	0.12	0.08	0.18	0.02
Crit Moves:	****				****		****				****	

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                          Existing Plus Project
                            Evening Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):           100              Critical Vol./Cap.(X):          0.773
Loss Time (sec):        10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:         100              Level Of Service:                   C
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    1  0  2  0  1    1  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     221   873    97    98   895   196   197   461   278    92   357    51
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  221   873    97    98   895   196   197   461   278    92   357    51
Added Vol:     75     0     0     0     0    29    15     3    38     0     6     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  296   873    97    98   895   225   212   464   316    92   363    51
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   296   873    97    98   895   225   212   464   316    92   363    51
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  296   873    97    98   895   225   212   464   316    92   363    51
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  296   873    97    98   895   225   212   464   316    92   363    51
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.70  0.30  1.00  2.40  0.60  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:  1600  4320   480  1600  3836   964  1600  3200  1600  1600  3200  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.19  0.20  0.20  0.06  0.23  0.23  0.13  0.15  0.20  0.06  0.11  0.03
Crit Moves:  ****                    ****                    ****  ****
********************************************************************************
```

El Camino College Expansion
Existing Plus Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.780
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	765	59	67	963	205	130	229	171	121	580	35
Added Vol:	94	0	0	0	0	36	7	1	19	0	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	343	765	59	67	963	241	137	230	190	121	587	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	343	765	59	67	963	241	137	230	0	121	587	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	765	59	67	963	241	137	230	0	121	587	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	343	765	59	67	963	241	137	230	0	121	587	35
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.40	0.60	1.00	3.00	0.00	1.00	2.83	0.17
Final Sat.:	1600	4456	344	1600	3839	961	1600	4800	0	1600	4530	270
Capacity Analysis Module:												
Vol/Sat:	0.21	0.17	0.17	0.04	0.25	0.25	0.09	0.05	0.00	0.08	0.13	0.13
Crit Moves:	****				****		****				****	

```
---------------------------------------------------------------------------
                         El Camino College Expansion
                  Existing Plus Project - With Improvements
                             Evening Peak Hour
---------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
***************************************************************************
Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)
***************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):        0.737
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100               Level Of Service:                 C
***************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Ignore           Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    221   873    97   98   895   196  197   461   278   92   357    51
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 221   873    97   98   895   196  197   461   278   92   357    51
Added Vol:    75     0     0    0     0    29   15     3    38    0     6     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 296   873    97   98   895   225  212   464   316   92   363    51
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
PHF Volume:  296   873    97   98   895   225  212   464     0   92   363    51
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 296   873    97   98   895   225  212   464     0   92   363    51
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00
FinalVolume: 296   873    97   98   895   225  212   464     0   92   363    51
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  2.70  0.30 1.00  2.40  0.60 1.00  3.00  0.00 1.00  2.63  0.37
Final Sat.: 1600  4320   480 1600  3836   964 1600  4800     0 1600  4209   591
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.19  0.20  0.20 0.06  0.23  0.23 0.13  0.10  0.00 0.06  0.09  0.09
Crit Moves: ****                    ****      ****                    ****
***************************************************************************
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El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.593
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	157	1053	6	1	1265	53	115	0	71	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	157	1053	6	1	1265	53	115	0	71	0	0	0
Added Vol:	0	94	0	0	19	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	157	1147	6	1	1284	53	115	0	71	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	157	1147	6	1	1284	53	115	0	71	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	1147	6	1	1284	53	115	0	71	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	1147	6	1	1284	53	115	0	71	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.98	0.02	1.00	2.88	0.12	0.62	0.00	0.38	0.00	1.00	0.00
Final Sat.:	1600	4775	25	1600	4610	190	989	0	611	0	1600	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.24	0.24	0.00	0.28	0.28	0.07	0.00	0.12	0.00	0.00	0.00
Crit Moves:	****				****				****			

```
--------------------------------------------------------------------------------
                         El Camino College Expansion
                           Existing Plus Project
                             Evening Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
********************************************************************************
Cycle (sec):          100             Critical Vol./Cap.(X):        0.524
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):    xxxxxx
Optimal Cycle:        100             Level Of Service:                 A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Permitted        Permitted        Permitted        Permitted
Rights:         Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     111 1185     0     4 1302    15    75     0    39     1     0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  111 1185     0     4 1302    15    75     0    39     1     0     4
Added Vol:      0   75     0     0   38     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  111 1260     0     4 1340    15    75     0    39     1     0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   111 1260     0     4 1340    15    75     0    39     1     0     4
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  111 1260     0     4 1340    15    75     0    39     1     0     4
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  111 1260     0     4 1340    15    75     0    39     1     0     4
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  1.00 2.97  0.03  0.66 0.00  0.34  0.20 0.00  0.80
Final Sat.:  1600 4800     0  1600 4747    53  1053    0   547   320    0  1280
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.26  0.00  0.00 0.28  0.28  0.05 0.00  0.07  0.00 0.00  0.00
Crit Moves:  ****                  ****                    ****  ****
********************************************************************************
```

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.898
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	813	150	195	880	253	217	650	84	217	964	143
Added Vol:	7	94	0	0	19	0	0	10	1	0	51	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	907	150	195	899	253	217	660	85	217	1015	143
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	225	907	150	195	899	253	217	660	85	217	1015	143
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	907	150	195	899	253	217	660	85	217	1015	143
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	225	907	150	195	899	253	217	660	85	217	1015	143
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.63	0.37
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	4207	593
Capacity Analysis Module:												
Vol/Sat:	0.14	0.28	0.09	0.12	0.28	0.16	0.14	0.21	0.05	0.14	0.24	0.24
Crit Moves:	****				****		****					****

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--------------------------------------------------------------------------------
                         El Camino College Expansion
                            Existing Plus Project
                              Evening Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):           0.877
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       100              Level Of Service:                    D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  2  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     207   847   173   141   913   272   211   731   194   179   785   167
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  207   847   173   141   913   272   211   731   194   179   785   167
Added Vol:      6    75     0     0    38     0     0    20     3     0    41     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  213   922   173   141   951   272   211   751   197   179   826   167
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   213   922   173   141   951   272   211   751   197   179   826   167
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  213   922   173   141   951   272   211   751   197   179   826   167
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  213   922   173   141   951   272   211   751   197   179   826   167
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.50  0.50
Final Sat.:  1600  3200  1600  1600  3200  1600  1600  3200  1600  1600  3993   807
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.29  0.11  0.09  0.30  0.17  0.13  0.23  0.12  0.11  0.21  0.21
Crit Moves:  ****                    ****              ****      ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                   Existing Plus Project - With Improvements
                              Morning Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.858
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100              Level Of Service:                   D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     218  813   150   195  880   253   217  650    84   217  964   143
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  218  813   150   195  880   253   217  650    84   217  964   143
Added Vol:      7   94     0     0   19     0     0   10     1     0   51     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  225  907   150   195  899   253   217  660    85   217 1015   143
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   225  907   150   195  899   253   217  660    85   217 1015   143
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  225  907   150   195  899   253   217  660    85   217 1015   143
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  225  907   150   195  899   253   217  660    85   217 1015   143
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.57  0.43  1.00 2.34  0.66  1.00 2.00  1.00  1.00 2.63  0.37
Final Sat.:  1600 4119   681  1600 3746  1054  1600 3200  1600  1600 4207   593
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.22  0.22  0.12 0.24  0.24  0.14 0.21  0.05  0.14 0.24  0.24
Crit Moves:  ****                  ****        ****                         ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                       El Camino College Expansion
                  Existing Plus Project - With Improvements
                           Evening Peak Hour
--------------------------------------------------------------------------------

                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.834
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    207   847   173  141   913   272  211   731   194  179   785   167
Growth Adj: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse: 207   847   173  141   913   272  211   731   194  179   785   167
Added Vol:     6    75     0    0    38     0    0    20     3    0    41     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 213   922   173  141   951   272  211   751   197  179   826   167
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  213   922   173  141   951   272  211   751   197  179   826   167
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 213   922   173  141   951   272  211   751   197  179   826   167
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 213   922   173  141   951   272  211   751   197  179   826   167
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.00  2.53  0.47 1.00  2.33  0.67 1.00  2.00  1.00 1.00  2.50  0.50
Final Sat.: 1600  4042   758 1600  3732  1068 1600  3200  1600 1600  3993   807
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.13  0.23  0.23 0.09  0.25  0.25 0.13  0.23  0.12 0.11  0.21  0.21
Crit Moves: ****                   ****              ****       ****
********************************************************************************
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--------------------------------------------------------------------------------
                         El Camino College Expansion
                           Existing Plus Project
                             Morning Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.921
Loss Time (sec):       10 (Y+R=0.0 sec)   Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                 Level Of Service:                  E
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Lanes:         1  0  2  0  1   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      161 1022   235   198  974    76    80  702   149   283  953   155
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   161 1022   235   198  974    76    80  702   149   283  953   155
Added Vol:       0   81     0     3   16     1     4    0     0     0    0    14
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   161 1103   235   201  990    77    84  702   149   283  953   169
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    161 1103   235   201  990    77    84  702   149   283  953   169
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   161 1103   235   201  990    77    84  702   149   283  953   169
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   161 1103   235   201  990    77    84  702   149   283  953   169
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:        1.00 2.00  1.00  1.00 2.78  0.22  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:   1600 3200  1600  1600 4454   346  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.10 0.34  0.15  0.13 0.22  0.22  0.05 0.22  0.09  0.10 0.30  0.11
Crit Moves:        ****        ****              ****                   ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                          Existing Plus Project
                            Evening Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.980
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100              Level Of Service:                  E
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:      0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         1  0  2  0  1   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      179  994   303   200  894    89   100 1068   122   251  764   183
Growth Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   179  994   303   200  894    89   100 1068   122   251  764   183
Added Vol:       0   65     0     5   32     1     3    0     0     0    0    11
PasserByVol:     0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   179 1059   303   205  926    90   103 1068   122   251  764   194
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    179 1059   303   205  926    90   103 1068   122   251  764   194
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   179 1059   303   205  926    90   103 1068   122   251  764   194
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   179 1059   303   205  926    90   103 1068   122   251  764   194
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:        1.00 2.00  1.00  1.00 2.73  0.27  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:   1600 3200  1600  1600 4375   425  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.11 0.33  0.19  0.13 0.21  0.21  0.06 0.33  0.08  0.09 0.24  0.12
Crit Moves:        ****        ****                  ****        ****
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El Camino College Expansion
Existing Plus Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.855
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	2 0	2	0 1
Volume Module:												
Base Vol:	161	1022	235	198	974	76	80	702	149	283	953	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1022	235	198	974	76	80	702	149	283	953	155
Added Vol:	0	81	0	3	16	1	4	0	0	0	0	14
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	161	1103	235	201	990	77	84	702	149	283	953	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1103	235	201	990	77	84	702	149	283	953	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1103	235	201	990	77	84	702	149	283	953	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1103	235	201	990	77	84	702	149	283	953	169
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.47	0.53	1.00	2.78	0.22	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3957	843	1600	4454	346	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.28	0.13	0.22	0.22	0.05	0.22	0.09	0.10	0.30	0.11
Crit Moves:		****		****			****				****	

El Camino College Expansion
Existing Plus Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.933
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	2 0	2	0 1
Volume Module:												
Base Vol:	179	994	303	200	894	89	100	1068	122	251	764	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	994	303	200	894	89	100	1068	122	251	764	183
Added Vol:	0	65	0	5	32	1	3	0	0	0	0	11
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	179	1059	303	205	926	90	103	1068	122	251	764	194
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	1059	303	205	926	90	103	1068	122	251	764	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	1059	303	205	926	90	103	1068	122	251	764	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	179	1059	303	205	926	90	103	1068	122	251	764	194
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.33	0.67	1.00	2.73	0.27	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3732	1068	1600	4375	425	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.28	0.28	0.13	0.21	0.21	0.06	0.33	0.08	0.09	0.24	0.12
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.882
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	1 0	1 0	1	1 0	1 1	0	1 0
Volume Module:												
Base Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	807	523	7	1175	233	183	341	134	482	655	261
Added Vol:	0	15	0	2	12	1	7	0	0	0	0	54
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	822	523	9	1187	234	190	341	134	482	655	315
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	822	523	9	1187	234	190	341	134	482	655	315
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	822	523	9	1187	234	190	341	134	482	655	315
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	822	523	9	1187	234	190	341	134	482	655	315
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.51	0.49	1.00	1.44	0.56	1.00	1.35	0.65
Final Sat.:	1600	3200	1600	1600	4010	790	1600	2297	903	1600	2161	1039
Capacity Analysis Module:												
Vol/Sat:	0.03	0.26	0.33	0.01	0.30	0.30	0.12	0.15	0.15	0.30	0.30	0.30
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.096
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 1	0	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	54	1090	777	59	911	144	152	404	83	529	657	303
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1090	777	59	911	144	152	404	83	529	657	303
Added Vol:	0	12	0	4	23	3	6	0	0	0	0	44
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	1102	777	63	934	147	158	404	83	529	657	347
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	1102	777	63	934	147	158	404	83	529	657	347
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1102	777	63	934	147	158	404	83	529	657	347
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	1102	777	63	934	147	158	404	83	529	657	347
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.59	0.41	1.00	1.66	0.34	1.04	1.29	0.68
Final Sat.:	1600	3200	1600	1600	4147	653	1600	2655	545	1657	2057	1086
Capacity Analysis Module:												
Vol/Sat:	0.03	0.34	0.49	0.04	0.23	0.23	0.10	0.15	0.15	0.32	0.32	0.32
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing Plus Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.879
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		1 0 2 1 1			1 0 2 1 0			1 0 1 1 0			1 1 0 1 0	
Volume Module:												
Base Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	807	523	7	1175	233	183	341	134	482	655	261
Added Vol:	0	15	0	2	12	1	7	0	0	0	0	54
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	822	523	9	1187	234	190	341	134	482	655	315
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	822	523	9	1187	234	190	341	134	482	655	315
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	822	523	9	1187	234	190	341	134	482	655	315
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	822	523	9	1187	234	190	341	134	482	655	315
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.44	1.56	1.00	2.51	0.49	1.00	1.44	0.56	1.00	1.35	0.65
Final Sat.:	1600	3911	2489	1600	4010	790	1600	2297	903	1600	2161	1039
Capacity Analysis Module:												
Vol/Sat:	0.03	0.21	0.21	0.01	0.30	0.30	0.12	0.15	0.15	0.30	0.30	0.30
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.904
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 1	1 0	2	1 0	1 0	1	1 0	1 1	0	1 0
Volume Module:												
Base Vol:	54	1090	777	59	911	144	152	404	83	529	657	303
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1090	777	59	911	144	152	404	83	529	657	303
Added Vol:	0	12	0	4	23	3	6	0	0	0	0	44
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	1102	777	63	934	147	158	404	83	529	657	347
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	1102	777	63	934	147	158	404	83	529	657	347
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1102	777	63	934	147	158	404	83	529	657	347
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	1102	777	63	934	147	158	404	83	529	657	347
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.35	1.65	1.00	2.59	0.41	1.00	1.66	0.34	1.04	1.29	0.68
Final Sat.:	1600	3753	2647	1600	4147	653	1600	2655	545	1657	2057	1086
Capacity Analysis Module:												
Vol/Sat:	0.03	0.29	0.29	0.04	0.23	0.23	0.10	0.15	0.15	0.32	0.32	0.32
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.008
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		1 0 3 0 0			0 0 2 1 0			0 0 1! 0 1			0 0 0 0 0	
Volume Module:												
Base Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	439	1343	0	0	1436	378	52	0	758	0	0	0
Added Vol:	0	15	0	0	3	9	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	439	1358	0	0	1439	387	52	0	758	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	439	1358	0	0	1439	387	52	0	758	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	439	1358	0	0	1439	387	52	0	758	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	439	1358	0	0	1439	387	52	0	758	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.36	0.64	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	3783	1017	205	0	2995	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.27	0.28	0.00	0.00	0.38	0.38	0.03	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****				****			

El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.853
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	3	0 0	0 0	2	1 0	0 0	1!	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	294	1792	0	0	1416	219	97	0	619	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	294	1792	0	0	1416	219	97	0	619	0	0	0
Added Vol:	0	12	0	0	6	17	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	294	1804	0	0	1422	236	97	0	619	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	294	1804	0	0	1422	236	97	0	619	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	294	1804	0	0	1422	236	97	0	619	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	294	1804	0	0	1422	236	97	0	619	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.57	0.43	0.27	0.00	1.73	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	4117	683	434	0	2766	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.18	0.38	0.00	0.00	0.35	0.35	0.06	0.00	0.22	0.00	0.00	0.00
Crit Moves:	****				****				****			

El Camino College Expansion
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.689
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1!	0 0	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	680	0	13	0	0	0	0	411	446	128	692	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	680	0	13	0	0	0	0	411	446	128	692	0
Added Vol:	44	0	0	0	0	0	0	2	0	0	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	724	0	13	0	0	0	0	413	446	128	703	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	724	0	13	0	0	0	0	413	446	128	703	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	724	0	13	0	0	0	0	413	446	128	703	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	724	0	13	0	0	0	0	413	446	128	703	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.96	0.00	0.04	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	3144	0	56	0	0	0	0	1600	1600	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.26	0.28	0.08	0.22	0.00
Crit Moves:	****								****	****		

El Camino College Expansion
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.871
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1!	0 0	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	854	0	29	0	0	0	0	644	604	148	622	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	854	0	29	0	0	0	0	644	604	148	622	0
Added Vol:	35	0	0	0	0	0	0	4	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	889	0	29	0	0	0	0	648	604	148	631	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	889	0	29	0	0	0	0	648	604	148	631	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	889	0	29	0	0	0	0	648	604	148	631	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	889	0	29	0	0	0	0	648	604	148	631	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.94	0.00	0.06	0.00	0.00	0.00	0.00	1.04	0.96	1.00	2.00	0.00
Final Sat.:	3099	0	101	0	0	0	0	1656	1544	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.39	0.39	0.09	0.20	0.00
Crit Moves:	****							****		****		

Existing Plus Cumulatives

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

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********************************************************************************
Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.816
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        2  0  3  0  1   2  0  3  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     384 1312   179   197 1220   148   115  414   256   270  809   169
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  384 1312   179   197 1220   148   115  414   256   270  809   169
Added Vol:      0    0     0     0    0     0     0    6     0     0    6     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  384 1312   179   197 1220   148   115  420   256   270  815   169
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   384 1312   179   197 1220   148   115  420   256   270  815   169
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  384 1312   179   197 1220   148   115  420   256   270  815   169
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  384 1312   179   197 1220   148   115  420   256   270  815   169
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  0.90 1.00  1.00  0.90 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 3.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  2880 4800  1600  2880 4800  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.27  0.11  0.07 0.25  0.09  0.07 0.13  0.16  0.17 0.25  0.11
Crit Moves:  ****                   ****                   ****  ****
********************************************************************************
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El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.799
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	2 0 3 0 1	2 0 3 0 1	1 0 2 0 1	1 0 2 0 1

Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	1244	204	249	1392	161	159	723	231	117	489	130
Added Vol:	0	0	0	0	0	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	311	1244	204	249	1392	161	159	728	231	117	494	130
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	311	1244	204	249	1392	161	159	728	231	117	494	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	1244	204	249	1392	161	159	728	231	117	494	130
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	1244	204	249	1392	161	159	728	231	117	494	130
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.13	0.09	0.29	0.10	0.10	0.23	0.14	0.07	0.15	0.08
Crit Moves:	****				****			****		****		

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                         El Camino College Expansion
                          Existing Plus Cumulative
                             Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100             Critical Vol./Cap.(X):         0.730
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100             Level Of Service:                  C
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  1   1  0  0  0  1   0  0  2  0  1   0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0    36   525    0   124     0  880    22     0  677     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0    0    36   525    0   124     0  880    22     0  677     0
Added Vol:     0    0     0     0    0     0     0   13     0     0   13     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0    0    36   525    0   124     0  893    22     0  690     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0    0    36   525    0   124     0  893    22     0  690     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0    0    36   525    0   124     0  893    22     0  690     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0    0    36   525    0   124     0  893    22     0  690     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  1.00  1.00 0.00  1.00  0.00 2.00  1.00  0.00 2.00  0.00
Final Sat.:    0    0  1600  1600    0  1600     0 3200  1600     0 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.02  0.33 0.00  0.08  0.00 0.28  0.01  0.00 0.22  0.00
Crit Moves:             ****  ****                  ****        ****
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El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.796
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	0 1	0	1 0	0 0	2	0 1	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	25	630	1	177	0	908	27	0	776	0
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	630	1	177	0	918	27	0	785	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	630	1	177	0	918	27	0	785	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	630	1	177	0	918	27	0	785	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	630	1	177	0	918	27	0	785	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.56	0.44	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	899	701	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.39	0.00	0.25	0.00	0.29	0.02	0.00	0.25	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.613
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			0 0 0 0 0			1 0 2 0 0			0 0 2 0 1		
Volume Module:												
Base Vol:	0	0	0	0	0	0	133	1321	0	0	680	688
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	133	1321	0	0	680	688
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	133	1334	0	0	693	688
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	133	1334	0	0	693	688
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	133	1334	0	0	693	688
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	133	1334	0	0	693	688
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.42	0.00	0.00	0.22	0.43
Crit Moves:							****					****

El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.546
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 0	0	0 0	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	142	1417	0	0	782	541
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	142	1417	0	0	782	541
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	142	1427	0	0	791	541
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	142	1427	0	0	791	541
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	142	1427	0	0	791	541
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	142	1427	0	0	791	541
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.45	0.00	0.00	0.25	0.34
Crit Moves:								****		****		

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                         Existing Plus Cumulative
                             Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.755
Loss Time (sec):        10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100              Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     123  537   141   171  851   203   120  529    72   232  669   103
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  123  537   141   171  851   203   120  529    72   232  669   103
Added Vol:      0    0     0     0    0     0     0    6     0     0    6     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  123  537   141   171  851   203   120  535    72   232  675   103
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   123  537   141   171  851   203   120  535    72   232  675   103
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  123  537   141   171  851   203   120  535    72   232  675   103
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  123  537   141   171  851   203   120  535    72   232  675   103
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.17  0.09  0.11 0.27  0.13  0.08 0.17  0.05  0.15 0.21  0.06
Crit Moves:  ****                  ****             ****        ****
********************************************************************************
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--------------------------------------------------------------------------------
                         El Camino College Expansion
                          Existing Plus Cumulative
                             Evening Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.785
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100                 Level Of Service:                  C
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     86  623   207  190  889   192  146  774   121  176  439   101
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  86  623   207  190  889   192  146  774   121  176  439   101
Added Vol:     0    0     0    0    0     0    0    5     0    0    5     0
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  86  623   207  190  889   192  146  779   121  176  444   101
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   86  623   207  190  889   192  146  779   121  176  444   101
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  86  623   207  190  889   192  146  779   121  176  444   101
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  86  623   207  190  889   192  146  779   121  176  444   101
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.00 2.00  1.00 1.00 2.00  1.00 1.00 2.00  1.00 1.00 2.00  1.00
Final Sat.:  1600 3200  1600 1600 3200  1600 1600 3200  1600 1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.19  0.13 0.12 0.28  0.12 0.09 0.24  0.08 0.11 0.14  0.06
Crit Moves:  ****                 ****              ****        ****
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---------------------------------------------------------------------------------
                        El Camino College Expansion
                         Existing Plus Cumulative
                             Morning Peak Hour
---------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*********************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
*********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.923
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  E
*********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      292   568   360   198   738   167   126   904   286   197   786   210
Growth Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   292   568   360   198   738   167   126   904   286   197   786   210
Added Vol:       0     0     0     0     0     0     0    13     0     0    13     0
PasserByVol:     0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   292   568   360   198   738   167   126   917   286   197   799   210
User Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    292   568   360   198   738   167   126   917   286   197   799   210
Reduct Vol:      0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   292   568   360   198   738   167   126   917   286   197   799   210
PCE Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:      1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   292   568   360   198   738   167   126   917   286   197   799   210
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:        1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:   1600  3200  1600  1600  3200  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.18  0.18  0.23  0.12  0.23  0.10  0.08  0.29  0.18  0.12  0.25  0.13
Crit Moves:   ****                    ****              ****        ****
*********************************************************************************
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El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.945
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	340	638	356	231	710	155	134	896	375	204	757	220
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	638	356	231	710	155	134	896	375	204	757	220
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	340	638	356	231	710	155	134	906	375	204	766	220
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	638	356	231	710	155	134	906	375	204	766	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	638	356	231	710	155	134	906	375	204	766	220
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	638	356	231	710	155	134	906	375	204	766	220
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.20	0.22	0.14	0.22	0.10	0.08	0.28	0.23	0.13	0.24	0.14
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	98	11	141	10	1	22	32	1335	48	64	949	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	11	141	10	1	22	32	1335	48	64	949	26
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	11	141	10	1	22	32	1348	48	64	962	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	11	141	10	1	22	32	1348	48	64	962	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	11	141	10	1	22	32	1348	48	64	962	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	11	141	10	1	22	32	1348	48	64	962	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.39	0.04	0.56	0.91	0.09	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	627	70	902	1455	145	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.16	0.01	0.01	0.01	0.02	0.42	0.03	0.04	0.30	0.02
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.673
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	90	14	100	44	14	61	48	1182	106	73	1053	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	14	100	44	14	61	48	1182	106	73	1053	46
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	14	100	44	14	61	48	1192	106	73	1062	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	14	100	44	14	61	48	1192	106	73	1062	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	14	100	44	14	61	48	1192	106	73	1062	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	14	100	44	14	61	48	1192	106	73	1062	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.44	0.07	0.49	0.76	0.24	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	706	110	784	1214	386	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.13	0.13	0.03	0.04	0.04	0.03	0.37	0.07	0.05	0.33	0.03
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.470
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 2			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	0	0	20	0	0	0	0	774	153	115	1014	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	20	0	0	0	0	774	153	115	1014	0
Added Vol:	0	0	0	0	0	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	20	0	0	0	0	780	153	115	1020	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	20	0	0	0	0	780	153	115	1020	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	20	0	0	0	0	780	153	115	1020	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	20	0	0	0	0	780	153	115	1020	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00
Final Sat.:	0	0	3200	0	0	0	0	2675	525	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.29	0.29	0.07	0.32	0.00
Crit Moves:			****					****		****		

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                         El Camino College Expansion
                          Existing Plus Cumulative
                             Evening Peak Hour
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.524
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0   0     0     0   0     0     0   0     0     0
Lanes:       0  0  1! 0  1   0  0  0  0  0   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      9     0    76     0     0     0     0  1031    97    70   733     0
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   9     0    76     0     0     0     0  1031    97    70   733     0
Added Vol:     0     0     0     0     0     0     0     5     0     0     5     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   9     0    76     0     0     0     0  1036    97    70   738     0
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    9     0    76     0     0     0     0  1036    97    70   738     0
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   9     0    76     0     0     0     0  1036    97    70   738     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   9     0    76     0     0     0     0  1036    97    70   738     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.21  0.00  1.79  0.00  0.00  0.00  0.00  1.83  0.17  1.00  2.00  0.00
Final Sat.:   339     0  2861     0     0     0     0  2926   274  1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.00  0.03  0.00  0.00  0.00  0.00  0.35  0.35  0.04  0.23  0.00
Crit Moves:              ****                          ****        ****
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El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound	South Bound	East Bound	West Bound
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	0 0 1! 0 0	0 0 1! 0 0	1 0 2 0 1	1 0 2 0 1

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	62	9	27	45	16	97	42	455	56	101	875	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	62	9	27	45	16	97	42	455	56	101	875	20
Added Vol:	0	0	0	0	0	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	62	9	27	45	16	97	42	461	56	101	881	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	62	9	27	45	16	97	42	461	56	101	881	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	9	27	45	16	97	42	461	56	101	881	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	62	9	27	45	16	97	42	461	56	101	881	20
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.63	0.09	0.28	0.28	0.10	0.61	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1012	147	441	456	162	982	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.06	0.06	0.03	0.10	0.10	0.03	0.14	0.04	0.06	0.28	0.01
Crit Moves:	****					****	****				****	

El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	77	11	62	28	12	55	69	887	62	81	659	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	11	62	28	12	55	69	887	62	81	659	46
Added Vol:	0	0	0	0	0	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	77	11	62	28	12	55	69	892	62	81	664	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	11	62	28	12	55	69	892	62	81	664	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	11	62	28	12	55	69	892	62	81	664	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	11	62	28	12	55	69	892	62	81	664	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.51	0.07	0.41	0.29	0.13	0.58	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	821	117	661	472	202	926	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.09	0.09	0.02	0.06	0.06	0.04	0.28	0.04	0.05	0.21	0.03
Crit Moves:		****		****				****		****		

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                      El Camino College Expansion
                      Existing Plus Cumulative
                          Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.679
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100               Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0    2  0  0  0  2    1  0  3  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0    23     0    65   367  1106     0     0  1040   290
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:    0     0     0    23     0    65   367  1106     0     0  1040   290
Added Vol:      0     0     0     0     0     0     0    13     0     0    13     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0    23     0    65   367  1119     0     0  1053   290
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0    23     0    65   367  1119     0     0  1053   290
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0    23     0    65   367  1119     0     0  1053   290
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:    0     0     0    23     0    65   367  1119     0     0  1053   290
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  0.90  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  2.00  1.00  3.00  0.00  0.00  2.00  1.00
Final Sat.:     0     0     0  2880     0  3200  1600  4800     0     0  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.01  0.00  0.02  0.23  0.23  0.00  0.00  0.33  0.18
Crit Moves:                               ****  ****                    ****
********************************************************************************
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El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	2 0	0	0 2	1 0	3	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	125	0	168	224	1145	0	0	1006	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	125	0	168	224	1145	0	0	1006	172
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	125	0	168	224	1155	0	0	1015	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	125	0	168	224	1155	0	0	1015	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	125	0	168	224	1155	0	0	1015	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	125	0	168	224	1155	0	0	1015	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	2880	0	3200	1600	4800	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.05	0.14	0.24	0.00	0.00	0.32	0.11
Crit Moves:						****	****				****	

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.765
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	765	59	67	963	205	130	229	171	121	580	35
Added Vol:	0	7	0	0	7	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	249	772	59	67	970	205	130	235	171	121	586	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	249	772	59	67	970	205	130	235	171	121	586	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	249	772	59	67	970	205	130	235	171	121	586	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	249	772	59	67	970	205	130	235	171	121	586	35
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.48	0.52	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4459	341	1600	3963	837	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.16	0.17	0.17	0.04	0.24	0.24	0.08	0.07	0.11	0.08	0.18	0.02
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.703
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	221	873	97	98	895	196	197	461	278	92	357	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	221	873	97	98	895	196	197	461	278	92	357	51
Added Vol:	0	5	0	0	5	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	221	878	97	98	900	196	197	466	278	92	362	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	221	878	97	98	900	196	197	466	278	92	362	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	221	878	97	98	900	196	197	466	278	92	362	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	221	878	97	98	900	196	197	466	278	92	362	51
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.70	0.30	1.00	2.46	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4322	478	1600	3942	858	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.14	0.20	0.20	0.06	0.23	0.23	0.12	0.15	0.17	0.06	0.11	0.03
Crit Moves:	****				****		****				****	

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--------------------------------------------------------------------------------
                         El Camino College Expansion
                          Existing Plus Cumulative
                             Morning Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.590
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  A
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     157 1053     6     1 1265    53   115     0    71     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  157 1053     6     1 1265    53   115     0    71     0     0     0
Added Vol:      0    7     0     0    7     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  157 1060     6     1 1272    53   115     0    71     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   157 1060     6     1 1272    53   115     0    71     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  157 1060     6     1 1272    53   115     0    71     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157 1060     6     1 1272    53   115     0    71     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.98  0.02  1.00 2.88  0.12  0.62 0.00  0.38  0.00 1.00  0.00
Final Sat.:  1600 4773    27  1600 4608   192   989    0   611     0 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.22  0.22  0.00 0.28  0.28  0.07 0.00  0.12  0.00 0.00  0.00
Crit Moves:  ****                    ****                   ****
********************************************************************************
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El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.517
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	111	1185	0	4	1302	15	75	0	39	1	0	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	1185	0	4	1302	15	75	0	39	1	0	4
Added Vol:	0	5	0	0	5	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	1190	0	4	1307	15	75	0	39	1	0	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	111	1190	0	4	1307	15	75	0	39	1	0	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	1190	0	4	1307	15	75	0	39	1	0	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	1190	0	4	1307	15	75	0	39	1	0	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	1.00	2.97	0.03	0.66	0.00	0.34	0.20	0.00	0.80
Final Sat.:	1600	4800	0	1600	4746	54	1053	0	547	320	0	1280
Capacity Analysis Module:												
Vol/Sat:	0.07	0.25	0.00	0.00	0.28	0.28	0.05	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****				****				****	****		

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.881
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	813	150	195	880	253	217	650	84	217	964	143
Added Vol:	0	0	0	6	0	0	0	13	0	0	13	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	218	813	150	201	880	253	217	663	84	217	977	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	813	150	201	880	253	217	663	84	217	977	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	813	150	201	880	253	217	663	84	217	977	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	813	150	201	880	253	217	663	84	217	977	149
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.60	0.40
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	4165	635
Capacity Analysis Module:												
Vol/Sat:	0.14	0.25	0.09	0.13	0.28	0.16	0.14	0.21	0.05	0.14	0.23	0.23
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.858
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	207	847	173	141	913	272	211	731	194	179	785	167
Added Vol:	0	0	0	5	0	0	0	10	0	0	9	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	207	847	173	146	913	272	211	741	194	179	794	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	207	847	173	146	913	272	211	741	194	179	794	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	207	847	173	146	913	272	211	741	194	179	794	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	207	847	173	146	913	272	211	741	194	179	794	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.47	0.53
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3945	855
Capacity Analysis Module:												
Vol/Sat:	0.13	0.26	0.11	0.09	0.29	0.17	0.13	0.23	0.12	0.11	0.20	0.20
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.891
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	161	1022	235	198	974	76	80	702	149	283	953	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1022	235	198	974	76	80	702	149	283	953	155
Added Vol:	0	0	0	0	0	0	0	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	161	1022	235	198	974	76	80	703	149	283	954	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1022	235	198	974	76	80	703	149	283	954	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1022	235	198	974	76	80	703	149	283	954	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1022	235	198	974	76	80	703	149	283	954	155
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.78	0.22	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	4453	347	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.32	0.15	0.12	0.22	0.22	0.05	0.22	0.09	0.10	0.30	0.10
Crit Moves:		****		****			****				****	

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                          Existing Plus Cumulative
                             Evening Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.957
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100                 Level Of Service:                  E
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|----------------||----------------||----------------||----------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:         1  0  2  0  1    1  0  2  1  0    1  0  2  0  1    2  0  2  0  1
------------|----------------||----------------||----------------||----------------|
Volume Module:
Base Vol:     179  994   303   200  894    89   100 1068   122   251  764   183
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  179  994   303   200  894    89   100 1068   122   251  764   183
Added Vol:      0    0     0     0    0     0     0    1     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  179  994   303   200  894    89   100 1069   122   251  765   183
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   179  994   303   200  894    89   100 1069   122   251  765   183
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  179  994   303   200  894    89   100 1069   122   251  765   183
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  179  994   303   200  894    89   100 1069   122   251  765   183
------------|----------------||----------------||----------------||----------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.73  0.27  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 4365   435  1600 3200  1600  2880 3200  1600
------------|----------------||----------------||----------------||----------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.31  0.19  0.13 0.20  0.20  0.06 0.33  0.08  0.09 0.24  0.11
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
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El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.872
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2 0 1			1 0 2 1 0			1 0 1 1 0			1 1 0 1 0		
Volume Module:												
Base Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	807	523	7	1175	233	183	341	134	482	655	261
Added Vol:	0	0	0	0	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	807	523	7	1175	233	183	342	134	482	655	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	807	523	7	1175	233	183	342	134	482	655	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	807	523	7	1175	233	183	342	134	482	655	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	807	523	7	1175	233	183	342	134	482	655	261
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.50	0.50	1.00	1.44	0.56	1.03	1.41	0.56
Final Sat.:	1600	3200	1600	1600	4006	794	1600	2299	901	1651	2249	900
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.33	0.00	0.29	0.29	0.11	0.15	0.15	0.29	0.29	0.29
Crit Moves:			****	****				****		****		

```
------------------------------------------------------------------------------
                     El Camino College Expansion
                      Existing Plus Cumulative
                          Evening Peak Hour
------------------------------------------------------------------------------

                   Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
******************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
******************************************************************************
Cycle (sec):        100                Critical Vol./Cap.(X):        1.087
Loss Time (sec):     10 (Y+R=0.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:      100                Level Of Service:                 F
******************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Permitted        Permitted        Permitted        Permitted
Rights:           Ovl            Include          Include          Include
Min. Green:   0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  0  2  0  1   1  0  2  1  0   1  0  1  1  0   1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     54 1090   777    59  911   144   152  404    83   529  657   303
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  54 1090   777    59  911   144   152  404    83   529  657   303
Added Vol:     0    0     0     0    0     0     0    2     0     0    2     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  54 1090   777    59  911   144   152  406    83   529  659   303
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   54 1090   777    59  911   144   152  406    83   529  659   303
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  54 1090   777    59  911   144   152  406    83   529  659   303
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  54 1090   777    59  911   144   152  406    83   529  659   303
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.59  0.41  1.00 1.66  0.34  1.06 1.33  0.61
Final Sat.:  1600 3200  1600  1600 4145   655  1600 2657   543  1698 2121   981
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.34  0.49  0.04 0.22  0.22  0.10 0.15  0.15  0.31 0.31  0.31
Crit Moves:             ****  ****                  ****        ****
******************************************************************************
```

El Camino College Expansion
Existing Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 1.005
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	3 0	0	0 0	2 1	0	0 0	1! 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	439	1343	0	0	1436	378	52	0	758	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	439	1343	0	0	1436	378	52	0	758	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	439	1343	0	0	1436	378	52	0	758	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	439	1343	0	0	1436	378	52	0	758	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.37	0.63	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	3800	1000	205	0	2995	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.27	0.28	0.00	0.00	0.38	0.38	0.03	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****				****			

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--------------------------------------------------------------------------------
                     El Camino College Expansion
                      Existing Plus Cumulative
                         Evening Peak Hour
--------------------------------------------------------------------------------

                   Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.848
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  3  0  0    0  0  2  1  0    0  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     294 1792     0     0 1416   219    97     0   619     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  294 1792     0     0 1416   219    97     0   619     0     0     0
Added Vol:      0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  294 1792     0     0 1416   219    97     0   619     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   294 1792     0     0 1416   219    97     0   619     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  294 1792     0     0 1416   219    97     0   619     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  294 1792     0     0 1416   219    97     0   619     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 2.60  0.40  0.27 0.00  1.73  0.00 0.00  0.00
Final Sat.:  1600 4800     0     0 4157   643   434     0  2766     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.18 0.37  0.00  0.00 0.34  0.34  0.06 0.00  0.22  0.00 0.00  0.00
Crit Moves:  ****                 ****                    ****
********************************************************************************
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--------------------------------------------------------------------------------
                         El Camino College Expansion
                          Existing Plus Cumulative
                             Morning Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.675
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  1! 0  0   0  0  0  0  0   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     680    0    13    0    0     0    0  411   446  128  692     0
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:  680    0    13    0    0     0    0  411   446  128  692     0
Added Vol:      0    0     0    0    0     0    0    1     0    0    0     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:  680    0    13    0    0     0    0  412   446  128  692     0
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:   680    0    13    0    0     0    0  412   446  128  692     0
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:  680    0    13    0    0     0    0  412   446  128  692     0
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:  680    0    13    0    0     0    0  412   446  128  692     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       1.96 0.00  0.04 0.00 0.00  0.00 0.00 1.00  1.00 1.00 2.00  0.00
Final Sat.:  3140    0    60    0    0     0    0 1600  1600 1600 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.22 0.00  0.22 0.00 0.00  0.00 0.00 0.26  0.28 0.08 0.22  0.00
Crit Moves:  ****                                       ****  ****
********************************************************************************
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--------------------------------------------------------------------------------
                          El Camino College Expansion
                           Existing Plus Cumulative
                               Evening Peak Hour
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.859
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  1! 0  0   0  0  0  0  0   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     854    0    29     0    0     0     0  644   604   148  622     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  854    0    29     0    0     0     0  644   604   148  622     0
Added Vol:      0    0     0     0    0     0     0    2     0     0    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  854    0    29     0    0     0     0  646   604   148  624     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   854    0    29     0    0     0     0  646   604   148  624     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  854    0    29     0    0     0     0  646   604   148  624     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  854    0    29     0    0     0     0  646   604   148  624     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.93 0.00  0.07  0.00 0.00  0.00  0.00 1.03  0.97  1.00 2.00  0.00
Final Sat.:  3095    0   105     0    0     0     0 1654  1546  1600 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.28 0.00  0.28  0.00 0.00  0.00  0.00 0.39  0.39  0.09 0.20  0.00
Crit Moves:  ****                                   ****        ****
********************************************************************************
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Existing Plus Project Plus Cumulatives

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.819
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	384	1312	179	197	1220	148	115	414	256	270	809	169
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	384	1312	179	197	1220	148	115	414	256	270	809	169
Added Vol:	0	0	18	15	0	0	0	28	0	4	11	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	384	1312	197	212	1220	148	115	442	256	274	820	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	384	1312	197	212	1220	148	115	442	256	274	820	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	384	1312	197	212	1220	148	115	442	256	274	820	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	384	1312	197	212	1220	148	115	442	256	274	820	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.13	0.27	0.12	0.07	0.25	0.09	0.07	0.14	0.16	0.17	0.26	0.11
Crit Moves:	****				****				****	****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	311	1244	204	249	1392	161	159	723	231	117	489	130
Added Vol:	0	0	15	12	0	0	0	22	0	7	13	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	311	1244	219	261	1392	161	159	745	231	124	502	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	311	1244	219	261	1392	161	159	745	231	124	502	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	1244	219	261	1392	161	159	745	231	124	502	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	1244	219	261	1392	161	159	745	231	124	502	136
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.14	0.09	0.29	0.10	0.10	0.23	0.14	0.08	0.16	0.09
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

```
Cycle (sec):          100                Critical Vol./Cap.(X):        0.762
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100                Level Of Service:                 C
```

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	1 0	0	0 1	0 0	2	0 1	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	36	525	0	124	0	880	22	0	677	0
Added Vol:	0	0	0	44	0	0	0	27	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	36	569	0	124	0	907	22	0	692	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	36	569	0	124	0	907	22	0	692	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	36	569	0	124	0	907	22	0	692	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	36	569	0	124	0	907	22	0	692	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.36	0.00	0.08	0.00	0.28	0.01	0.00	0.22	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.822
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	0 1	0	1 0	0 0	2	0 1	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	25	630	1	177	0	908	27	0	776	0
Added Vol:	0	0	0	35	0	0	0	21	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	665	1	177	0	929	27	0	791	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	665	1	177	0	929	27	0	791	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	665	1	177	0	929	27	0	791	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	665	1	177	0	929	27	0	791	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.58	0.42	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	928	672	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.42	0.00	0.26	0.00	0.29	0.02	0.00	0.25	0.00
Crit Moves:			****	****				****		****		

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------------------------------------------------------------------------------
                      El Camino College Expansion
        Existing Plus Project Plus Cumulative - With Improvements
                          Morning Peak Hour
------------------------------------------------------------------------------

                  Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.694
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       100             Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  1   1  0  0  0  1   0  0  2  1  0   0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0    36   525     0   124     0   880    22     0   677     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0     0    36   525     0   124     0   880    22     0   677     0
Added Vol:     0     0     0    44     0     0     0    27     0     0    15     0
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   0     0    36   569     0   124     0   907    22     0   692     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0     0    36   569     0   124     0   907    22     0   692     0
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   0     0    36   569     0   124     0   907    22     0   692     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0     0    36   569     0   124     0   907    22     0   692     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  1.00  1.00 0.00  1.00  0.00 2.93  0.07  0.00 2.00  0.00
Final Sat.:    0     0  1600  1600     0  1600     0 4686   114     0 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.02  0.36 0.00  0.08  0.00 0.19  0.19  0.00 0.22  0.00
Crit Moves:             ****  ****             ****                   ****
********************************************************************************
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El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	0 1	0	1 0	0 0	2	1 0	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	25	630	1	177	0	908	27	0	776	0
Added Vol:	0	0	0	35	0	0	0	21	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	665	1	177	0	929	27	0	791	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	665	1	177	0	929	27	0	791	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	665	1	177	0	929	27	0	791	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	665	1	177	0	929	27	0	791	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.58	0.42	0.00	2.92	0.08	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	928	672	0	4664	136	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.42	0.00	0.26	0.00	0.20	0.20	0.00	0.25	0.00
Crit Moves:			****	****			****				****	

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--------------------------------------------------------------------------------
                         El Camino College Expansion
                   Existing Plus Project Plus Cumulative
                             Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.619
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  0   0  0  0  0  0   1  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0    0    0     0  133 1321     0    0  680   688
Growth Adj:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Initial Bse:   0    0     0    0    0     0  133 1321     0    0  680   688
Added Vol:     0    0     0    0    0     0    0   71     0    0   15     9
PasserByVol:   0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:   0    0     0    0    0     0  133 1392     0    0  695   697
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:    0    0     0    0    0     0  133 1392     0    0  695   697
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0    0     0    0    0     0  133 1392     0    0  695   697
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:   0    0     0    0    0     0  133 1392     0    0  695   697
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 0.00 0.00  0.00 1.00 2.00  0.00 0.00 2.00  1.00
Final Sat.:    0    0     0    0    0     0 1600 3200     0    0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.00 0.00  0.00 0.08 0.44  0.00 0.00 0.22  0.44
Crit Moves:                                  ****                          ****
********************************************************************************
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El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.560
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			0 0 0 0 0			1 0 2 0 0			0 0 2 0 1		
Volume Module:												
Base Vol:	0	0	0	0	0	0	142	1417	0	0	782	541
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	142	1417	0	0	782	541
Added Vol:	0	0	0	0	0	0	0	56	0	0	15	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	142	1473	0	0	797	558
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	142	1473	0	0	797	558
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	142	1473	0	0	797	558
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	142	1473	0	0	797	558
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.46	0.00	0.00	0.25	0.35
Crit Moves:								****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.773
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	123	537	141	171	851	203	120	529	72	232	669	103
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	123	537	141	171	851	203	120	529	72	232	669	103
Added Vol:	0	0	11	15	0	0	0	61	0	2	17	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	123	537	152	186	851	203	120	590	72	234	686	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	123	537	152	186	851	203	120	590	72	234	686	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	123	537	152	186	851	203	120	590	72	234	686	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	123	537	152	186	851	203	120	590	72	234	686	106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.10	0.12	0.27	0.13	0.08	0.18	0.05	0.15	0.21	0.07
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	86	623	207	190	889	192	146	774	121	176	439	101
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	623	207	190	889	192	146	774	121	176	439	101
Added Vol:	0	0	9	12	0	0	0	48	0	4	26	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	623	216	202	889	192	146	822	121	180	465	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	86	623	216	202	889	192	146	822	121	180	465	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	623	216	202	889	192	146	822	121	180	465	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	86	623	216	202	889	192	146	822	121	180	465	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.14	0.13	0.28	0.12	0.09	0.26	0.08	0.11	0.15	0.07
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.942
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	292	568	360	198	738	167	126	904	286	197	786	210
Added Vol:	0	11	4	0	2	0	0	71	0	1	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	292	579	364	198	740	167	126	975	286	198	810	210
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	292	579	364	198	740	167	126	975	286	198	810	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	292	579	364	198	740	167	126	975	286	198	810	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	292	579	364	198	740	167	126	975	286	198	810	210
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.23	0.12	0.23	0.10	0.08	0.30	0.18	0.12	0.25	0.13
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.961
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	340	638	356	231	710	155	134	896	375	204	757	220
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	638	356	231	710	155	134	896	375	204	757	220
Added Vol:	0	9	3	0	4	0	0	56	0	1	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	340	647	359	231	714	155	134	952	375	205	789	220
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	647	359	231	714	155	134	952	375	205	789	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	647	359	231	714	155	134	952	375	205	789	220
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	647	359	231	714	155	134	952	375	205	789	220
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.20	0.22	0.14	0.22	0.10	0.08	0.30	0.23	0.13	0.25	0.14
Crit Moves:	****				****			****		****		

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                         El Camino College Expansion
         Existing Plus Project Plus Cumulative - With Improvements
                             Morning Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):        0.900
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100               Level Of Service:                 E
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     292  568   360   198  738   167   126  904   286   197  786   210
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  292  568   360   198  738   167   126  904   286   197  786   210
Added Vol:      0   11     4     0    2     0     0   71     0     1   24     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  292  579   364   198  740   167   126  975   286   198  810   210
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   292  579   364   198  740   167   126  975   286   198  810   210
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  292  579   364   198  740   167   126  975   286   198  810   210
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  292  579   364   198  740   167   126  975   286   198  810   210
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.32  0.68  1.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 3711  1089  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.18 0.18  0.23  0.12 0.23  0.10  0.08 0.26  0.26  0.12 0.25  0.13
Crit Moves:  ****                    ****             ****       ****
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El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.940
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	340	638	356	231	710	155	134	896	375	204	757	220
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	638	356	231	710	155	134	896	375	204	757	220
Added Vol:	0	9	3	0	4	0	0	56	0	1	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	340	647	359	231	714	155	134	952	375	205	789	220
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	340	647	359	231	714	155	134	952	375	205	789	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	340	647	359	231	714	155	134	952	375	205	789	220
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	340	647	359	231	714	155	134	952	375	205	789	220
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.15	0.85	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3444	1356	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.20	0.22	0.14	0.22	0.10	0.08	0.28	0.28	0.13	0.25	0.14
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.757
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1! 0	0	0 1	0 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	98	11	141	10	1	22	32	1335	48	64	949	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	11	141	10	1	22	32	1335	48	64	949	26
Added Vol:	0	0	18	0	0	0	0	74	0	4	25	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	11	159	10	1	22	32	1409	48	68	974	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	98	11	159	10	1	22	32	1409	48	68	974	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	11	159	10	1	22	32	1409	48	68	974	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	11	159	10	1	22	32	1409	48	68	974	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.04	0.59	0.91	0.09	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	585	66	949	1455	145	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.17	0.17	0.01	0.01	0.01	0.02	0.44	0.03	0.04	0.30	0.02
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.702
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	90	14	100	44	14	61	48	1182	106	73	1053	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	14	100	44	14	61	48	1182	106	73	1053	46
Added Vol:	0	0	15	0	0	0	0	59	0	7	34	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	90	14	115	44	14	61	48	1241	106	80	1087	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	14	115	44	14	61	48	1241	106	80	1087	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	14	115	44	14	61	48	1241	106	80	1087	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	14	115	44	14	61	48	1241	106	80	1087	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.41	0.06	0.53	0.76	0.24	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	658	102	840	1214	386	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.14	0.14	0.03	0.04	0.04	0.03	0.39	0.07	0.05	0.34	0.03
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.555
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		0 0 1! 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0	
Volume Module:												
Base Vol:	0	0	20	0	0	0	0	774	153	115	1014	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	20	0	0	0	0	774	153	115	1014	0
Added Vol:	9	0	17	0	0	0	0	43	44	83	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	9	0	37	0	0	0	0	817	197	198	1028	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	0	37	0	0	0	0	817	197	198	1028	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	0	37	0	0	0	0	817	197	198	1028	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	0	37	0	0	0	0	817	197	198	1028	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.39	0.00	1.61	0.00	0.00	0.00	0.00	1.61	0.39	1.00	2.00	0.00
Final Sat.:	626	0	2574	0	0	0	0	2578	622	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.32	0.32	0.12	0.32	0.00
Crit Moves:			****					****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                    Existing Plus Project Plus Cumulative
                               Evening Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.602
Loss Time (sec):       10 (Y+R=0.0 sec)   Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                 Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      9     0    76    0     0     0    0  1031    97   70   733     0
Growth Adj:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Initial Bse:   9     0    76    0     0     0    0  1031    97   70   733     0
Added Vol:    17     0    33    0     0     0    0    34    35   67    19     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:  26     0   109    0     0     0    0  1065   132  137   752     0
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:   26     0   109    0     0     0    0  1065   132  137   752     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:  26     0   109    0     0     0    0  1065   132  137   752     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:  26     0   109    0     0     0    0  1065   132  137   752     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.39  0.00  1.61 0.00  0.00  0.00 0.00  1.78  0.22 1.00  2.00  0.00
Final Sat.:   616     0  2584    0     0     0    0  2847   353 1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.00  0.04 0.00  0.00  0.00 0.00  0.37  0.37 0.09  0.24  0.00
Crit Moves:              ****                        ****       ****
********************************************************************************
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El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.574
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	62	9	27	45	16	97	42	455	56	101	875	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	62	9	27	45	16	97	42	455	56	101	875	20
Added Vol:	7	1	11	0	7	0	0	23	36	54	90	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	69	10	38	45	23	97	42	478	92	155	965	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	69	10	38	45	23	97	42	478	92	155	965	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	10	38	45	23	97	42	478	92	155	965	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	10	38	45	23	97	42	478	92	155	965	20
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.59	0.09	0.32	0.27	0.14	0.59	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	944	137	520	436	223	941	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.07	0.07	0.03	0.10	0.10	0.03	0.15	0.06	0.10	0.30	0.01
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.603
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	77	11	62	28	12	55	69	887	62	81	659	46
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	11	62	28	12	55	69	887	62	81	659	46
Added Vol:	15	3	22	0	6	0	0	38	29	44	71	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	14	84	28	18	55	69	925	91	125	730	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	14	84	28	18	55	69	925	91	125	730	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	14	84	28	18	55	69	925	91	125	730	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	14	84	28	18	55	69	925	91	125	730	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.48	0.07	0.44	0.28	0.18	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	775	118	707	444	285	871	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.02	0.06	0.06	0.04	0.29	0.06	0.08	0.23	0.03
Crit Moves:			****	****				****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Lanes:	0 0 0 0 0	2 0 0 0 2	1 0 3 0 0	0 0 2 0 1

	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Volume Module:												
Base Vol:	0	0	0	23	0	65	367	1106	0	0	1040	290
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	23	0	65	367	1106	0	0	1040	290
Added Vol:	0	0	0	12	0	16	80	13	0	0	13	58
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	35	0	81	447	1119	0	0	1053	348
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	35	0	81	447	1119	0	0	1053	348
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	35	0	81	447	1119	0	0	1053	348
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	35	0	81	447	1119	0	0	1053	348
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	2880	0	3200	1600	4800	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.03	0.28	0.23	0.00	0.00	0.33	0.22
Crit Moves:						****	****				****	

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E

Cycle (sec): 100 Critical Vol./Cap.(X): 0.660
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	2 0	0	0 2	1 0	3	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	125	0	168	224	1145	0	0	1006	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	125	0	168	224	1145	0	0	1006	172
Added Vol:	0	0	0	23	0	32	64	10	0	0	9	46
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	148	0	200	288	1155	0	0	1015	218
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	148	0	200	288	1155	0	0	1015	218
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	148	0	200	288	1155	0	0	1015	218
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	148	0	200	288	1155	0	0	1015	218
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	2880	0	3200	1600	4800	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.06	0.18	0.24	0.00	0.00	0.32	0.14
Crit Moves:						****	****				****	

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                          El Camino College Expansion
          Existing Plus Project Plus Cumulative - With Improvements
                               Morning Peak Hour
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                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):          0.572
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       100               Level Of Service:                   A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   2  0  2  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0    23     0    65   367  1106     0     0  1040   290
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:   0     0     0    23     0    65   367  1106     0     0  1040   290
Added Vol:     0     0     0    12     0    16    80    13     0     0    13    58
PasserByVol:   0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   0     0     0    35     0    81   447  1119     0     0  1053   348
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    0     0     0    35     0    81   447  1119     0     0  1053   348
Reduct Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   0     0     0    35     0    81   447  1119     0     0  1053   348
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   0     0     0    35     0    81   447  1119     0     0  1053   348
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  0.90  1.00  1.00  0.90  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  2.00  2.00  2.00  0.00  0.00  2.25  0.75
Final Sat.:    0     0     0  2880     0  3200  2880  3200     0     0  3608  1192
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.01  0.00  0.03  0.16  0.35  0.00  0.00  0.29  0.29
Crit Moves:                               ****  ****                    ****
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El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E

Cycle (sec):	100	Critical Vol./Cap.(X):	0.523
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 0			2 0 0 0 2			2 0 2 0 0			0 0 2 1 0		
Volume Module:												
Base Vol:	0	0	0	125	0	168	224	1145	0	0	1006	172
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	125	0	168	224	1145	0	0	1006	172
Added Vol:	0	0	0	23	0	32	64	10	0	0	9	46
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	148	0	200	288	1155	0	0	1015	218
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	148	0	200	288	1155	0	0	1015	218
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	148	0	200	288	1155	0	0	1015	218
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	148	0	200	288	1155	0	0	1015	218
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	2.00	2.00	0.00	0.00	2.47	0.53
Final Sat.:	0	0	0	2880	0	3200	2880	3200	0	0	3951	849
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.06	0.10	0.36	0.00	0.00	0.26	0.26
Crit Moves:						****		****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.838
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	765	59	67	963	205	130	229	171	121	580	35
Added Vol:	94	7	0	0	7	36	7	8	19	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	343	772	59	67	970	241	137	237	190	121	594	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	343	772	59	67	970	241	137	237	190	121	594	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	772	59	67	970	241	137	237	190	121	594	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	343	772	59	67	970	241	137	237	190	121	594	35
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.40	0.60	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4459	341	1600	3845	955	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.17	0.17	0.04	0.25	0.25	0.09	0.07	0.12	0.08	0.19	0.02
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	221	873	97	98	895	196	197	461	278	92	357	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	221	873	97	98	895	196	197	461	278	92	357	51
Added Vol:	75	5	0	0	5	29	15	8	38	0	10	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	296	878	97	98	900	225	212	469	316	92	367	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	296	878	97	98	900	225	212	469	316	92	367	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	296	878	97	98	900	225	212	469	316	92	367	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	296	878	97	98	900	225	212	469	316	92	367	51
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.70	0.30	1.00	2.40	0.60	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4322	478	1600	3840	960	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.19	0.20	0.20	0.06	0.23	0.23	0.13	0.15	0.20	0.06	0.11	0.03
Crit Moves:	****				****				****	****		

El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.783
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	249	765	59	67	963	205	130	229	171	121	580	35
Added Vol:	94	7	0	0	7	36	7	8	19	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	343	772	59	67	970	241	137	237	190	121	594	35
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	343	772	59	67	970	241	137	237	0	121	594	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	772	59	67	970	241	137	237	0	121	594	35
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	343	772	59	67	970	241	137	237	0	121	594	35
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.40	0.60	1.00	3.00	0.00	1.00	2.83	0.17
Final Sat.:	1600	4459	341	1600	3845	955	1600	4800	0	1600	4533	267
Capacity Analysis Module:												
Vol/Sat:	0.21	0.17	0.17	0.04	0.25	0.25	0.09	0.05	0.00	0.08	0.13	0.13
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.739
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	221	873	97	98	895	196	197	461	278	92	357	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	221	873	97	98	895	196	197	461	278	92	357	51
Added Vol:	75	5	0	0	5	29	15	8	38	0	10	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	296	878	97	98	900	225	212	469	316	92	367	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	296	878	97	98	900	225	212	469	0	92	367	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	296	878	97	98	900	225	212	469	0	92	367	51
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	296	878	97	98	900	225	212	469	0	92	367	51
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.70	0.30	1.00	2.40	0.60	1.00	3.00	0.00	1.00	2.63	0.37
Final Sat.:	1600	4322	478	1600	3840	960	1600	4800	0	1600	4214	586
Capacity Analysis Module:												
Vol/Sat:	0.19	0.20	0.20	0.06	0.23	0.23	0.13	0.10	0.00	0.06	0.09	0.09
Crit Moves:	****				****		****				****	

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-------------------------------------------------------------------------------
                       El Camino College Expansion
                  Existing Plus Project Plus Cumulative
                            Morning Peak Hour
-------------------------------------------------------------------------------
                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.594
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     157 1053     6     1 1265    53   115    0    71     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  157 1053     6     1 1265    53   115    0    71     0    0     0
Added Vol:      0  101     0     0   26     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  157 1154     6     1 1291    53   115    0    71     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   157 1154     6     1 1291    53   115    0    71     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  157 1154     6     1 1291    53   115    0    71     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  157 1154     6     1 1291    53   115    0    71     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.98  0.02  1.00 2.88  0.12  0.62 0.00  0.38  0.00 1.00  0.00
Final Sat.:  1600 4775    25  1600 4611   189   989    0   611     0 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.24  0.24  0.00 0.28  0.28  0.07 0.00  0.12  0.00 0.00  0.00
Crit Moves:  ****                    ****                   ****
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El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.525
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	111	1185	0	4	1302	15	75	0	39	1	0	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	111	1185	0	4	1302	15	75	0	39	1	0	4
Added Vol:	0	80	0	0	43	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	111	1265	0	4	1345	15	75	0	39	1	0	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	111	1265	0	4	1345	15	75	0	39	1	0	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	1265	0	4	1345	15	75	0	39	1	0	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	1265	0	4	1345	15	75	0	39	1	0	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	1.00	2.97	0.03	0.66	0.00	0.34	0.20	0.00	0.80
Final Sat.:	1600	4800	0	1600	4747	53	1053	0	547	320	0	1280
Capacity Analysis Module:												
Vol/Sat:	0.07	0.26	0.00	0.00	0.28	0.28	0.05	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****				****				****	****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.902
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	813	150	195	880	253	217	650	84	217	964	143
Added Vol:	7	95	0	6	19	0	0	23	1	0	63	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	908	150	201	899	253	217	673	85	217	1027	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	225	908	150	201	899	253	217	673	85	217	1027	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	908	150	201	899	253	217	673	85	217	1027	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	225	908	150	201	899	253	217	673	85	217	1027	149
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.62	0.38
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	4192	608
Capacity Analysis Module:												
Vol/Sat:	0.14	0.28	0.09	0.13	0.28	0.16	0.14	0.21	0.05	0.14	0.25	0.24
Crit Moves:	****				****		****				****	

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.880
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	207	847	173	141	913	272	211	731	194	179	785	167
Added Vol:	6	76	0	5	38	0	0	30	3	0	50	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	213	923	173	146	951	272	211	761	197	179	835	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	213	923	173	146	951	272	211	761	197	179	835	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	923	173	146	951	272	211	761	197	179	835	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	213	923	173	146	951	272	211	761	197	179	835	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.49	0.51
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3980	820
Capacity Analysis Module:												
Vol/Sat:	0.13	0.29	0.11	0.09	0.30	0.17	0.13	0.24	0.12	0.11	0.21	0.21
Crit Moves:	****				****			****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.890
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	1 0	1 0	2	0 1	1 0	2	1 0
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	218	813	150	195	880	253	217	650	84	217	964	143
Added Vol:	7	95	0	6	19	0	0	23	1	0	63	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	908	150	201	899	253	217	673	85	217	1027	149
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	225	908	150	201	899	253	217	673	85	217	1027	149
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	908	150	201	899	253	217	673	85	217	1027	149
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	225	908	150	201	899	253	217	673	85	217	1027	149
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.34	0.66	1.00	2.00	1.00	1.00	2.62	0.38
Final Sat.:	1600	3200	1600	1600	3746	1054	1600	3200	1600	1600	4192	608
Capacity Analysis Module:												
Vol/Sat:	0.14	0.28	0.09	0.13	0.24	0.24	0.14	0.21	0.05	0.14	0.25	0.24
Crit Moves:		****		****			****				****	

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--------------------------------------------------------------------------------
                         El Camino College Expansion
         Existing Plus Project Plus Cumulative - With Improvements
                              Evening Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.838
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    1  0  2  0  1    1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     207  847   173   141  913   272   211  731   194   179  785   167
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  207  847   173   141  913   272   211  731   194   179  785   167
Added Vol:      6   76     0     5   38     0     0   30     3     0   50     5
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  213  923   173   146  951   272   211  761   197   179  835   172
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   213  923   173   146  951   272   211  761   197   179  835   172
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  213  923   173   146  951   272   211  761   197   179  835   172
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  213  923   173   146  951   272   211  761   197   179  835   172
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.33  0.67  1.00 2.00  1.00  1.00 2.49  0.51
Final Sat.:  1600 3200  1600  1600 3732  1068  1600 3200  1600  1600 3980   820
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.29  0.11  0.09 0.25  0.25  0.13 0.24  0.12  0.11 0.21  0.21
Crit Moves:  ****                   ****             ****        ****
********************************************************************************
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--------------------------------------------------------------------------------
                          El Camino College Expansion
                    Existing Plus Project Plus Cumulative
                              Morning Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.921
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     161 1022   235   198  974    76    80  702   149   283  953   155
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  161 1022   235   198  974    76    80  702   149   283  953   155
Added Vol:      0   81     0     3   16     1     4    1     0     0    1    14
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  161 1103   235   201  990    77    84  703   149   283  954   169
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   161 1103   235   201  990    77    84  703   149   283  954   169
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  161 1103   235   201  990    77    84  703   149   283  954   169
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  161 1103   235   201  990    77    84  703   149   283  954   169
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.78  0.22  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 4454   346  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.34  0.15  0.13 0.22  0.22  0.05 0.22  0.09  0.10 0.30  0.11
Crit Moves:       ****        ****             ****                  ****
********************************************************************************
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--------------------------------------------------------------------------------
                        El Camino College Expansion
                   Existing Plus Project Plus Cumulative
                            Evening Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.981
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100               Level Of Service:                  E
********************************************************************************
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Permitted         Permitted         Permitted
Rights:          Include           Include           Include           Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    179  994   303   200  894    89   100 1068   122   251  764   183
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 179  994   303   200  894    89   100 1068   122   251  764   183
Added Vol:     0   65     0     6   32     1     3    1     0     0    1    11
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 179 1059   303   206  926    90   103 1069   122   251  765   194
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  179 1059   303   206  926    90   103 1069   122   251  765   194
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 179 1059   303   206  926    90   103 1069   122   251  765   194
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume: 179 1059   303   206  926    90   103 1069   122   251  765   194
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:      1.00 2.00  1.00  1.00 2.73  0.27  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.: 1600 3200  1600  1600 4375   425  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.11 0.33  0.19  0.13 0.21  0.21  0.06 0.33  0.08  0.09 0.24  0.12
Crit Moves:      ****        ****                    ****        ****
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El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.855
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	2 0	2	0 1
Volume Module:												
Base Vol:	161	1022	235	198	974	76	80	702	149	283	953	155
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	161	1022	235	198	974	76	80	702	149	283	953	155
Added Vol:	0	81	0	3	16	1	4	1	0	0	1	14
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	161	1103	235	201	990	77	84	703	149	283	954	169
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	161	1103	235	201	990	77	84	703	149	283	954	169
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	1103	235	201	990	77	84	703	149	283	954	169
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	1103	235	201	990	77	84	703	149	283	954	169
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.47	0.53	1.00	2.78	0.22	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3957	843	1600	4454	346	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.28	0.13	0.22	0.22	0.05	0.22	0.09	0.10	0.30	0.11
Crit Moves:		****		****			****				****	

El Camino College Expansion
Existing Plus Project Plus Cumulative - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.934
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	2 0	2	0 1
Volume Module:												
Base Vol:	179	994	303	200	894	89	100	1068	122	251	764	183
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	179	994	303	200	894	89	100	1068	122	251	764	183
Added Vol:	0	65	0	6	32	1	3	1	0	0	1	11
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	179	1059	303	206	926	90	103	1069	122	251	765	194
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	1059	303	206	926	90	103	1069	122	251	765	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	1059	303	206	926	90	103	1069	122	251	765	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	179	1059	303	206	926	90	103	1069	122	251	765	194
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.33	0.67	1.00	2.73	0.27	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3732	1068	1600	4375	425	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.28	0.28	0.13	0.21	0.21	0.06	0.33	0.08	0.09	0.24	0.12
Crit Moves:		****		****				****		****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

```
*******************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):        0.883
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100              Level Of Service:                 D
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:            Ovl            Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  1  0   1  0  1  1  0   1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     54  807   523     7 1175   233   183  341   134   482  655   261
Growth Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  54  807   523     7 1175   233   183  341   134   482  655   261
Added Vol:     0   15     0     2   12     1     7    1     0     0    0    54
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  54  822   523     9 1187   234   190  342   134   482  655   315
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   54  822   523     9 1187   234   190  342   134   482  655   315
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  54  822   523     9 1187   234   190  342   134   482  655   315
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  54  822   523     9 1187   234   190  342   134   482  655   315
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      1.00 2.00  1.00  1.00 2.51  0.49  1.00 1.44  0.56  1.00 1.35  0.65
Final Sat.: 1600 3200  1600  1600 4010   790  1600 2299   901  1600 2161  1039
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.03 0.26  0.33  0.01 0.30  0.30  0.12 0.15  0.15  0.30 0.30  0.30
Crit Moves:            ****  ****                    ****        ****
*******************************************************************************
```

```
--------------------------------------------------------------------------------
                      El Camino College Expansion
                 Existing Plus Project Plus Cumulative
                           Evening Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         1.098
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  F
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:            Ovl            Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  0  2  0  1   1  0  2  1  0   1  0  1  1  0   1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54 1090   777    59  911   144   152  404    83   529  657   303
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54 1090   777    59  911   144   152  404    83   529  657   303
Added Vol:      0   12     0     4   23     3     6    2     0     0    2    44
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54 1102   777    63  934   147   158  406    83   529  659   347
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    54 1102   777    63  934   147   158  406    83   529  659   347
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   54 1102   777    63  934   147   158  406    83   529  659   347
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   54 1102   777    63  934   147   158  406    83   529  659   347
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.59  0.41  1.00 1.66  0.34  1.03 1.29  0.68
Final Sat.:  1600 3200  1600  1600 4147   653  1600 2657   543  1654 2061  1085
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.34  0.49  0.04 0.23  0.23  0.10 0.15  0.15  0.32 0.32  0.32
Crit Moves:             ****  ****                  ****        ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                        El Camino College Expansion
          Existing Plus Project Plus Cumulative - With Improvements
                              Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.880
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  D
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:            Ovl            Include          Include          Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  1    1  0  2  1  0    1  0  1  1  0    1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  807   523     7 1175   233   183  341   134   482  655   261
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54  807   523     7 1175   233   183  341   134   482  655   261
Added Vol:      0   15     0     2   12     1     7    1     0     0    0    54
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54  822   523     9 1187   234   190  342   134   482  655   315
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    54  822   523     9 1187   234   190  342   134   482  655   315
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   54  822   523     9 1187   234   190  342   134   482  655   315
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   54  822   523     9 1187   234   190  342   134   482  655   315
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.44  1.56  1.00 2.51  0.49  1.00 1.44  0.56  1.00 1.35  0.65
Final Sat.:  1600 3911  2489  1600 4010   790  1600 2299   901  1600 2161  1039
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.21  0.21  0.01 0.30  0.30  0.12 0.15  0.15  0.30 0.30  0.30
Crit Moves:  ****                  ****             ****        ****
********************************************************************************
```

```
--------------------------------------------------------------------------------
                          El Camino College Expansion
        Existing Plus Project Plus Cumulative - With Improvements
                               Evening Peak Hour
--------------------------------------------------------------------------------

                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.906
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100              Level Of Service:                   E
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:            Ovl            Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  0  2  1  1   1  0  2  1  0   1  0  1  1  0   1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54 1090   777    59  911   144   152  404    83   529  657   303
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   54 1090   777    59  911   144   152  404    83   529  657   303
Added Vol:      0   12     0     4   23     3     6    2     0     0    2    44
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   54 1102   777    63  934   147   158  406    83   529  659   347
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    54 1102   777    63  934   147   158  406    83   529  659   347
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   54 1102   777    63  934   147   158  406    83   529  659   347
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   54 1102   777    63  934   147   158  406    83   529  659   347
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.35  1.65  1.00 2.59  0.41  1.00 1.66  0.34  1.03 1.29  0.68
Final Sat.:  1600 3753  2647  1600 4147   653  1600 2657   543  1654 2061  1085
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.29  0.29  0.04 0.23  0.23  0.10 0.15  0.15  0.32 0.32  0.32
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
```

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.008
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	3	0 0	0 0	2	1 0	0 0	1!	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	439	1343	0	0	1436	378	52	0	758	0	0	0
Added Vol:	0	15	0	0	3	9	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	439	1358	0	0	1439	387	52	0	758	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	439	1358	0	0	1439	387	52	0	758	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	439	1358	0	0	1439	387	52	0	758	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	439	1358	0	0	1439	387	52	0	758	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.36	0.64	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	3783	1017	205	0	2995	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.27	0.28	0.00	0.00	0.38	0.38	0.03	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****				****				****			

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--------------------------------------------------------------------------------
                         El Camino College Expansion
                    Existing Plus Project Plus Cumulative
                              Evening Peak Hour
--------------------------------------------------------------------------------

                      Level Of Service Computation Report
        ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.853
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                Level Of Service:                  D
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  3  0  0    0  0  2  1  0    0  0  1! 0  1    0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     294 1792     0     0 1416   219    97     0   619     0     0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  294 1792     0     0 1416   219    97     0   619     0     0     0
Added Vol:      0   12     0     0    6    17     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  294 1804     0     0 1422   236    97     0   619     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   294 1804     0     0 1422   236    97     0   619     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  294 1804     0     0 1422   236    97     0   619     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  294 1804     0     0 1422   236    97     0   619     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 2.57  0.43  0.27 0.00  1.73  0.00 0.00  0.00
Final Sat.:  1600 4800     0     0 4117   683   434     0  2766     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.18 0.38  0.00  0.00 0.35  0.35  0.06 0.00  0.22  0.00 0.00  0.00
Crit Moves:  ****                  ****                    ****
********************************************************************************
```

El Camino College Expansion
Existing Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.689
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 1! 0 0			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	680	0	13	0	0	0	0	411	446	128	692	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	680	0	13	0	0	0	0	411	446	128	692	0
Added Vol:	44	0	0	0	0	0	0	3	0	0	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	724	0	13	0	0	0	0	414	446	128	703	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	724	0	13	0	0	0	0	414	446	128	703	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	724	0	13	0	0	0	0	414	446	128	703	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	724	0	13	0	0	0	0	414	446	128	703	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.96	0.00	0.04	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	3144	0	56	0	0	0	0	1600	1600	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.26	0.28	0.08	0.22	0.00
Crit Moves:	****								****	****		

El Camino College Expansion
Existing Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.871
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1! 0	0	0 0	0 0	0	0 0	1 1	0	1 0	2 0	0
Volume Module:												
Base Vol:	854	0	29	0	0	0	0	644	604	148	622	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	854	0	29	0	0	0	0	644	604	148	622	0
Added Vol:	35	0	0	0	0	0	0	6	0	0	10	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	889	0	29	0	0	0	0	650	604	148	632	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	889	0	29	0	0	0	0	650	604	148	632	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	889	0	29	0	0	0	0	650	604	148	632	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	889	0	29	0	0	0	0	650	604	148	632	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.94	0.00	0.06	0.00	0.00	0.00	0.00	1.04	0.96	1.00	2.00	0.00
Final Sat.:	3099	0	101	0	0	0	0	1659	1541	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.39	0.39	0.09	0.20	0.00
Crit Moves:	****							****		****		

Year 2020 Without Project

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.828
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0 3 0 1			2 0 3 0 1			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	384	1312	179	197	1220	148	115	414	256	270	809	169
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	390	1334	182	200	1241	151	117	421	260	275	823	172
Added Vol:	0	0	0	0	0	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	390	1334	182	200	1241	151	117	427	260	275	829	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	390	1334	182	200	1241	151	117	427	260	275	829	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	390	1334	182	200	1241	151	117	427	260	275	829	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	390	1334	182	200	1241	151	117	427	260	275	829	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.14	0.28	0.11	0.07	0.26	0.09	0.07	0.13	0.16	0.17	0.26	0.11
Crit Moves:	****				****				****	****		

El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.810
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	316	1265	207	253	1416	164	162	735	235	119	497	132
Added Vol:	0	0	0	0	0	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	316	1265	207	253	1416	164	162	740	235	119	502	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	316	1265	207	253	1416	164	162	740	235	119	502	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	316	1265	207	253	1416	164	162	740	235	119	502	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	316	1265	207	253	1416	164	162	740	235	119	502	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.13	0.09	0.29	0.10	0.10	0.23	0.15	0.07	0.16	0.08
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.740
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	1 0	0	0 1	0 0	2	0 1	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	37	534	0	126	0	895	22	0	688	0
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	37	534	0	126	0	908	22	0	701	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	37	534	0	126	0	908	22	0	701	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	37	534	0	126	0	908	22	0	701	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	37	534	0	126	0	908	22	0	701	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.33	0.00	0.08	0.00	0.28	0.01	0.00	0.22	0.00
Crit Moves:			****	****				****		****		

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                         Year 2020 Without Project
                             Evening Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):         0.808
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:       100             Level Of Service:                  D
********************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  0  0  1   0  1  0  1  0    0  0  2  0  1    0  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    25   630    1   177     0  908    27     0  776     0
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:    0    0    25   641    1   180     0  923    27     0  789     0
Added Vol:      0    0     0     0    0     0     0   10     0     0    9     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0    0    25   641    1   180     0  933    27     0  798     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0    25   641    1   180     0  933    27     0  798     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0    25   641    1   180     0  933    27     0  798     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:    0    0    25   641    1   180     0  933    27     0  798     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  1.00  1.00 0.56  0.44  0.00 2.00  1.00  0.00 2.00  0.00
Final Sat.:     0    0  1600  1600  899   701     0 3200  1600     0 3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.02  0.40 0.00  0.26  0.00 0.29  0.02  0.00 0.25  0.00
Crit Moves:             ****  ****                   ****        ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.676
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	1	1 0	0 0	1	0 0	2 1	0	0 0	2 0	0
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	37	534	0	126	0	895	22	0	688	0
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	37	534	0	126	0	908	22	0	701	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	37	534	0	126	0	908	22	0	701	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	37	534	0	126	0	908	22	0	701	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	37	534	0	126	0	908	22	0	701	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.93	0.07	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	4685	115	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.33	0.00	0.08	0.00	0.19	0.19	0.00	0.22	0.00
Crit Moves:			****	****			****				****	

El Camino College Expansion
Year 2020 Without Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.766
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	0 1	0	1 0	0 0	2	1 0	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	25	641	1	180	0	923	27	0	789	0
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	641	1	180	0	933	27	0	798	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	641	1	180	0	933	27	0	798	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	641	1	180	0	933	27	0	798	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	641	1	180	0	933	27	0	798	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.56	0.44	0.00	2.91	0.09	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	899	701	0	4663	137	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.40	0.00	0.26	0.00	0.20	0.20	0.00	0.25	0.00
Crit Moves:			****	****			****				****	

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-------------------------------------------------------------------------------
                         El Camino College Expansion
                          Year 2020 Without Project
                             Morning Peak Hour
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.622
Loss Time (sec):        10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  B
*******************************************************************************
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Permitted         Permitted         Permitted
Rights:          Include           Include           Include           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        0  0  0  0  0    0  0  0  0  0    1  0  2  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0   133  1321     0     0   680   688
Growth Adj:  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:    0     0     0     0     0     0   135  1343     0     0   691   700
Added Vol:      0     0     0     0     0     0     0    13     0     0    13     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:    0     0     0     0     0     0   135  1356     0     0   704   700
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:     0     0     0     0     0     0   135  1356     0     0   704   700
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0   135  1356     0     0   704   700
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:    0     0     0     0     0     0   135  1356     0     0   704   700
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.00  0.00  0.00  0.00  0.00  1.00  2.00  0.00  0.00  2.00  1.00
Final Sat.:     0     0     0     0     0     0  1600  3200     0     0  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.00  0.00  0.00  0.08  0.42  0.00  0.00  0.22  0.44
Crit Moves:                                      ****                          ****
*******************************************************************************
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El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.553
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 0	0	0 0	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	142	1417	0	0	782	541
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	0	0	0	0	144	1441	0	0	795	550
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	144	1451	0	0	804	550
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	144	1451	0	0	804	550
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	144	1451	0	0	804	550
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	144	1451	0	0	804	550
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.45	0.00	0.00	0.25	0.34
Crit Moves:								****		****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.766
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	123	537	141	171	851	203	120	529	72	232	669	103
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	125	546	143	174	865	206	122	538	73	236	680	105
Added Vol:	0	0	0	0	0	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	125	546	143	174	865	206	122	544	73	236	686	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	546	143	174	865	206	122	544	73	236	686	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	546	143	174	865	206	122	544	73	236	686	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	546	143	174	865	206	122	544	73	236	686	105
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.09	0.11	0.27	0.13	0.08	0.17	0.05	0.15	0.21	0.07
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.797
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	86	623	207	190	889	192	146	774	121	176	439	101
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	87	634	210	193	904	195	148	787	123	179	446	103
Added Vol:	0	0	0	0	0	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	634	210	193	904	195	148	792	123	179	451	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	634	210	193	904	195	148	792	123	179	451	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	634	210	193	904	195	148	792	123	179	451	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	634	210	193	904	195	148	792	123	179	451	103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.13	0.12	0.28	0.12	0.09	0.25	0.08	0.11	0.14	0.06
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.937
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	297	578	366	201	750	170	128	919	291	200	799	214
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	297	578	366	201	750	170	128	932	291	200	812	214
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	297	578	366	201	750	170	128	932	291	200	812	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	578	366	201	750	170	128	932	291	200	812	214
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	578	366	201	750	170	128	932	291	200	812	214
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.23	0.13	0.23	0.11	0.08	0.29	0.18	0.13	0.25	0.13
Crit Moves:	****				****			****		****		

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-------------------------------------------------------------------------------
                          El Camino College Expansion
                           Year 2020 Without Project
                              Evening Peak Hour
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):         0.959
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                 Level Of Service:                  E
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  0  1    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     340   638   356   231   710   155   134   896   375   204   757   220
Growth Adj:  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:  346   649   362   235   722   158   136   911   381   207   770   224
Added Vol:      0     0     0     0     0     0     0    10     0     0     9     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  346   649   362   235   722   158   136   921   381   207   779   224
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   346   649   362   235   722   158   136   921   381   207   779   224
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  346   649   362   235   722   158   136   921   381   207   779   224
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  346   649   362   235   722   158   136   921   381   207   779   224
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:  1600  3200  1600  1600  3200  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.22  0.20  0.23  0.15  0.23  0.10  0.09  0.29  0.24  0.13  0.24  0.14
Crit Moves:  ****                    ****              ****        ****
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El Camino College Expansion
Year 2020 Without Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.900
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	297	578	366	201	750	170	128	919	291	200	799	214
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	297	578	366	201	750	170	128	932	291	200	812	214
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	297	578	366	201	750	170	128	932	291	200	812	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	578	366	201	750	170	128	932	291	200	812	214
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	578	366	201	750	170	128	932	291	200	812	214
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.29	0.71	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3659	1141	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.23	0.13	0.23	0.11	0.08	0.25	0.25	0.13	0.25	0.13
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 Without Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.943
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Permitted	Permitted	Permitted	Permitted
Rights:	Include	Include	Include	Include
Lanes:	1 0 2 0 1	1 0 2 0 1	1 0 2 1 0	1 0 2 0 1

Movement:	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	340	638	356	231	710	155	134	896	375	204	757	220
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	346	649	362	235	722	158	136	911	381	207	770	224
Added Vol:	0	0	0	0	0	0	0	10	0	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	346	649	362	235	722	158	136	921	381	207	779	224
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	346	649	362	235	722	158	136	921	381	207	779	224
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	346	649	362	235	722	158	136	921	381	207	779	224
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	346	649	362	235	722	158	136	921	381	207	779	224
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.12	0.88	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3395	1405	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.22	0.20	0.23	0.15	0.23	0.10	0.09	0.27	0.27	0.13	0.24	0.14
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	98	11	141	10	1	22	32	1335	48	64	949	26
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	100	11	143	10	1	22	33	1358	49	65	965	26
Added Vol:	0	0	0	0	0	0	0	13	0	0	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	11	143	10	1	22	33	1371	49	65	978	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	100	11	143	10	1	22	33	1371	49	65	978	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	11	143	10	1	22	33	1371	49	65	978	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	100	11	143	10	1	22	33	1371	49	65	978	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.39	0.04	0.56	0.91	0.09	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	627	70	902	1455	145	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.16	0.01	0.01	0.01	0.02	0.43	0.03	0.04	0.31	0.02
Crit Moves:		****		****				****		****		

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                         El Camino College Expansion
                          Year 2020 Without Project
                              Evening Peak Hour
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.683
Loss Time (sec):       10 (Y+R=0.0 sec)   Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                 Level Of Service:                  B
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         0  0  1! 0  0   0  1  0  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      90    14   100    44    14    61    48  1182   106    73  1053    46
Growth Adj:  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:   92    14   102    45    14    62    49  1202   108    74  1071    47
Added Vol:      0     0     0     0     0     0     0    10     0     0     9     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   92    14   102    45    14    62    49  1212   108    74  1080    47
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    92    14   102    45    14    62    49  1212   108    74  1080    47
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   92    14   102    45    14    62    49  1212   108    74  1080    47
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   92    14   102    45    14    62    49  1212   108    74  1080    47
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.44  0.07  0.49  0.76  0.24  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:   706   110   784  1214   386  1600  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06  0.13  0.13  0.03  0.04  0.04  0.03  0.38  0.07  0.05  0.34  0.03
Crit Moves:        ****        ****                    ****        ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.476
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 2	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	0	0	20	0	0	0	0	774	153	115	1014	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	20	0	0	0	0	787	156	117	1031	0
Added Vol:	0	0	0	0	0	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	20	0	0	0	0	793	156	117	1037	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	20	0	0	0	0	793	156	117	1037	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	20	0	0	0	0	793	156	117	1037	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	20	0	0	0	0	793	156	117	1037	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	2.00	0.00	0.00	0.00	0.00	1.67	0.33	1.00	2.00	0.00
Final Sat.:	0	0	3200	0	0	0	0	2675	525	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.30	0.30	0.07	0.32	0.00
Crit Moves:			****					****		****		

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                       El Camino College Expansion
                       Year 2020 Without Project
                          Evening Peak Hour
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                     Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.532
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  A
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted         Permitted        Permitted
Rights:           Include          Include           Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:         0  0  1! 0  1   0  0  0  0  0   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       9     0    76    0     0     0    0  1031    97   70   733     0
Growth Adj:  1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02
Initial Bse:    9     0    77    0     0     0    0  1048    99   71   745     0
Added Vol:      0     0     0    0     0     0    0     5     0    0     5     0
PasserByVol:    0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:    9     0    77    0     0     0    0  1053    99   71   750     0
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:     9     0    77    0     0     0    0  1053    99   71   750     0
Reduct Vol:     0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:    9     0    77    0     0     0    0  1053    99   71   750     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:    9     0    77    0     0     0    0  1053    99   71   750     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.21  0.00  1.79 0.00  0.00  0.00 0.00  1.83  0.17 1.00  2.00  0.00
Final Sat.:   339     0  2861    0     0     0    0  2926   274 1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.00  0.03 0.00  0.00  0.00 0.00  0.36  0.36 0.04  0.23  0.00
Crit Moves:              ****                       ****       ****
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                       El Camino College Expansion
                       Year 2020 Without Project
                          Morning Peak Hour
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                  Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.546
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  1! 0  0   0  0  1! 0  0   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      62     9    27    45    16    97    42   455    56   101   875    20
Growth Adj:  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:   63     9    27    46    16    99    43   463    57   103   890    20
Added Vol:      0     0     0     0     0     0     0     6     0     0     6     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:   63     9    27    46    16    99    43   469    57   103   896    20
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    63     9    27    46    16    99    43   469    57   103   896    20
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   63     9    27    46    16    99    43   469    57   103   896    20
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   63     9    27    46    16    99    43   469    57   103   896    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       0.63  0.09  0.28  0.28  0.10  0.61  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:  1012   147   441   456   162   982  1600  3200  1600  1600  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04  0.06  0.06  0.03  0.10  0.10  0.03  0.15  0.04  0.06  0.28  0.01
Crit Moves:  ****                    ****        ****                    ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.548
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	77	11	62	28	12	55	69	887	62	81	659	46
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	78	11	63	28	12	56	70	902	63	82	670	47
Added Vol:	0	0	0	0	0	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	78	11	63	28	12	56	70	907	63	82	675	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	78	11	63	28	12	56	70	907	63	82	675	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	11	63	28	12	56	70	907	63	82	675	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	78	11	63	28	12	56	70	907	63	82	675	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.51	0.07	0.41	0.29	0.13	0.58	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	821	117	661	472	202	926	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.10	0.10	0.02	0.06	0.06	0.04	0.28	0.04	0.05	0.21	0.03
Crit Moves:		****		****				****		****		

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                       El Camino College Expansion
                        Year 2020 Without Project
                           Morning Peak Hour
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                   Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.688
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   1  0  3  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   23    0    65  367 1106     0    0 1040   290
Growth Adj:  1.02 1.02  1.02 1.02 1.02  1.02 1.02 1.02  1.02 1.02 1.02  1.02
Initial Bse:    0    0     0   23    0    66  373 1125     0    0 1058   295
Added Vol:      0    0     0    0    0     0    0   13     0    0   13     0
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0   23    0    66  373 1138     0    0 1071   295
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0    0     0   23    0    66  373 1138     0    0 1071   295
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0    0     0   23    0    66  373 1138     0    0 1071   295
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0    0     0   23    0    66  373 1138     0    0 1071   295
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 0.90 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 2.00 0.00  2.00 1.00 3.00  0.00 0.00 2.00  1.00
Final Sat.:     0    0     0 2880    0  3200 1600 4800     0    0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.01 0.00  0.02 0.23 0.24  0.00 0.00 0.33  0.18
Crit Moves:                             **** ****                   ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                           Year 2020 Without Project
                              Evening Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.618
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  0  0  0    2  0  0  0  2    1  0  3  0  0    0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  125     0   168  224  1145     0    0  1006   172
Growth Adj:  1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02
Initial Bse:   0     0     0  127     0   171  228  1164     0    0  1023   175
Added Vol:     0     0     0    0     0     0    0    10     0    0     9     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0     0     0  127     0   171  228  1174     0    0  1032   175
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    0     0     0  127     0   171  228  1174     0    0  1032   175
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  127     0   171  228  1174     0    0  1032   175
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0     0     0  127     0   171  228  1174     0    0  1032   175
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 0.90  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  0.00  0.00 2.00  0.00  2.00 1.00  3.00  0.00 0.00  2.00  1.00
Final Sat.:    0     0     0 2880     0  3200 1600  4800     0    0  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.04  0.00  0.05 0.14  0.24  0.00 0.00  0.32  0.11
Crit Moves:                               **** ****                    ****
********************************************************************************
```

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-------------------------------------------------------------------------------
                       El Camino College Expansion
                 Year 2020 Without Project - With Improvements
                             Morning Peak Hour
-------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):          0.535
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:        100              Level Of Service:                   A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   2  0  2  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0   23     0    65  367  1106    0     0  1040   290
Growth Adj:  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:   0     0     0   23     0    66  373  1125    0     0  1058   295
Added Vol:     0     0     0    0     0     0    0    13    0     0    13     0
PasserByVol:   0     0     0    0     0     0    0     0    0     0     0     0
Initial Fut:   0     0     0   23     0    66  373  1138    0     0  1071   295
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    0     0     0   23     0    66  373  1138    0     0  1071   295
Reduct Vol:    0     0     0    0     0     0    0     0    0     0     0     0
Reduced Vol:   0     0     0   23     0    66  373  1138    0     0  1071   295
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   0     0     0   23     0    66  373  1138    0     0  1071   295
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  0.90  1.00  1.00  0.90  1.00  1.00  1.00  1.00  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  2.00  2.00  2.00  0.00  0.00  2.35  0.65
Final Sat.:    0     0     0  2880     0  3200  2880  3200    0     0  3763  1037
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.01  0.00  0.02  0.13  0.36  0.00  0.00  0.28  0.28
Crit Moves:                               ****  ****                    ****
*******************************************************************************
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--------------------------------------------------------------------------------
                       El Camino College Expansion
              Year 2020 Without Project - With Improvements
                            Evening Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.520
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   2  0  2  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  125     0   168   224 1145     0     0 1006   172
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:   0     0     0  127     0   171   228 1164     0     0 1023   175
Added Vol:     0     0     0    0     0     0     0   10     0     0    9     0
PasserByVol:   0     0     0    0     0     0     0    0     0     0    0     0
Initial Fut:   0     0     0  127     0   171   228 1174     0     0 1032   175
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0     0     0  127     0   171   228 1174     0     0 1032   175
Reduct Vol:    0     0     0    0     0     0     0    0     0     0    0     0
Reduced Vol:   0     0     0  127     0   171   228 1174     0     0 1032   175
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0     0     0  127     0   171   228 1174     0     0 1032   175
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  0.90 1.00  1.00  0.90 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  0.00  2.00 0.00  2.00  2.00 2.00  0.00  0.00 2.57  0.43
Final Sat.:    0     0     0 2880     0  3200  2880 3200     0     0 4104   696
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.04 0.00  0.05  0.08 0.37  0.00  0.00 0.25  0.25
Crit Moves:                              ****        ****        ****
********************************************************************************
```

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.776
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	253	778	60	68	979	208	132	233	174	123	590	36
Added Vol:	0	7	0	0	7	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	253	785	60	68	986	208	132	239	174	123	596	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	253	785	60	68	986	208	132	239	174	123	596	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	785	60	68	986	208	132	239	174	123	596	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	253	785	60	68	986	208	132	239	174	123	596	36
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.48	0.52	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4459	341	1600	3962	838	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.16	0.18	0.18	0.04	0.25	0.25	0.08	0.07	0.11	0.08	0.19	0.02
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.713
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	221	873	97	98	895	196	197	461	278	92	357	51
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	225	888	99	100	910	199	200	469	283	94	363	52
Added Vol:	0	5	0	0	5	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	225	893	99	100	915	199	200	474	283	94	368	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	225	893	99	100	915	199	200	474	283	94	368	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	893	99	100	915	199	200	474	283	94	368	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	225	893	99	100	915	199	200	474	283	94	368	52
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.70	0.30	1.00	2.46	0.54	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4322	478	1600	3942	858	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.14	0.21	0.21	0.06	0.23	0.23	0.13	0.15	0.18	0.06	0.12	0.03
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 Without Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	253	778	60	68	979	208	132	233	174	123	590	36
Added Vol:	0	7	0	0	7	0	0	6	0	0	6	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	253	785	60	68	986	208	132	239	174	123	596	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	253	785	60	68	986	208	132	239	0	123	596	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	253	785	60	68	986	208	132	239	0	123	596	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	253	785	60	68	986	208	132	239	0	123	596	36
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.48	0.52	1.00	3.00	0.00	1.00	2.83	0.17
Final Sat.:	1600	4459	341	1600	3962	838	1600	4800	0	1600	4529	271
Capacity Analysis Module:												
Vol/Sat:	0.16	0.18	0.18	0.04	0.25	0.25	0.08	0.05	0.00	0.08	0.13	0.13
Crit Moves:	****				****		****				****	

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                 Year 2020 Without Project - With Improvements
                               Evening Peak Hour
--------------------------------------------------------------------------------

                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.685
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Ignore           Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     221  873    97    98  895   196   197  461   278    92  357    51
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  225  888    99   100  910   199   200  469   283    94  363    52
Added Vol:      0    5     0     0    5     0     0    5     0     0    5     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  225  893    99   100  915   199   200  474   283    94  368    52
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:   225  893    99   100  915   199   200  474     0    94  368    52
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  225  893    99   100  915   199   200  474     0    94  368    52
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
FinalVolume:  225  893    99   100  915   199   200  474     0    94  368    52
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.70  0.30  1.00 2.46  0.54  1.00 3.00  0.00  1.00 2.63  0.37
Final Sat.:  1600 4322   478  1600 3942   858  1600 4800     0  1600 4207   593
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.21  0.21  0.06 0.23  0.23  0.13 0.10  0.00  0.06 0.09  0.09
Crit Moves:  ****                  ****        ****                   ****
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--------------------------------------------------------------------------------
                          El Camino College Expansion
                          Year 2020 Without Project
                              Morning Peak Hour
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.599
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   0  0  1! 0  0   0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     157 1053     6     1 1265    53   115     0    71     0     0     0
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  160 1071     6     1 1286    54   117     0    72     0     0     0
Added Vol:      0    7     0     0    7     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  160 1078     6     1 1293    54   117     0    72     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   160 1078     6     1 1293    54   117     0    72     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  160 1078     6     1 1293    54   117     0    72     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  160 1078     6     1 1293    54   117     0    72     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.98  0.02  1.00 2.88  0.12  0.62 0.00  0.38  0.00 1.00  0.00
Final Sat.:  1600 4773    27  1600 4608   192   989    0   611     0 1600     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.23  0.23  0.00 0.28  0.28  0.07 0.00  0.12  0.00 0.00  0.00
Crit Moves:  ****                    ****                    ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.524
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2 1 0			1 0 2 1 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	111	1185	0	4	1302	15	75	0	39	1	0	4
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	113	1205	0	4	1324	15	76	0	40	1	0	4
Added Vol:	0	5	0	0	5	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	113	1210	0	4	1329	15	76	0	40	1	0	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	113	1210	0	4	1329	15	76	0	40	1	0	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	1210	0	4	1329	15	76	0	40	1	0	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	113	1210	0	4	1329	15	76	0	40	1	0	4
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	1.00	2.97	0.03	0.66	0.00	0.34	0.20	0.00	0.80
Final Sat.:	1600	4800	0	1600	4746	54	1053	0	547	320	0	1280
Capacity Analysis Module:												
Vol/Sat:	0.07	0.25	0.00	0.00	0.28	0.28	0.05	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****				****				****	****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.895
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Include			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		1 0 2 0 1			1 0 2 0 1			1 0 2 0 1			1 0 2 1 0	
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	222	827	153	198	895	257	221	661	85	221	980	145
Added Vol:	0	0	0	6	0	0	0	13	0	0	13	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	222	827	153	204	895	257	221	674	85	221	993	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	827	153	204	895	257	221	674	85	221	993	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	827	153	204	895	257	221	674	85	221	993	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	222	827	153	204	895	257	221	674	85	221	993	151
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.60	0.40
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	4165	635
Capacity Analysis Module:												
Vol/Sat:	0.14	0.26	0.10	0.13	0.28	0.16	0.14	0.21	0.05	0.14	0.24	0.24
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.871
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	210	861	176	143	928	277	215	743	197	182	798	170
Added Vol:	0	0	0	5	0	0	0	10	0	0	9	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	210	861	176	148	928	277	215	753	197	182	807	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	210	861	176	148	928	277	215	753	197	182	807	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	210	861	176	148	928	277	215	753	197	182	807	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	210	861	176	148	928	277	215	753	197	182	807	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.47	0.53
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3946	854
Capacity Analysis Module:												
Vol/Sat:	0.13	0.27	0.11	0.09	0.29	0.17	0.13	0.24	0.12	0.11	0.20	0.20
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 Without Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.855
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 2 1 0			1 0 2 1 0			1 0 2 0 1			1 0 2 1 0		
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	222	827	153	198	895	257	221	661	85	221	980	145
Added Vol:	0	0	0	6	0	0	0	13	0	0	13	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	222	827	153	204	895	257	221	674	85	221	993	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	827	153	204	895	257	221	674	85	221	993	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	827	153	204	895	257	221	674	85	221	993	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	222	827	153	204	895	257	221	674	85	221	993	151
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.53	0.47	1.00	2.33	0.67	1.00	2.00	1.00	1.00	2.60	0.40
Final Sat.:	1600	4052	748	1600	3728	1072	1600	3200	1600	1600	4165	635
Capacity Analysis Module:												
Vol/Sat:	0.14	0.20	0.20	0.13	0.24	0.24	0.14	0.21	0.05	0.14	0.24	0.24
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 Without Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	1 0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	210	861	176	143	928	277	215	743	197	182	798	170
Added Vol:	0	0	0	5	0	0	0	10	0	0	9	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	210	861	176	148	928	277	215	753	197	182	807	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	210	861	176	148	928	277	215	753	197	182	807	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	210	861	176	148	928	277	215	753	197	182	807	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	210	861	176	148	928	277	215	753	197	182	807	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.49	0.51	1.00	2.31	0.69	1.00	2.00	1.00	1.00	2.47	0.53
Final Sat.:	1600	3986	814	1600	3698	1102	1600	3200	1600	1600	3946	854
Capacity Analysis Module:												
Vol/Sat:	0.13	0.22	0.22	0.09	0.25	0.25	0.13	0.24	0.12	0.11	0.20	0.20
Crit Moves:	****				****			****		****		

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                         Year 2020 Without Project
                            Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):          0.905
Loss Time (sec):     10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:      100              Level Of Service:                   E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     161 1022   235   198  974    76    80  702   149   283  953   155
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  164 1039   239   201  990    77    81  714   152   288  969   158
Added Vol:      0    0     0     0    0     0     0    1     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  164 1039   239   201  990    77    81  715   152   288  970   158
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   164 1039   239   201  990    77    81  715   152   288  970   158
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  164 1039   239   201  990    77    81  715   152   288  970   158
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  164 1039   239   201  990    77    81  715   152   288  970   158
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.78  0.22  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 4453   347  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.32  0.15  0.13 0.22  0.22  0.05 0.22  0.09  0.10 0.30  0.10
Crit Moves:       ****        ****             ****                  ****
********************************************************************************
```

El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.971
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	179	994	303	200	894	89	100	1068	122	251	764	183
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	182	1011	308	203	909	91	102	1086	124	255	777	186
Added Vol:	0	0	0	0	0	0	0	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	182	1011	308	203	909	91	102	1087	124	255	778	186
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	182	1011	308	203	909	91	102	1087	124	255	778	186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	1011	308	203	909	91	102	1087	124	255	778	186
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	182	1011	308	203	909	91	102	1087	124	255	778	186
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.73	0.27	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	4365	435	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.32	0.19	0.13	0.21	0.21	0.06	0.34	0.08	0.09	0.24	0.12
Crit Moves:		****		****				****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                 Year 2020 Without Project - With Improvements
                               Morning Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         0.846
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                Level Of Service:                  D
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     161 1022   235   198  974    76    80  702   149   283  953   155
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  164 1039   239   201  990    77    81  714   152   288  969   158
Added Vol:      0    0     0     0    0     0     0    1     0     0    1     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  164 1039   239   201  990    77    81  715   152   288  970   158
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   164 1039   239   201  990    77    81  715   152   288  970   158
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  164 1039   239   201  990    77    81  715   152   288  970   158
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  164 1039   239   201  990    77    81  715   152   288  970   158
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.44  0.56  1.00 2.78  0.22  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3903   897  1600 4453   347  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.27  0.27  0.13 0.22  0.22  0.05 0.22  0.09  0.10 0.30  0.10
Crit Moves:       ****        ****             ****                   ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.930
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	2 0	2	0 1
Volume Module:												
Base Vol:	179	994	303	200	894	89	100	1068	122	251	764	183
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	182	1011	308	203	909	91	102	1086	124	255	777	186
Added Vol:	0	0	0	0	0	0	0	1	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	182	1011	308	203	909	91	102	1087	124	255	778	186
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	182	1011	308	203	909	91	102	1087	124	255	778	186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	1011	308	203	909	91	102	1087	124	255	778	186
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	182	1011	308	203	909	91	102	1087	124	255	778	186
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.30	0.70	1.00	2.73	0.27	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3679	1121	1600	4365	435	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.27	0.27	0.13	0.21	0.21	0.06	0.34	0.08	0.09	0.24	0.12
Crit Moves:		****		****				****		****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.885
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	1 0	1 0	1	1 0	1 1	0	1 0
Volume Module:												
Base Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	55	821	532	7	1195	237	186	347	136	490	666	265
Added Vol:	0	0	0	0	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	821	532	7	1195	237	186	348	136	490	666	265
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	821	532	7	1195	237	186	348	136	490	666	265
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	821	532	7	1195	237	186	348	136	490	666	265
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	821	532	7	1195	237	186	348	136	490	666	265
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.50	0.50	1.00	1.44	0.56	1.03	1.41	0.56
Final Sat.:	1600	3200	1600	1600	4006	794	1600	2299	901	1651	2249	900
Capacity Analysis Module:												
Vol/Sat:	0.03	0.26	0.33	0.00	0.30	0.30	0.12	0.15	0.15	0.30	0.30	0.29
Crit Moves:			****	****				****		****		

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                         El Camino College Expansion
                          Year 2020 Without Project
                              Evening Peak Hour
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):         100                 Critical Vol./Cap.(X):         1.104
Loss Time (sec):      10 (Y+R=0.0 sec)   Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                 Level Of Service:                  F
********************************************************************************
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:      L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:          Permitted        Permitted        Permitted        Permitted
Rights:              Ovl            Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    1  0  1  1  0    1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54  1090   777   59   911   144   152   404    83   529   657   303
Growth Adj:  1.02  1.02  1.02 1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:   55  1108   790   60   926   146   155   411    84   538   668   308
Added Vol:      0     0     0    0     0     0     0     2     0     0     2     0
PasserByVol:    0     0     0    0     0     0     0     0     0     0     0     0
Initial Fut:   55  1108   790   60   926   146   155   413    84   538   670   308
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:    55  1108   790   60   926   146   155   413    84   538   670   308
Reduct Vol:     0     0     0    0     0     0     0     0     0     0     0     0
Reduced Vol:   55  1108   790   60   926   146   155   413    84   538   670   308
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:   55  1108   790   60   926   146   155   413    84   538   670   308
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  2.00  1.00 1.00  2.59  0.41  1.00  1.66  0.34  1.06  1.33  0.61
Final Sat.:  1600  3200  1600 1600  4145   655  1600  2657   543  1698  2121   981
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.35  0.49 0.04  0.22  0.22  0.10  0.16  0.16  0.32  0.32  0.31
Crit Moves:              **** ****                    ****        ****
********************************************************************************
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--------------------------------------------------------------------------------
                         El Camino College Expansion
                  Year 2020 Without Project - With Improvements
                              Morning Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
     ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):          100             Critical Vol./Cap.(X):          0.881
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:        100             Level Of Service:                   D
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted         Permitted
Rights:            Ovl            Include           Include           Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:       1  0  2  1  1    1  0  2  1  0    1  0  1  1  0    1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     54  807   523    7 1175   233   183  341   134   482  655   261
Growth Adj: 1.02 1.02  1.02 1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  55  821   532    7 1195   237   186  347   136   490  666   265
Added Vol:     0    0     0    0    0     0     0    1     0     0    0     0
PasserByVol:   0    0     0    0    0     0     0    0     0     0    0     0
Initial Fut:  55  821   532    7 1195   237   186  348   136   490  666   265
User Adj:   1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   55  821   532    7 1195   237   186  348   136   490  666   265
Reduct Vol:    0    0     0    0    0     0     0    0     0     0    0     0
Reduced Vol:  55  821   532    7 1195   237   186  348   136   490  666   265
PCE Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  55  821   532    7 1195   237   186  348   136   490  666   265
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600 1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      1.00 2.43  1.57 1.00 2.50  0.50  1.00 1.44  0.56  1.03 1.41  0.56
Final Sat.: 1600 3883  2517 1600 4006   794  1600 2299   901  1651 2249   900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.03 0.21  0.21 0.00 0.30  0.30  0.12 0.15  0.15  0.30 0.30  0.29
Crit Moves: ****                 ****             ****        ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.906
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Ovl			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 1	1	1 0	2 1	0	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	54	1090	777	59	911	144	152	404	83	529	657	303
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	55	1108	790	60	926	146	155	411	84	538	668	308
Added Vol:	0	0	0	0	0	0	0	2	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	1108	790	60	926	146	155	413	84	538	670	308
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	1108	790	60	926	146	155	413	84	538	670	308
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	1108	790	60	926	146	155	413	84	538	670	308
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	1108	790	60	926	146	155	413	84	538	670	308
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.34	1.66	1.00	2.59	0.41	1.00	1.66	0.34	1.06	1.33	0.61
Final Sat.:	1600	3736	2664	1600	4145	655	1600	2657	543	1698	2121	981
Capacity Analysis Module:												
Vol/Sat:	0.03	0.30	0.30	0.04	0.22	0.22	0.10	0.16	0.16	0.32	0.32	0.31
Crit Moves:		****		****				****		****		

El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

```
Cycle (sec):          100                Critical Vol./Cap.(X):       1.021
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):    xxxxxx
Optimal Cycle:        100                Level Of Service:                F
```

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	3 0	0	0 0	2 1	0	0 0	1! 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	446	1366	0	0	1460	384	53	0	771	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	446	1366	0	0	1460	384	53	0	771	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	446	1366	0	0	1460	384	53	0	771	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	446	1366	0	0	1460	384	53	0	771	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	446	1366	0	0	1460	384	53	0	771	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.37	0.63	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	3800	1000	205	0	2995	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.28	0.28	0.00	0.00	0.38	0.38	0.03	0.00	0.26	0.00	0.00	0.00
Crit Moves:	****				****				****			

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                          El Camino College Expansion
                           Year 2020 Without Project
                              Evening Peak Hour
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.861
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  D
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  3  0  0   0  0  2  1  0   0  0  1! 0  1   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     294 1792     0     0 1416   219    97     0   619     0     0     0
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  299 1822     0     0 1440   223    99     0   629     0     0     0
Added Vol:      0    0     0     0    0     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  299 1822     0     0 1440   223    99     0   629     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   299 1822     0     0 1440   223    99     0   629     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  299 1822     0     0 1440   223    99     0   629     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  299 1822     0     0 1440   223    99     0   629     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 2.60  0.40  0.27 0.00  1.73  0.00 0.00  0.00
Final Sat.:  1600 4800     0     0 4157   643   434     0  2766     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.19 0.38  0.00  0.00 0.35  0.35  0.06 0.00  0.23  0.00 0.00  0.00
Crit Moves:  ****                    ****                    ****
********************************************************************************
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El Camino College Expansion
Year 2020 Without Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.685
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1!	0 0	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	680	0	13	0	0	0	0	411	446	128	692	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	691	0	13	0	0	0	0	418	454	130	704	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	691	0	13	0	0	0	0	419	454	130	704	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	691	0	13	0	0	0	0	419	454	130	704	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	691	0	13	0	0	0	0	419	454	130	704	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	691	0	13	0	0	0	0	419	454	130	704	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.96	0.00	0.04	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	3140	0	60	0	0	0	0	1600	1600	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.22	0.00	0.22	0.00	0.00	0.00	0.00	0.26	0.28	0.08	0.22	0.00
Crit Moves:	****								****	****		

El Camino College Expansion
Year 2020 Without Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.872
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1!	0 0	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	854	0	29	0	0	0	0	644	604	148	622	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	868	0	29	0	0	0	0	655	614	151	633	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	868	0	29	0	0	0	0	657	614	151	635	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	868	0	29	0	0	0	0	657	614	151	635	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	868	0	29	0	0	0	0	657	614	151	635	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	868	0	29	0	0	0	0	657	614	151	635	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.93	0.00	0.07	0.00	0.00	0.00	0.00	1.03	0.97	1.00	2.00	0.00
Final Sat.:	3095	0	105	0	0	0	0	1654	1546	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.28	0.00	0.28	0.00	0.00	0.00	0.00	0.40	0.40	0.09	0.20	0.00
Crit Moves:	****							****		****		

Year 2020 With Project

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                         El Camino College Expansion
                           Year 2020 With Project
                              Morning Peak Hour
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                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)
********************************************************************************
Cycle (sec):          100                Critical Vol./Cap.(X):         0.831
Loss Time (sec):       10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted         Permitted
Rights:          Include          Include           Include           Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        2  0  3  0  1   2  0  3  0  1   1  0  2  0  1   1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     384 1312   179   197 1220   148   115  414   256   270  809   169
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  390 1334   182   200 1241   151   117  421   260   275  823   172
Added Vol:      0    0    18    15    0     0     0   28     0     4   11     3
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  390 1334   200   215 1241   151   117  449   260   279  834   175
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   390 1334   200   215 1241   151   117  449   260   279  834   175
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  390 1334   200   215 1241   151   117  449   260   279  834   175
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  390 1334   200   215 1241   151   117  449   260   279  834   175
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  0.90 1.00  1.00  0.90 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 3.00  1.00  2.00 3.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  2880 4800  1600  2880 4800  1600  1600 3200  1600  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.28  0.13  0.07 0.26  0.09  0.07 0.14  0.16  0.17 0.26  0.11
Crit Moves:  ****                  ****                   ****  ****
********************************************************************************
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El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Hawthorne Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.820
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0 3 0 1			2 0 3 0 1			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	311	1244	204	249	1392	161	159	723	231	117	489	130
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	316	1265	207	253	1416	164	162	735	235	119	497	132
Added Vol:	0	0	15	12	0	0	0	22	0	7	13	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	316	1265	222	265	1416	164	162	757	235	126	510	138
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	316	1265	222	265	1416	164	162	757	235	126	510	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	316	1265	222	265	1416	164	162	757	235	126	510	138
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	316	1265	222	265	1416	164	162	757	235	126	510	138
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	2880	4800	1600	2880	4800	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.14	0.09	0.29	0.10	0.10	0.24	0.15	0.08	0.16	0.09
Crit Moves:	****				****			****		****		

El Camino College Expansion
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Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.772
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 1	1 0	0	0 1	0 0	2	0 1	0 0	2	0 0
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	37	534	0	126	0	895	22	0	688	0
Added Vol:	0	0	0	44	0	0	0	27	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	37	578	0	126	0	922	22	0	703	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	37	578	0	126	0	922	22	0	703	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	37	578	0	126	0	922	22	0	703	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	37	578	0	126	0	922	22	0	703	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.36	0.00	0.08	0.00	0.29	0.01	0.00	0.22	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.833
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	1	0 1	0 1	0	0 0	2 0	1	0 0	2 0	0
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	25	641	1	180	0	923	27	0	789	0
Added Vol:	0	0	0	35	0	0	0	21	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	676	1	180	0	944	27	0	804	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	676	1	180	0	944	27	0	804	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	676	1	180	0	944	27	0	804	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	676	1	180	0	944	27	0	804	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.58	0.42	0.00	2.00	1.00	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	928	672	0	3200	1600	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.42	0.00	0.27	0.00	0.30	0.02	0.00	0.25	0.00
Crit Moves:			****	****				****		****		

El Camino College Expansion
Year 2020 With Project - With Improvements
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 1			1 0 0 0 1			0 0 2 1 0			0 0 2 0 0		
Volume Module:												
Base Vol:	0	0	36	525	0	124	0	880	22	0	677	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	37	534	0	126	0	895	22	0	688	0
Added Vol:	0	0	0	44	0	0	0	27	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	37	578	0	126	0	922	22	0	703	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	37	578	0	126	0	922	22	0	703	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	37	578	0	126	0	922	22	0	703	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	37	578	0	126	0	922	22	0	703	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.00	1.00	0.00	2.93	0.07	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	0	1600	0	4686	114	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.36	0.00	0.08	0.00	0.20	0.20	0.00	0.22	0.00
Crit Moves:			****	****			****				****	

El Camino College Expansion
Year 2020 With Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 I-405 Freeway SB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.789
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 0 0 1			0 1 0 1 0			0 0 2 1 0			0 0 2 0 0		
Volume Module:												
Base Vol:	0	0	25	630	1	177	0	908	27	0	776	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	25	641	1	180	0	923	27	0	789	0
Added Vol:	0	0	0	35	0	0	0	21	0	0	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	25	676	1	180	0	944	27	0	804	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	25	676	1	180	0	944	27	0	804	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	25	676	1	180	0	944	27	0	804	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	25	676	1	180	0	944	27	0	804	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	1.00	1.00	0.58	0.42	0.00	2.92	0.08	0.00	2.00	0.00
Final Sat.:	0	0	1600	1600	928	672	0	4664	136	0	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.02	0.42	0.00	0.27	0.00	0.20	0.20	0.00	0.25	0.00
Crit Moves:			****	****			****				****	

El Camino College Expansion
Year 2020 With Project
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.627
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	0 0	0	0 0	1 0	2	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	0	0	0	133	1321	0	0	680	688
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	0	0	0	0	135	1343	0	0	691	700
Added Vol:	0	0	0	0	0	0	0	71	0	0	15	9
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	0	0	0	135	1414	0	0	706	709
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	0	135	1414	0	0	706	709
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	135	1414	0	0	706	709
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	135	1414	0	0	706	709
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	0	0	0	1600	3200	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.44	0.00	0.00	0.22	0.44
Crit Moves:							****					****

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                        El Camino College Expansion
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #3 I-405 Freeway NB Ramps (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):        100               Critical Vol./Cap.(X):         0.568
Loss Time (sec):     10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      100               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  0   0  0  0  0  0   1  0  2  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0    0    0     0  142 1417     0    0  782   541
Growth Adj:  1.02 1.02  1.02 1.02 1.02  1.02 1.02 1.02  1.02 1.02 1.02  1.02
Initial Bse:    0    0     0    0    0     0  144 1441     0    0  795   550
Added Vol:      0    0     0    0    0     0    0   56     0    0   15    17
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0    0    0     0  144 1497     0    0  810   567
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0    0     0    0    0     0  144 1497     0    0  810   567
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0    0     0    0    0     0  144 1497     0    0  810   567
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0    0     0    0    0     0  144 1497     0    0  810   567
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 0.00 0.00  0.00 1.00 2.00  0.00 0.00 2.00  1.00
Final Sat.:     0    0     0    0    0     0 1600 3200     0    0 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.00 0.00  0.00 0.09 0.47  0.00 0.00 0.25  0.35
Crit Moves:                                       ****        ****
********************************************************************************
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El Camino College Expansion
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.784
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	123	537	141	171	851	203	120	529	72	232	669	103
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	125	546	143	174	865	206	122	538	73	236	680	105
Added Vol:	0	0	11	15	0	0	0	61	0	2	17	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	125	546	154	189	865	206	122	599	73	238	697	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	546	154	189	865	206	122	599	73	238	697	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	546	154	189	865	206	122	599	73	238	697	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	546	154	189	865	206	122	599	73	238	697	108
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.10	0.12	0.27	0.13	0.08	0.19	0.05	0.15	0.22	0.07
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Prairie Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.812
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	86	623	207	190	889	192	146	774	121	176	439	101
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	87	634	210	193	904	195	148	787	123	179	446	103
Added Vol:	0	0	9	12	0	0	0	48	0	4	26	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	634	219	205	904	195	148	835	123	183	472	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	87	634	219	205	904	195	148	835	123	183	472	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	634	219	205	904	195	148	835	123	183	472	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	87	634	219	205	904	195	148	835	123	183	472	109
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.14	0.13	0.28	0.12	0.09	0.26	0.08	0.11	0.15	0.07
Crit Moves:	****				****			****		****		

El Camino College Expansion
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	297	578	366	201	750	170	128	919	291	200	799	214
Added Vol:	0	11	4	0	2	0	0	71	0	1	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	297	589	370	201	752	170	128	990	291	201	823	214
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	297	589	370	201	752	170	128	990	291	201	823	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	589	370	201	752	170	128	990	291	201	823	214
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	589	370	201	752	170	128	990	291	201	823	214
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.23	0.13	0.24	0.11	0.08	0.31	0.18	0.13	0.26	0.13
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.975
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	340	638	356	231	710	155	134	896	375	204	757	220
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	346	649	362	235	722	158	136	911	381	207	770	224
Added Vol:	0	9	3	0	4	0	0	56	0	1	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	346	658	365	235	726	158	136	967	381	208	802	224
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	346	658	365	235	726	158	136	967	381	208	802	224
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	346	658	365	235	726	158	136	967	381	208	802	224
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	346	658	365	235	726	158	136	967	381	208	802	224
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.22	0.21	0.23	0.15	0.23	0.10	0.09	0.30	0.24	0.13	0.25	0.14
Crit Moves:	****				****			****		****		

El Camino College Expansion
Year 2020 With Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.913
Loss Time (sec): 10 (Y+R=0.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 100 Level Of Service: E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	292	568	360	198	738	167	126	904	286	197	786	210
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	297	578	366	201	750	170	128	919	291	200	799	214
Added Vol:	0	11	4	0	2	0	0	71	0	1	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	297	589	370	201	752	170	128	990	291	201	823	214
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	297	589	370	201	752	170	128	990	291	201	823	214
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	297	589	370	201	752	170	128	990	291	201	823	214
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	297	589	370	201	752	170	128	990	291	201	823	214
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.32	0.68	1.00	2.00	1.00
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3710	1090	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.23	0.13	0.24	0.11	0.08	0.27	0.27	0.13	0.26	0.13
Crit Moves:	****				****			****		****		

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-------------------------------------------------------------------------------
                        El Camino College Expansion
                  Year 2020 With Project - With Improvements
                              Evening Peak Hour
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #5 Prairie Avenue (NS) at Redondo Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):        0.954
Loss Time (sec):     10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:      100              Level Of Service:                 E
*******************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  1  0    1  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     340  638   356   231  710   155   134  896   375   204  757   220
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  346  649   362   235  722   158   136  911   381   207  770   224
Added Vol:      0    9     3     0    4     0     0   56     0     1   32     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  346  658   365   235  726   158   136  967   381   208  802   224
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   346  658   365   235  726   158   136  967   381   208  802   224
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  346  658   365   235  726   158   136  967   381   208  802   224
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  346  658   365   235  726   158   136  967   381   208  802   224
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.15  0.85  1.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 3200  1600  1600 3443  1357  1600 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.22 0.21  0.23  0.15 0.23  0.10  0.09 0.28  0.28  0.13 0.25  0.14
Crit Moves:  ****                   ****             ****       ****
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El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.767
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0 1! 0 0			0 1 0 0 1			1 0 2 0 1			1 0 2 0 1		
Volume Module:												
Base Vol:	98	11	141	10	1	22	32	1335	48	64	949	26
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	100	11	143	10	1	22	33	1358	49	65	965	26
Added Vol:	0	0	18	0	0	0	0	74	0	4	25	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	11	161	10	1	22	33	1432	49	69	990	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	100	11	161	10	1	22	33	1432	49	69	990	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	11	161	10	1	22	33	1432	49	69	990	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	100	11	161	10	1	22	33	1432	49	69	990	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.37	0.04	0.59	0.91	0.09	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	586	66	949	1455	145	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.17	0.17	0.01	0.01	0.01	0.02	0.45	0.03	0.04	0.31	0.02
Crit Moves:		****		****				****		****		

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #6 Yukon Avenue (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.712
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 1	0	0 1	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	90	14	100	44	14	61	48	1182	106	73	1053	46
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	92	14	102	45	14	62	49	1202	108	74	1071	47
Added Vol:	0	0	15	0	0	0	0	59	0	7	34	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	92	14	117	45	14	62	49	1261	108	81	1105	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	92	14	117	45	14	62	49	1261	108	81	1105	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	14	117	45	14	62	49	1261	108	81	1105	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	14	117	45	14	62	49	1261	108	81	1105	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.41	0.06	0.52	0.76	0.24	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	658	102	839	1214	386	1600	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.14	0.14	0.03	0.04	0.04	0.03	0.39	0.07	0.05	0.35	0.03
Crit Moves:		****		****				****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                            Year 2020 With Project
                               Morning Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.570
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  0  0  1    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0    20    0     0     0    0   774   153  115  1014     0
Growth Adj:  1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02
Initial Bse:   0     0    20    0     0     0    0   787   156  117  1031     0
Added Vol:     9     0    17    0     0     0    0    43    44   83    14     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   9     0    37    0     0     0    0   830   200  200  1045     0
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    9     0    37    0     0     0    0   830   200  200  1045     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   9     0    37    0     0     0    0   830   200  200  1045     0
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   9     0    37    0     0     0    0   830   200  200  1045     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       1.00  0.00  1.00 0.00  0.00  0.00 0.00  1.61  0.39 1.00  2.00  0.00
Final Sat.:  1600     0  1600    0     0     0    0  2580   620 1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.00  0.02 0.00  0.00  0.00 0.00  0.32  0.32 0.12  0.33  0.00
Crit Moves:              ****                        ****       ****
********************************************************************************
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El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #7 El Camino College NW Driveway (NS) at Manhattan Beach Boulevard

Cycle (sec):	100	Critical Vol./Cap.(X):	0.635
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 0 0 1			0 0 0 0 0			0 0 1 1 0			1 0 2 0 0		
Volume Module:												
Base Vol:	9	0	76	0	0	0	0	1031	97	70	733	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	9	0	77	0	0	0	0	1048	99	71	745	0
Added Vol:	17	0	33	0	0	0	0	34	35	67	19	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	26	0	110	0	0	0	0	1082	134	138	764	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	26	0	110	0	0	0	0	1082	134	138	764	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	0	110	0	0	0	0	1082	134	138	764	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	26	0	110	0	0	0	0	1082	134	138	764	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.78	0.22	1.00	2.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	2848	352	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.07	0.00	0.00	0.00	0.00	0.38	0.38	0.09	0.24	0.00
Crit Moves:			****					****		****		

El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.581
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	62	9	27	45	16	97	42	455	56	101	875	20
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	63	9	27	46	16	99	43	463	57	103	890	20
Added Vol:	7	1	11	0	7	0	0	23	36	54	90	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	10	38	46	23	99	43	486	93	157	980	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	10	38	46	23	99	43	486	93	157	980	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	10	38	46	23	99	43	486	93	157	980	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	10	38	46	23	99	43	486	93	157	980	20
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.59	0.09	0.32	0.27	0.14	0.59	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	945	137	519	437	222	941	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.07	0.07	0.03	0.10	0.10	0.03	0.15	0.06	0.10	0.31	0.01
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #8 Lemoli Avenue (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.611
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	1!	0 0	0 0	1!	0 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	77	11	62	28	12	55	69	887	62	81	659	46
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	78	11	63	28	12	56	70	902	63	82	670	47
Added Vol:	15	3	22	0	6	0	0	38	29	44	71	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	93	14	85	28	18	56	70	940	92	126	741	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	93	14	85	28	18	56	70	940	92	126	741	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	14	85	28	18	56	70	940	92	126	741	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	14	85	28	18	56	70	940	92	126	741	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.48	0.07	0.44	0.28	0.18	0.55	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	775	118	707	444	284	872	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.02	0.06	0.06	0.04	0.29	0.06	0.08	0.23	0.03
Crit Moves:		****		****				****		****		

El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E

Cycle (sec):	100	Critical Vol./Cap.(X):	0.743
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0	0 0	2 0	0	0 2	1 0	3	0 0	0 0	2	0 1
Volume Module:												
Base Vol:	0	0	0	23	0	65	367	1106	0	0	1040	290
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	0	0	0	23	0	66	373	1125	0	0	1058	295
Added Vol:	0	0	0	12	0	16	80	13	0	0	13	58
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	35	0	82	453	1138	0	0	1071	353
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	35	0	82	453	1138	0	0	1071	353
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	35	0	82	453	1138	0	0	1071	353
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	35	0	82	453	1138	0	0	1071	353
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	1.00	3.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	2880	0	3200	1600	4800	0	0	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.01	0.00	0.03	0.28	0.24	0.00	0.00	0.33	0.22
Crit Moves:						****	****				****	

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                          El Camino College Expansion
                            Year 2020 With Project
                              Evening Peak Hour
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.668
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  B
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   1  0  3  0  0   0  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0  125     0   168  224  1145     0    0  1006   172
Growth Adj:  1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02
Initial Bse:   0     0     0  127     0   171  228  1164     0    0  1023   175
Added Vol:     0     0     0   23     0    32   64    10     0    0     9    46
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut:   0     0     0  150     0   203  292  1174     0    0  1032   221
User Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:    0     0     0  150     0   203  292  1174     0    0  1032   221
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol:   0     0     0  150     0   203  292  1174     0    0  1032   221
PCE Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume:   0     0     0  150     0   203  292  1174     0    0  1032   221
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment:  1.00  1.00  1.00 0.90  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:       0.00  0.00  0.00 2.00  0.00  2.00 1.00  3.00  0.00 0.00  2.00  1.00
Final Sat.:    0     0     0 2880     0  3200 1600  4800     0    0  3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00 0.05  0.00  0.06 0.18  0.24  0.00 0.00  0.32  0.14
Crit Moves:                             ****  ****                    ****
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                        El Camino College Expansion
                Year 2020 With Project - With Improvements
                            Morning Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):           0.580
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):        xxxxxx
Optimal Cycle:        100               Level Of Service:                    A
********************************************************************************
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted         Permitted        Permitted
Rights:          Include          Include           Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       0  0  0  0  0    2  0  0  0  2    2  0  2  0  0    0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0     0     0    23     0    65   367 1106     0     0 1040   290
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:   0     0     0    23     0    66   373 1125     0     0 1058   295
Added Vol:     0     0     0    12     0    16    80   13     0     0   13    58
PasserByVol:   0     0     0     0     0     0     0    0     0     0    0     0
Initial Fut:   0     0     0    35     0    82   453 1138     0     0 1071   353
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0     0     0    35     0    82   453 1138     0     0 1071   353
Reduct Vol:    0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:   0     0     0    35     0    82   453 1138     0     0 1071   353
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   0     0     0    35     0    82   453 1138     0     0 1071   353
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  0.90 1.00  1.00  0.90 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 0.00  0.00  2.00 0.00  2.00  2.00 2.00  0.00  0.00 2.26  0.74
Final Sat.:    0     0     0  2880     0  3200  2880 3200     0     0 3610  1190
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.01 0.00  0.03  0.16 0.36  0.00  0.00 0.30  0.30
Crit Moves:                               ****  ****                    ****
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--------------------------------------------------------------------------------
                          El Camino College Expansion
                     Year 2020 With Project - With Improvements
                               Evening Peak Hour
--------------------------------------------------------------------------------
                       Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #9 El Camino College SW Driveway (NS) at Redondo Beach Boulevard (E
********************************************************************************
Cycle (sec):         100               Critical Vol./Cap.(X):         0.530
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        0  0  0  0  0   2  0  0  0  2   2  0  2  0  0   0  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0  125    0   168  224 1145     0    0 1006   172
Growth Adj:  1.02 1.02  1.02 1.02 1.02  1.02 1.02 1.02  1.02 1.02 1.02  1.02
Initial Bse:    0    0     0  127    0   171  228 1164     0    0 1023   175
Added Vol:      0    0     0   23    0    32   64   10     0    0    9    46
PasserByVol:    0    0     0    0    0     0    0    0     0    0    0     0
Initial Fut:    0    0     0  150    0   203  292 1174     0    0 1032   221
User Adj:    1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
PHF Volume:     0    0     0  150    0   203  292 1174     0    0 1032   221
Reduct Vol:     0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:    0    0     0  150    0   203  292 1174     0    0 1032   221
PCE Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00 1.00 1.00  1.00
FinalVolume:    0    0     0  150    0   203  292 1174     0    0 1032   221
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600 1600 1600  1600 1600 1600  1600 1600 1600  1600
Adjustment:  1.00 1.00  1.00 0.90 1.00  1.00 0.90 1.00  1.00 1.00 1.00  1.00
Lanes:       0.00 0.00  0.00 2.00 0.00  2.00 2.00 2.00  0.00 0.00 2.47  0.53
Final Sat.:     0    0     0 2880    0  3200 2880 3200     0    0 3954   846
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00 0.05 0.00  0.06 0.10 0.37  0.00 0.00 0.26  0.26
Crit Moves:                             ****      ****       ****
********************************************************************************
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El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.849
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	0 1
Volume Module:												
Base Vol:	249	765	59	67	963	205	130	229	171	121	580	35
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	253	778	60	68	979	208	132	233	174	123	590	36
Added Vol:	94	7	0	0	7	36	7	8	19	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	347	785	60	68	986	244	139	241	193	123	604	36
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	347	785	60	68	986	244	139	241	193	123	604	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	347	785	60	68	986	244	139	241	193	123	604	36
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	347	785	60	68	986	244	139	241	193	123	604	36
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	2.40	0.60	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4459	341	1600	3847	953	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.22	0.18	0.18	0.04	0.26	0.26	0.09	0.08	0.12	0.08	0.19	0.02
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.784
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	221	873	97	98	895	196	197	461	278	92	357	51
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	225	888	99	100	910	199	200	469	283	94	363	52
Added Vol:	75	5	0	0	5	29	15	8	38	0	10	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	300	893	99	100	915	228	215	477	321	94	373	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	300	893	99	100	915	228	215	477	321	94	373	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	300	893	99	100	915	228	215	477	321	94	373	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	300	893	99	100	915	228	215	477	321	94	373	52
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.70	0.30	1.00	2.40	0.60	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	4322	478	1600	3842	958	1600	3200	1600	1600	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.19	0.21	0.21	0.06	0.24	0.24	0.13	0.15	0.20	0.06	0.12	0.03
Crit Moves:	****				****				****	****		

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-------------------------------------------------------------------------------
                        El Camino College Expansion
                  Year 2020 With Project - With Improvements
                            Morning Peak Hour
-------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*******************************************************************************
Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)
*******************************************************************************
Cycle (sec):          100              Critical Vol./Cap.(X):         0.794
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100              Level Of Service:                  C
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Ignore           Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  1  0   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     249  765    59    67  963   205   130  229   171   121  580    35
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  253  778    60    68  979   208   132  233   174   123  590    36
Added Vol:     94    7     0     0    7    36     7    8    19     0   14     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  347  785    60    68  986   244   139  241   193   123  604    36
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:   347  785    60    68  986   244   139  241     0   123  604    36
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  347  785    60    68  986   244   139  241     0   123  604    36
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
FinalVolume:  347  785    60    68  986   244   139  241     0   123  604    36
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.79  0.21  1.00 2.40  0.60  1.00 3.00  0.00  1.00 2.83  0.17
Final Sat.:  1600 4459   341  1600 3847   953  1600 4800     0  1600 4533   267
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.22 0.18  0.18  0.04 0.26  0.26  0.09 0.05  0.00  0.08 0.13  0.13
Crit Moves:  ****                  ****        ****                   ****
*******************************************************************************
```

El Camino College Expansion
Year 2020 With Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #10 Crenshaw Boulevard (NS) at Manhattan Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	221	873	97	98	895	196	197	461	278	92	357	51
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	225	888	99	100	910	199	200	469	283	94	363	52
Added Vol:	75	5	0	0	5	29	15	8	38	0	10	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	300	893	99	100	915	228	215	477	321	94	373	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	300	893	99	100	915	228	215	477	0	94	373	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	300	893	99	100	915	228	215	477	0	94	373	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	300	893	99	100	915	228	215	477	0	94	373	52
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.70	0.30	1.00	2.40	0.60	1.00	3.00	0.00	1.00	2.63	0.37
Final Sat.:	1600	4322	478	1600	3842	958	1600	4800	0	1600	4214	586
Capacity Analysis Module:												
Vol/Sat:	0.19	0.21	0.21	0.06	0.24	0.24	0.13	0.10	0.00	0.06	0.09	0.09
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.603
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	0 0	1!	0 0	0 0	1!	0 0
Volume Module:												
Base Vol:	157	1053	6	1	1265	53	115	0	71	0	0	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	160	1071	6	1	1286	54	117	0	72	0	0	0
Added Vol:	0	101	0	0	26	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	160	1172	6	1	1312	54	117	0	72	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	160	1172	6	1	1312	54	117	0	72	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	1172	6	1	1312	54	117	0	72	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	160	1172	6	1	1312	54	117	0	72	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.98	0.02	1.00	2.88	0.12	0.62	0.00	0.38	0.00	1.00	0.00
Final Sat.:	1600	4775	25	1600	4611	189	989	0	611	0	1600	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.25	0.25	0.00	0.28	0.28	0.07	0.00	0.12	0.00	0.00	0.00
Crit Moves:	****				****				****			

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--------------------------------------------------------------------------------
                     El Camino College Expansion
                       Year 2020 With Project
                         Evening Peak Hour
--------------------------------------------------------------------------------
                  Level Of Service Computation Report
      ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #11 Crenshaw Boulevard (NS) at El Camino College East Driveway (EW)
********************************************************************************
Cycle (sec):          100               Critical Vol./Cap.(X):         0.532
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    0  0  1! 0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     111  1185     0     4  1302    15    75     0    39     1     0     4
Growth Adj:  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02  1.02
Initial Bse:  113  1205     0     4  1324    15    76     0    40     1     0     4
Added Vol:      0    80     0     0    43     0     0     0     0     0     0     0
PasserByVol:    0     0     0     0     0     0     0     0     0     0     0     0
Initial Fut:  113  1285     0     4  1367    15    76     0    40     1     0     4
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
PHF Volume:   113  1285     0     4  1367    15    76     0    40     1     0     4
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  113  1285     0     4  1367    15    76     0    40     1     0     4
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
FinalVolume:  113  1285     0     4  1367    15    76     0    40     1     0     4
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600  1600
Adjustment:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Lanes:       1.00  3.00  0.00  1.00  2.97  0.03  0.66  0.00  0.34  0.20  0.00  0.80
Final Sat.:  1600  4800     0  1600  4747    53  1053     0   547   320     0  1280
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07  0.27  0.00  0.00  0.29  0.29  0.05  0.00  0.07  0.00  0.00  0.00
Crit Moves:  ****                    ****                    ****  ****
********************************************************************************
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El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.915
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	218	813	150	195	880	253	217	650	84	217	964	143
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	222	827	153	198	895	257	221	661	85	221	980	145
Added Vol:	7	95	0	6	19	0	0	23	1	0	63	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	229	922	153	204	914	257	221	684	86	221	1043	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	229	922	153	204	914	257	221	684	86	221	1043	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	922	153	204	914	257	221	684	86	221	1043	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	229	922	153	204	914	257	221	684	86	221	1043	151
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.62	0.38
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	4192	608
Capacity Analysis Module:												
Vol/Sat:	0.14	0.29	0.10	0.13	0.29	0.16	0.14	0.21	0.05	0.14	0.25	0.25
Crit Moves:	****				****		****				****	

El Camino College Expansion
Year 2020 With Project
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.893
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	210	861	176	143	928	277	215	743	197	182	798	170
Added Vol:	6	76	0	5	38	0	0	30	3	0	50	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	216	937	176	148	966	277	215	773	200	182	848	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	216	937	176	148	966	277	215	773	200	182	848	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	216	937	176	148	966	277	215	773	200	182	848	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	216	937	176	148	966	277	215	773	200	182	848	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.49	0.51
Final Sat.:	1600	3200	1600	1600	3200	1600	1600	3200	1600	1600	3980	820
Capacity Analysis Module:												
Vol/Sat:	0.14	0.29	0.11	0.09	0.30	0.17	0.13	0.24	0.13	0.11	0.21	0.21
Crit Moves:	****				****			****		****		

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--------------------------------------------------------------------------------
                        El Camino College Expansion
                Year 2020 With Project - With Improvements
                            Morning Peak Hour
--------------------------------------------------------------------------------
                    Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)
********************************************************************************
Cycle (sec):         100             Critical Vol./Cap.(X):        0.874
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):    xxxxxx
Optimal Cycle:       100             Level Of Service:                 D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  0  1   1  0  2  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     218  813   150   195  880   253   217  650    84   217  964   143
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  222  827   153   198  895   257   221  661    85   221  980   145
Added Vol:      7   95     0     6   19     0     0   23     1     0   63     6
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  229  922   153   204  914   257   221  684    86   221 1043   151
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   229  922   153   204  914   257   221  684    86   221 1043   151
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  229  922   153   204  914   257   221  684    86   221 1043   151
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  229  922   153   204  914   257   221  684    86   221 1043   151
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.57  0.43  1.00 2.34  0.66  1.00 2.00  1.00  1.00 2.62  0.38
Final Sat.:  1600 4118   682  1600 3746  1054  1600 3200  1600  1600 4192   608
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.22  0.22  0.13 0.24  0.24  0.14 0.21  0.05  0.14 0.25  0.25
Crit Moves:  ****                   ****       ****                   ****
********************************************************************************
```

El Camino College Expansion
Year 2020 With Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #12 Crenshaw Boulevard (NS) at Redondo Beach Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.850
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	1 0	2	1 0
Volume Module:												
Base Vol:	207	847	173	141	913	272	211	731	194	179	785	167
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	210	861	176	143	928	277	215	743	197	182	798	170
Added Vol:	6	76	0	5	38	0	0	30	3	0	50	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	216	937	176	148	966	277	215	773	200	182	848	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	216	937	176	148	966	277	215	773	200	182	848	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	216	937	176	148	966	277	215	773	200	182	848	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	216	937	176	148	966	277	215	773	200	182	848	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.53	0.47	1.00	2.33	0.67	1.00	2.00	1.00	1.00	2.49	0.51
Final Sat.:	1600	4041	759	1600	3732	1068	1600	3200	1600	1600	3980	820
Capacity Analysis Module:												
Vol/Sat:	0.14	0.23	0.23	0.09	0.26	0.26	0.13	0.24	0.13	0.11	0.21	0.21
Crit Moves:	****				****			****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                            Year 2020 With Project
                              Morning Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):          100                 Critical Vol./Cap.(X):         0.934
Loss Time (sec):       10 (Y+R=0.0 sec)   Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100                 Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     161 1022   235   198  974    76    80  702   149   283  953   155
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  164 1039   239   201  990    77    81  714   152   288  969   158
Added Vol:      0   81     0     3   16     1     4    1     0     0    1    14
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  164 1120   239   204 1006    78    85  715   152   288  970   172
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   164 1120   239   204 1006    78    85  715   152   288  970   172
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  164 1120   239   204 1006    78    85  715   152   288  970   172
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  164 1120   239   204 1006    78    85  715   152   288  970   172
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.78  0.22  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 4454   346  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.35  0.15  0.13 0.23  0.23  0.05 0.22  0.09  0.10 0.30  0.11
Crit Moves:       ****        ****             ****                   ****
********************************************************************************
```

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--------------------------------------------------------------------------------
                         El Camino College Expansion
                          Year 2020 With Project
                            Evening Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)
********************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.995
Loss Time (sec):     10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:      100              Level Of Service:                  E
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  0  1   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     179  994   303   200  894    89   100 1068   122   251  764   183
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  182 1011   308   203  909    91   102 1086   124   255  777   186
Added Vol:      0   65     0     6   32     1     3    1     0     0    1    11
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  182 1076   308   209  941    92   105 1087   124   255  778   197
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   182 1076   308   209  941    92   105 1087   124   255  778   197
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  182 1076   308   209  941    92   105 1087   124   255  778   197
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  182 1076   308   209  941    92   105 1087   124   255  778   197
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.73  0.27  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3200  1600  1600 4375   425  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.34  0.19  0.13 0.22  0.22  0.07 0.34  0.08  0.09 0.24  0.12
Crit Moves:       ****        ****                   ****        ****
********************************************************************************
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El Camino College Expansion
Year 2020 With Project - With Improvements
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.867
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	2	0 1	2 0	2	0 1
Volume Module:												
Base Vol:	161	1022	235	198	974	76	80	702	149	283	953	155
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	164	1039	239	201	990	77	81	714	152	288	969	158
Added Vol:	0	81	0	3	16	1	4	1	0	0	1	14
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	164	1120	239	204	1006	78	85	715	152	288	970	172
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	164	1120	239	204	1006	78	85	715	152	288	970	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	164	1120	239	204	1006	78	85	715	152	288	970	172
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	164	1120	239	204	1006	78	85	715	152	288	970	172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00
Lanes:	1.00	2.47	0.53	1.00	2.78	0.22	1.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3956	844	1600	4454	346	1600	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.28	0.13	0.23	0.23	0.05	0.22	0.09	0.10	0.30	0.11
Crit Moves:		****		****			****				****	

El Camino College Expansion
Year 2020 With Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #13 Crenshaw Boulevard (NS) at Artesia Boulevard (EW)

```
Cycle (sec):          100               Critical Vol./Cap.(X):         0.948
Loss Time (sec):       10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:        100               Level Of Service:                  E
*****************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
Lanes:        1  0  2  1  0   1  0  2  1  0   1  0  2  0  1   2  0  2  0  1
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     179  994   303   200  894    89   100 1068   122   251  764   183
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  182 1011   308   203  909    91   102 1086   124   255  777   186
Added Vol:      0   65     0     6   32     1     3    1     0     0    1    11
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  182 1076   308   209  941    92   105 1087   124   255  778   197
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   182 1076   308   209  941    92   105 1087   124   255  778   197
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  182 1076   308   209  941    92   105 1087   124   255  778   197
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  182 1076   308   209  941    92   105 1087   124   255  778   197
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  0.90 1.00  1.00
Lanes:       1.00 2.33  0.67  1.00 2.73  0.27  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  1600 3731  1069  1600 4375   425  1600 3200  1600  2880 3200  1600
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.29  0.29  0.13 0.22  0.22  0.07 0.34  0.08  0.09 0.24  0.12
Crit Moves:       ****        ****                  ****        ****
*****************************************************************************
```

El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.896
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	2	0 1	1 0	2	1 0	1 0	1	1 0	1 1	0	1 0
Volume Module:												
Base Vol:	54	807	523	7	1175	233	183	341	134	482	655	261
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	55	821	532	7	1195	237	186	347	136	490	666	265
Added Vol:	0	15	0	2	12	1	7	1	0	0	0	54
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	836	532	9	1207	238	193	348	136	490	666	319
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	836	532	9	1207	238	193	348	136	490	666	319
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	836	532	9	1207	238	193	348	136	490	666	319
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	836	532	9	1207	238	193	348	136	490	666	319
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	1.00	1.00	2.51	0.49	1.00	1.44	0.56	1.00	1.35	0.65
Final Sat.:	1600	3200	1600	1600	4010	790	1600	2299	901	1600	2163	1037
Capacity Analysis Module:												
Vol/Sat:	0.03	0.26	0.33	0.01	0.30	0.30	0.12	0.15	0.15	0.31	0.31	0.31
Crit Moves:			****	****				****		****		

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--------------------------------------------------------------------------------
                          El Camino College Expansion
                           Year 2020 With Project
                              Evening Peak Hour
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                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):         100                Critical Vol./Cap.(X):         1.114
Loss Time (sec):      10 (Y+R=0.0 sec)  Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100                Level Of Service:                  F
********************************************************************************
Approach:     North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:            Ovl            Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:       1  0  2  0  1    1  0  2  1  0    1  0  1  1  0    1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      54 1090   777    59  911   144   152  404    83   529  657   303
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:   55 1108   790    60  926   146   155  411    84   538  668   308
Added Vol:      0   12     0     4   23     3     6    2     0     0    2    44
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   55 1120   790    64  949   149   161  413    84   538  670   352
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    55 1120   790    64  949   149   161  413    84   538  670   352
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   55 1120   790    64  949   149   161  413    84   538  670   352
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   55 1120   790    64  949   149   161  413    84   538  670   352
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 2.59  0.41  1.00 1.66  0.34  1.03 1.29  0.68
Final Sat.:  1600 3200  1600  1600 4147   653  1600 2657   543  1654 2061  1084
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.35  0.49  0.04 0.23  0.23  0.10 0.16  0.16  0.33 0.33  0.32
Crit Moves:             ****  ****                  ****        ****
********************************************************************************
```

```
-----------------------------------------------------------------------------
                        El Camino College Expansion
                 Year 2020 With Project - With Improvements
                             Morning Peak Hour
-----------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
*****************************************************************************
Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)
*****************************************************************************
Cycle (sec):        100              Critical Vol./Cap.(X):         0.893
Loss Time (sec):     10 (Y+R=0.0 sec) Average Delay (sec/veh):     xxxxxx
Optimal Cycle:      100              Level Of Service:                  D
*****************************************************************************
Approach:     North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted         Permitted         Permitted         Permitted
Rights:            Ovl             Include           Include           Include
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  2  1  1    1  0  2  1  0    1  0  1  1  0    1  1  0  1  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     54  807   523     7 1175   233   183  341   134   482  655   261
Growth Adj: 1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  55  821   532     7 1195   237   186  347   136   490  666   265
Added Vol:     0   15     0     2   12     1     7    1     0     0    0    54
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  55  836   532     9 1207   238   193  348   136   490  666   319
User Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   55  836   532     9 1207   238   193  348   136   490  666   319
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  55  836   532     9 1207   238   193  348   136   490  666   319
PCE Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  55  836   532     9 1207   238   193  348   136   490  666   319
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:      1.00 2.44  1.56  1.00 2.51  0.49  1.00 1.44  0.56  1.00 1.35  0.65
Final Sat.: 1600 3911  2489  1600 4010   790  1600 2299   901  1600 2163  1037
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.03 0.21  0.21  0.01 0.30  0.30  0.12 0.15  0.15  0.31 0.31  0.31
Crit Moves: ****                  ****             ****        ****
*****************************************************************************
```

El Camino College Expansion
Year 2020 With Project - With Improvements
Evening Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #14 Crenshaw Boulevard (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.919
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	E

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:		Permitted			Permitted			Permitted			Permitted	
Rights:		Ovl			Include			Include			Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:		1 0 2 1 1			1 0 2 1 0			1 0 1 1 0			1 1 0 1 0	
Volume Module:												
Base Vol:	54	1090	777	59	911	144	152	404	83	529	657	303
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	55	1108	790	60	926	146	155	411	84	538	668	308
Added Vol:	0	12	0	4	23	3	6	2	0	0	2	44
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	1120	790	64	949	149	161	413	84	538	670	352
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	1120	790	64	949	149	161	413	84	538	670	352
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	1120	790	64	949	149	161	413	84	538	670	352
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	1120	790	64	949	149	161	413	84	538	670	352
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.35	1.65	1.00	2.59	0.41	1.00	1.66	0.34	1.03	1.29	0.68
Final Sat.:	1600	3753	2647	1600	4147	653	1600	2657	543	1654	2061	1084
Capacity Analysis Module:												
Vol/Sat:	0.03	0.30	0.30	0.04	0.23	0.23	0.10	0.16	0.16	0.33	0.33	0.32
Crit Moves:		****		****				****		****		

El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.023
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	3	0 0	0 0	2	1 0	0 0	1!	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	439	1343	0	0	1436	378	52	0	758	0	0	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	446	1366	0	0	1460	384	53	0	771	0	0	0
Added Vol:	0	15	0	0	3	9	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	446	1381	0	0	1463	393	53	0	771	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	446	1381	0	0	1463	393	53	0	771	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	446	1381	0	0	1463	393	53	0	771	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	446	1381	0	0	1463	393	53	0	771	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.36	0.64	0.13	0.00	1.87	0.00	0.00	0.00
Final Sat.:	1600	4800	0	0	3783	1017	205	0	2995	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.28	0.29	0.00	0.00	0.39	0.39	0.03	0.00	0.26	0.00	0.00	0.00
Crit Moves:	****				****				****			

```
--------------------------------------------------------------------------------
                         El Camino College Expansion
                           Year 2020 With Project
                              Evening Peak Hour
--------------------------------------------------------------------------------
                     Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #15 Crenshaw Boulevard (NS) at I-405 Freeway SB Ramps (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):          0.866
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       100              Level Of Service:                   D
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:     0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  3  0  0   0  0  2  1  0   0  0  1! 0  1   0  0  0  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     294 1792     0     0 1416   219    97     0   619     0     0     0
Growth Adj:  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02
Initial Bse:  299 1822     0     0 1440   223    99     0   629     0     0     0
Added Vol:      0   12     0     0    6    17     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:  299 1834     0     0 1446   240    99     0   629     0     0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   299 1834     0     0 1446   240    99     0   629     0     0     0
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:  299 1834     0     0 1446   240    99     0   629     0     0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:  299 1834     0     0 1446   240    99     0   629     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1600 1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  0.00  0.00 2.57  0.43  0.27 0.00  1.73  0.00 0.00  0.00
Final Sat.:  1600 4800     0     0 4117   683   434     0  2766     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.19 0.38  0.00  0.00 0.35  0.35  0.06 0.00  0.23  0.00 0.00  0.00
Crit Moves:  ****                   ****                    ****
********************************************************************************
```

El Camino College Expansion
Year 2020 With Project
Morning Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.699
Loss Time (sec):	10 (Y+R=0.0 sec)	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	1!	0 0	0 0	0	0 0	0 0	1	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	680	0	13	0	0	0	0	411	446	128	692	0
Growth Adj:	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
Initial Bse:	691	0	13	0	0	0	0	418	454	130	704	0
Added Vol:	44	0	0	0	0	0	0	3	0	0	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	735	0	13	0	0	0	0	421	454	130	715	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	735	0	13	0	0	0	0	421	454	130	715	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	735	0	13	0	0	0	0	421	454	130	715	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	735	0	13	0	0	0	0	421	454	130	715	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.96	0.00	0.04	0.00	0.00	0.00	0.00	1.00	1.00	1.00	2.00	0.00
Final Sat.:	3143	0	57	0	0	0	0	1600	1600	1600	3200	0
Capacity Analysis Module:												
Vol/Sat:	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.26	0.28	0.08	0.22	0.00
Crit Moves:	****								****	****		

```
--------------------------------------------------------------------------------
                         El Camino College Expansion
                           Year 2020 With Project
                              Evening Peak Hour
--------------------------------------------------------------------------------
                      Level Of Service Computation Report
       ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)
********************************************************************************
Intersection #16 I-405 Freeway NB Ramps (NS) at 182rd Street (EW)
********************************************************************************
Cycle (sec):         100              Critical Vol./Cap.(X):         0.884
Loss Time (sec):      10 (Y+R=0.0 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       100              Level Of Service:                  D
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Permitted        Permitted        Permitted        Permitted
Rights:          Include          Include          Include          Include
Min. Green:    0     0     0    0     0     0    0     0     0    0     0     0
Lanes:        1  0  1! 0  0   0  0  0  0  0   0  0  1  1  0   1  0  2  0  0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:    854     0    29    0     0     0    0   644   604  148   622     0
Growth Adj: 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02 1.02  1.02  1.02
Initial Bse: 868     0    29    0     0     0    0   655   614  151   633     0
Added Vol:    35     0     0    0     0     0    0     6     0    0    10     0
PasserByVol:   0     0     0    0     0     0    0     0     0    0     0     0
Initial Fut: 903     0    29    0     0     0    0   661   614  151   643     0
User Adj:   1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
PHF Volume:  903     0    29    0     0     0    0   661   614  151   643     0
Reduct Vol:    0     0     0    0     0     0    0     0     0    0     0     0
Reduced Vol: 903     0    29    0     0     0    0   661   614  151   643     0
PCE Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
MLF Adj:    1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
FinalVolume: 903     0    29    0     0     0    0   661   614  151   643     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:   1600  1600  1600 1600  1600  1600 1600  1600  1600 1600  1600  1600
Adjustment: 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00
Lanes:      1.94  0.00  0.06 0.00  0.00  0.00 0.00  1.04  0.96 1.00  2.00  0.00
Final Sat.: 3099     0   101    0     0     0    0  1659  1541 1600  3200     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:    0.29  0.00  0.29 0.00  0.00  0.00 0.00  0.40  0.40 0.09  0.20  0.00
Crit Moves: ****                                    ****        ****
********************************************************************************
```

APPENDIX D

Traffic Signal Warrant Worksheet

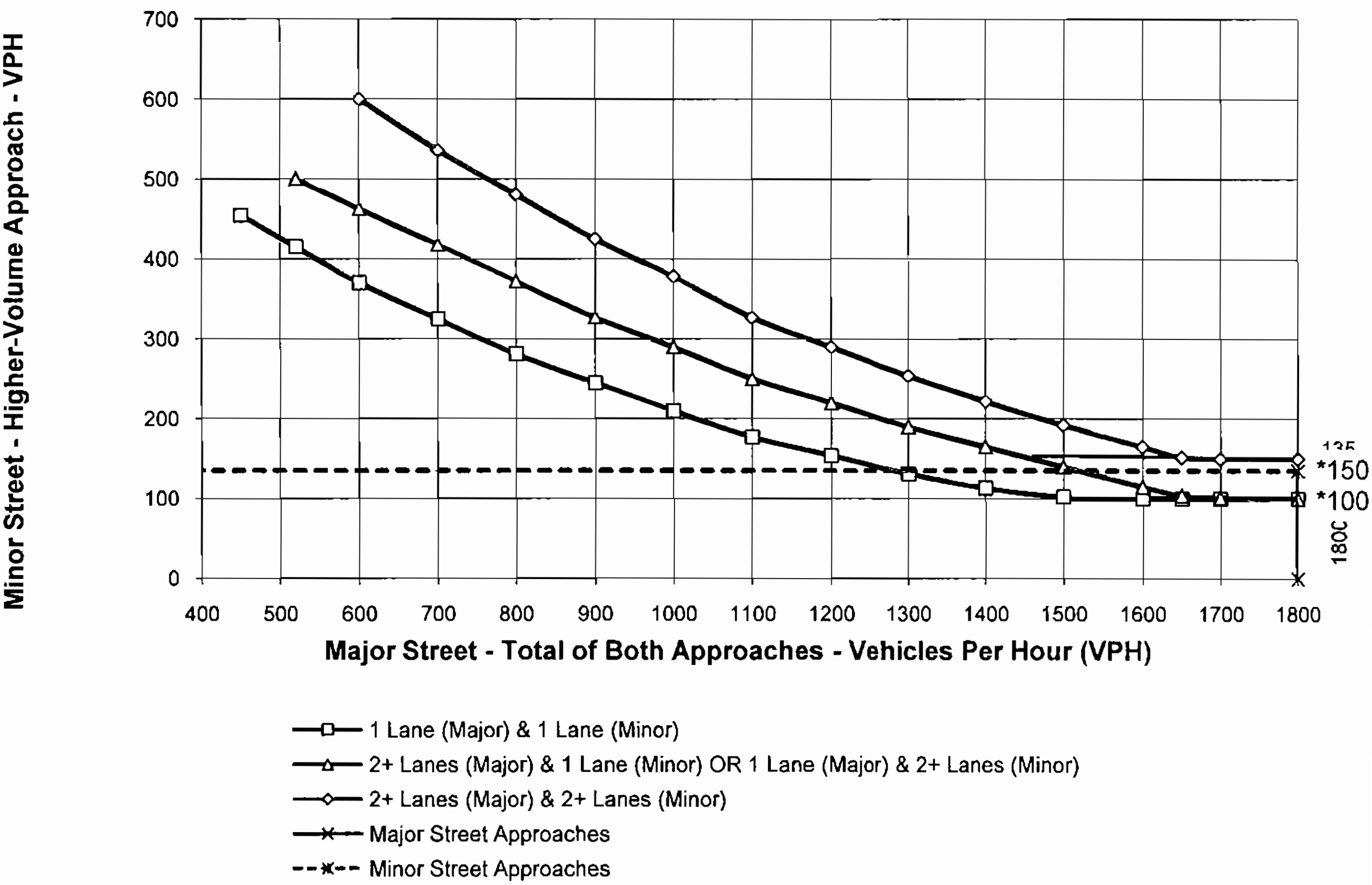
WARRANT 3, PEAK HOUR
(Urban Areas)

Traffic Conditions = **Existing Plus Project**

Major Street Name = **Manhattan Beach Boulevard** Total of Both Approaches (VPH) = **2077**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **El Camino College NW Entrance** High Volume Approach (VPH) = **135**
Number of Approach Lanes On Minor Street = **2**

WARRANTED FOR A SIGNAL



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

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EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN

PARKING ANALYSIS

March 4, 2013

KUNZMAN ASSOCIATES, INC.

EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN

PARKING ANALYSIS

March 4, 2013

Prepared by:

Amy L. Kim, E.I.T.,
Carl Ballard, LEED GA, and
William Kunzman, P.E.

William Kunzman

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STATE OF CALIFORNIA

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APPENDICES

El Camino College
2012 Facilities Master Plan

Parking Analysis

This report contains the parking analysis for the expansion of El Camino College. The project site is bounded by Manhattan Beach Boulevard to the north, Crenshaw Boulevard to the east, and Redondo Beach Boulevard to the south. The student enrollment currently is 16,400 full time equivalent (FTEs) students and is expected to grow to 20,025 FTEs by Year 2020.

The parking analysis contains documentation of existing parking conditions for the fall semester on a Wednesday (September 19, 2012). Parking counts were conducted from 9:00 AM to 9:00 PM. This parking analysis was conducted to determine the future parking demand per student based upon the existing parking demand per student for Year 2020 conditions. The future projections take into consideration the recommended number of parking spaces provided within the proposed Parking Lot F third level parking, Parking Lot C parking structure, and Parking Lot 1.

This parking analysis provides a summary of the findings, analysis procedures, and evaluation of existing/future parking lot capacity, demand access and circulation for El Camino College.

I. Executive Summary

This section summarizes the existing conditions, project impacts, and the proposed recommendations.

A. Existing Conditions

1. El Camino College currently has an enrollment of 16,400 FTEs.

2. The project site currently has access to Manhattan Beach Boulevard, Crenshaw Boulevard, and Redondo Beach Boulevard.

3. Currently, a total of 4,917 parking spaces are provided on the El Camino College campus. These parking spaces are currently divided into 790 staff parking spaces, 3,729 student parking spaces, 3 box office parking spaces, 1 bus only parking space, 9 child development center parking spaces, 2 copy center parking spaces, 77 handicap parking space, 8 police services parking spaces, 5 police vehicle parking spaces, 56 reserved parking spaces, 20 staff carpool parking spaces, 7 van parking spaces, and 45 visitor parking spaces.

4. On-street parking for the El Camino College campus currently is permitted on Manhattan Beach Boulevard. A total of 165 on-street parking spaces are available adjacent to the campus on Manhattan Beach Boulevard.

B. Project Impacts

1. El Camino College is proposed to increase its enrollment from 16,400 FTEs in Year 2011-2012 to 20,025 FTEs in Year 2020 (increase of 3,625 FTEs). As part of the school expansion, a new signalized intersection will be created on Manhattan Beach Boulevard to serve the campus.

2. Kunzman Associates, Inc. conducted an initial parking survey for the first month of the fall semester on a Wednesday (September 19, 2012). Parking counts were conducted from 9:00 AM to 9:00 PM.

3. Table 17 depicts the existing and proposed parking space comparison by parking area. A total of approximately 4,917 parking spaces are currently available for the El Camino College campus. In the future, a total of approximately 5,096 parking spaces will be available for the El Camino College campus (without the proposed north and south parking structures). With campus construction, a net gain of 179 parking spaces is projected to occur (see Table 17). The gain of approximately 179 parking spaces is because of the changes in Parking Lots B, D, F, G, and K.

4. The estimated future parking demand and supply is shown in Table 18. For Year 2020, it is proposed that Parking Lot C parking structure be constructed with 3 levels and a total of 700 to 800 parking spaces, Parking Lot F third level parking structure be

constructed with a minimum of 700 parking spaces, and Parking Lot 1 be constructed with 72 parking spaces. With construction of the Parking Lot C parking structure, the Parking Lot F third level parking structure, and Parking Lot 1, the El Camino College campus will provide a total of approximately 6,568 parking spaces for Year 2020. Figures 42 to 44 illustrate the proposed parking structures. The parking space demand by Year 2020 is expected to be 5,607 parking spaces for the 20,025 FTEs.

C. Recommendations

The following mitigation measures are recommended for the El Camino College campus:

Parking Mitigation Measures

1. The college shall install a total of 6,568 parking spaces at buildout of the 2012 Facilities Master Plan and maintain a minimum ratio of 0.28 spaces per FTEs. A parking space utilization rate of equal or less than 90 percent is recommended for day enrollment four weeks into the fall semester. The rate shall be evaluated every three years. Facilities Planning and Service shall monitor compliance.

2. A temporary parking program shall be implemented during the Lot F Parking Structure construction that results in less than 95 percent parking space utilization on campus weekdays. A communication program identifying available parking lots on campus shall also be implemented during the Lot F construction period. Facilities Planning and Service shall monitor compliance.

3. The college shall offer instant rebates on purchase of new discount bus passes for students during any construction phase of the Lot F Channel Parking Structure when the FTEs estimates and the parking factor of 0.28 spaces per FTEs is exceeded. The offer days and the discount shall be included in campus publications, the campus website, posters and in the communication program required by the previous parking mitigation measure. All costs shall be borne by the college. Facilities Planning and Service shall monitor compliance.

4. If parking projections indicate the need for temporary off-campus parking spaces during Lot F Channel Parking Structure construction, the college shall enter into short-term parking agreements with businesses or churches with surplus daytime surface parking east of Crenshaw Boulevard. Other options include short-term parking space rental in area more removed from the campus with shuttle service to campus during the peak morning and evening hours. Facilities Planning and Service shall monitor compliance.

5. The college shall update parking, pedestrian, circulation, and signage plans regularly to address direct and indirect public safety needs for parking on campus during the construction period. Construction employee parking areas shall be identified and the changing parking demands created by construction, increased student enrollments, and new building locations projected to balance parking demand and supply. Facilities Planning and Service shall monitor compliance.

6. The college shall implement a preferential carpool parking permits and spaces, bicycle racks and storage lockers, if needed, restripe and/or redesign existing parking lots for greater efficiency and create carpool and motorcycle parking permits. Facilities Planning and Service shall monitor compliance.

7. An internal circulation plan shall be prepared based on the 2012 Facilities Master Plan. The plan shall specify all parking areas, parking regulations, public bus stops, pathways, shuttle stops, vanpool spaces, handicapped spaces, emergency vehicle access and signage within the campus needed for buildout of the 2012 Facilities Master Plan. The plan shall comply with all requirements of the American Disabilities Act. All recommendations of the approved internal circulation plan shall be included in construction contracts and implemented. Facilities Planning and Service shall monitor compliance.

<u>Pedestrian Mitigation Measures</u>

1. The college shall implement the proposed sidewalk recommendations (see Figure 48) concurrent with adjacent development on the campus. Facilities Planning and Services shall monitor compliance.

2. The future parking lots should incorporate appropriate parking spaces for persons with disabilities in terms of design, location, and access in accordance with ADA (Americans with Disabilities Act) requirements. Facilities Planning and Services shall monitor compliance.

<u>Construction Mitigation Measures</u>

1. Contractors shall submit traffic handling plans to Facilities Planning and Services and to the Campus Police Department prior to commencement of demolition or grading. The plans and documents shall comply with the *Work Area Traffic Control Handbook (WATCH)*. Facilities Planning and Services shall approve the final plans and monitor compliance.

2. Demolition and construction contracts shall include plans for temporary sidewalk closures, pedestrian safety on adjacent sidewalks, and vehicle and pedestrian safety along the project perimeter, along construction equipment haul routes on campus and near on-site construction parking areas. These plans shall be reviewed by the Campus Police Division and approved by Facilities Planning and Services. Facilities Planning and Services shall monitor compliance.

3. Construction contractors shall post a flag person at locations near a construction site during major truck hauling activities to protect pedestrians from conflicts with heavy equipment entering or leaving the project site. Facilities Planning and Services shall monitor compliance.

4. Each project construction site shall be adequately barricaded with temporary fencing to secure construction equipment, minimize trespassing, vandalism, short-cut attractions,

and reduce hazards during demolition and construction. Facilities Planning and Services shall monitor compliance.

5. The college shall consult with the effected cities on a truck haul route plan for all major earth hauling activities with more than eighty (80) trucks per day shall be established. Hauling of earth materials shall only occur between 9:00 AM and 2:00 PM Monday through Friday and between 8:00 AM and 5:00 PM on Saturdays. Light duty trucks with a weight of no more than 8,500 pounds are exempted from this restriction. Facilities Planning and Services shall ensure compliance.

6. Each construction site shall be adequately barricaded with temporary fencing to secure construction equipment, minimize trespassing, vandalism, short-cut attractions, and reduce hazards during demolition and construction. Facilities Planning and Services shall monitor compliance.

<u>Transportation Demand Management Mitigation Measures</u>

1. Schedule/fee information for the Los Angeles County Metropolitan Transportation Authority (MTA), Torrance Transit, Municipal Area Express (MAX), and the Gardena Municipal Bus Line shall be made available for students for each term. The college shall offer students discount bus passes for transit lines which offer them. Facilities Planning and Services shall monitor compliance.

II. Project Description

This section discusses the project's location and proposed development. Figure 1 shows the existing campus map and Figure 2 illustrates the proposed campus map.

A. <u>Location</u>

The project site is bounded by Manhattan Beach Boulevard to the north, Crenshaw Boulevard to the east, and Redondo Beach Boulevard to the south.

B. <u>Proposed Development</u>

El Camino College is proposed to increase its enrollment from 16,400 FTEs in Year 2011-2012 to 20,025 FTEs in Year 2020 (increase of 3,625 FTEs). As part of the school expansion, a new signalized intersection will be created on Manhattan Beach Boulevard to serve the campus.

Figure 1
Existing Campus Map

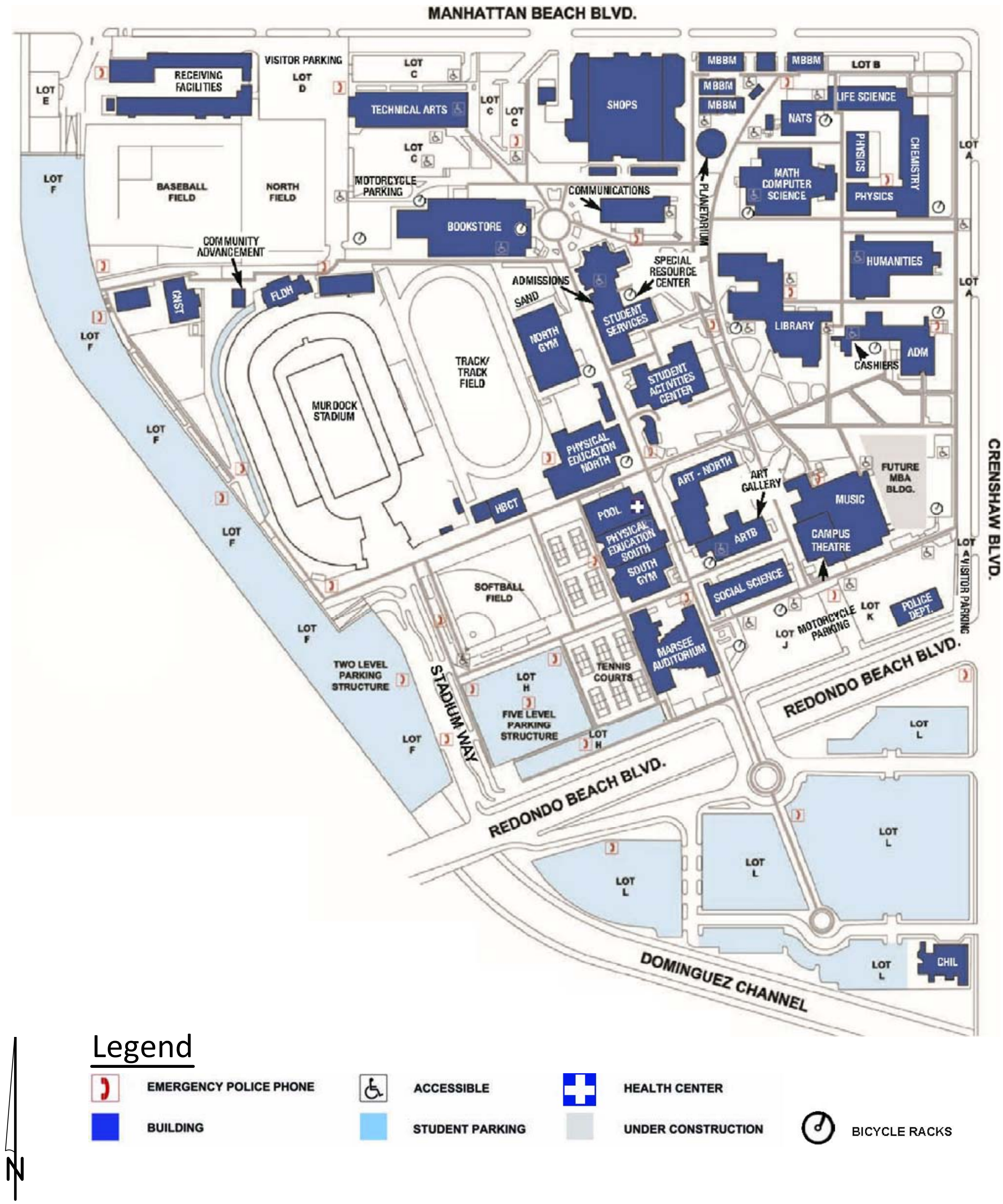

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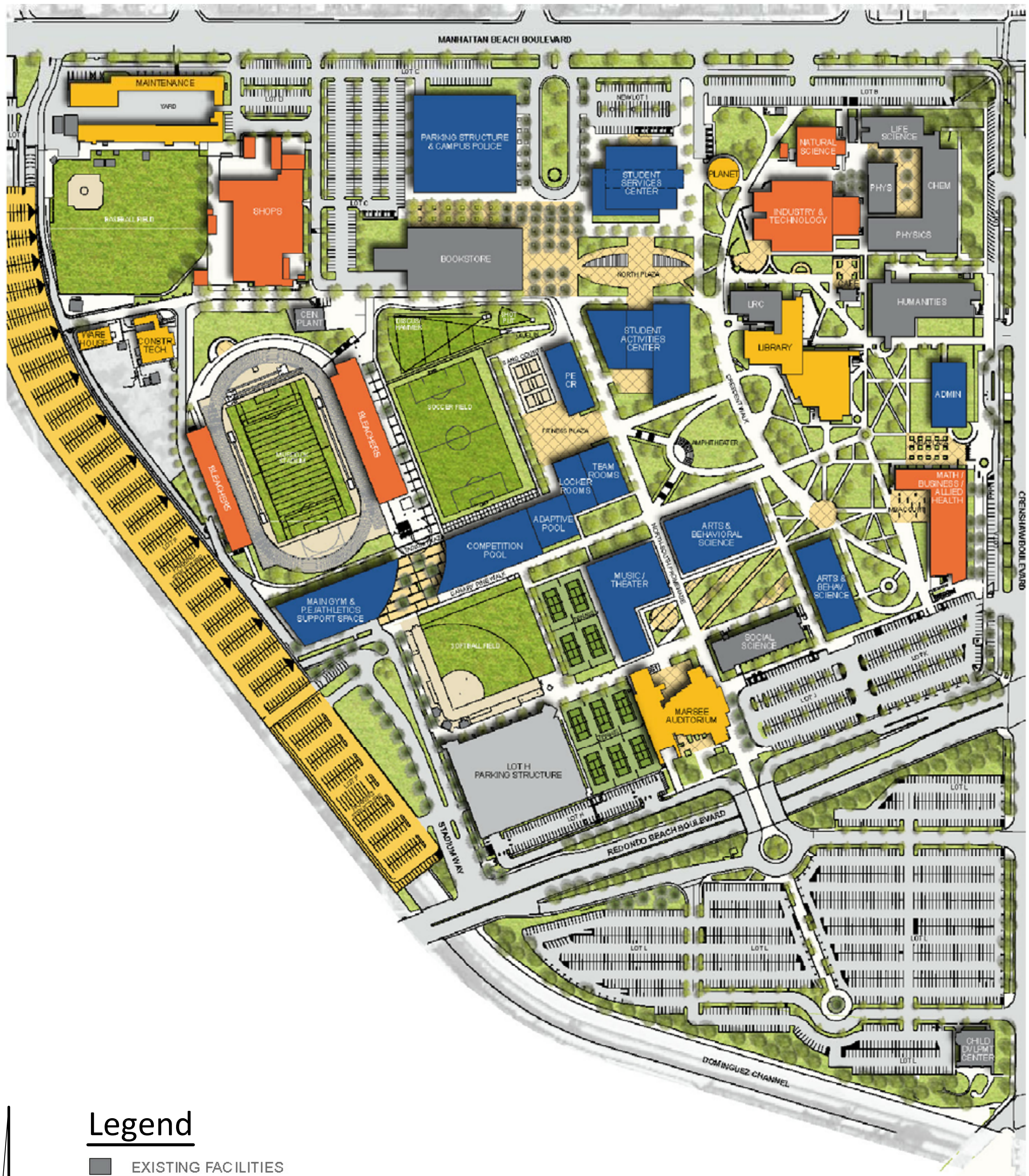
Figure 2
Future Campus Map



Legend

- EXISTING FACILITIES
- IN DESIGN / CONSTRUCTION
- PROPOSED NEW CONSTRUCTION
- PROPOSED RENOVATIONS

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III. Existing Conditions

The traffic conditions as they exist today are discussed below.

A. Existing Parking Spaces

The El Camino College parking areas were separated by their fourteen (14) designated parking areas (see Table 1).

Currently, a total of 4,917 parking spaces are provided on the El Camino College campus. These parking spaces are divided into 790 staff parking spaces, 3,729 student parking spaces, 3 box office parking spaces, 1 bus only parking space, 9 child development center parking spaces, 2 copy center parking spaces, 77 handicap parking space, 8 police services parking spaces, 5 police vehicle parking spaces, 56 reserved parking spaces, 20 staff carpool parking spaces, 7 van parking spaces, and 45 visitor parking spaces.

On-street parking for the El Camino College campus currently is permitted on Manhattan Beach Boulevard. A total of 165 on-street parking spaces are available adjacent to the campus on Manhattan Beach Boulevard.

B. Parking Survey

To quantify the existing parking demand for the El Camino College, a parking survey was conducted for the first month of the fall semester on a Wednesday (September 19, 2012). Parking counts were conducted from 9:00 AM to 9:00 PM.

The existing parking survey is shown in Tables 2. As indicated in Table 2, the maximum number of occupied parking spaces at El Camino College during the first month of classes is 4,634 parked vehicles from 11:00 AM to 12:00 Noon. The total parking demand is also shown graphically (see Figure 3).

Table 1

Existing Number of Parking Spaces

	Parking Area														
													Manhattan Beach Boulevard		
Type of Parking Spaces	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F[1] Upper	Lot F[2] Lower	Lot G[3]	Lot H	Lot J[4]	Lot K[5]	Lot L[6]	Northside	Southside	Total
Box Office	-	-	-	-	-	-	-	-	-	3	-	-	-	-	3
Bus Only	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
Child Development Center	-	-	-	-	-	-	-	-	-	-	-	9	-	-	9
Copy Center	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2
Handicap	8	1	18	2	-	-	-	1	26	13	6	2	-	-	77
Police Services	-	-	-	-	-	-	-	-	-	-	8	-	-	-	8
Police Vehicle	-	-	-	-	-	-	-	-	-	-	5	-	-	-	5
Reserved	23	4	18	-	-	-	-	2	2	3	4	-	-	-	56
Staff	9	43	192	137	32	-	-	12	105	111	112	37	-	-	790
Staff Carpool	4	-	5	-	-	-	-	-	7	4		-	-	-	20
Student	-	-	-	-	-	704	747	69	1,009	-	-	1,200	-	-	3,729
Van	-	-	-	7	-	-	-	-	-	-	-	-	-	-	7
Visitor	-	-	-	36	-	-	-	-	-	-	9	-	-	-	45
Subtotal	44	48	233	182	32	704	747	86	1,149	134	144	1,249	-	-	4,752
On-Street	-	-	-	-	-	-	-	-	-	-	-	-	97	68	165
Total	44	48	233	182	32	704	747	86	1,149	134	144	1,249	97	68	4,917

[1] Parking Lot F (Upper Level) is coned off in areas.

[2] Parking Lot F (Lower Level) is coned off in areas.

[3] Part of Parking Lot G is closed off for construction.

[4] Some parking spaces are used to store construction equipment and motorcycle parking in Parking Lot J.

[5] Part of Parking Lot K is closed off for construction. Some parking spaces are used to store contruction equipment.

[6] Some parking spaces are used to store construction equipment and landscaping material in Parking Lot L.

Table 2

Parking Survey Totals[1]

Time Period	Number of Parked Vehicles														
	Parking Area														Total
	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F[2] Upper	Lot F[3] Lower	Lot G[4]	Lot H	Lot J[5]	Lot K[6]	Lot L[7]	Manhattan Beach Boulevard Northside	Manhattan Beach Boulevard Southside	
9:00 AM to 10:00 AM	25	46	222	130	20	554	661	70	995	104	140	1,140	72	45	4,224
10:00 AM to 11:00 AM	28	47	230	151	18	640	746	76	1,096	125	141	1,216	70	47	4,631
11:00 AM to 12:00 NOON	31	47	222	159	21	639	742	68	1,106	122	137	1,208	81	51	4,634[8]
12:00 NOON to 1:00 PM	25	47	212	119	20	560	720	66	1,086	119	140	1,142	61	40	4,357
1:00 PM to 2:00 PM	22	42	199	111	23	422	621	61	977	124	139	997	84	52	3,874
2:00 PM to 3:00 PM	20	46	200	97	23	380	525	52	896	109	129	913	86	54	3,530
3:00 PM to 4:00 PM	19	43	203	80	16	190	413	50	726	99	123	688	69	51	2,770
4:00 PM to 5:00 PM	17	43	194	68	2	145	304	58	511	74	101	472	67	53	2,109
5:00 PM to 6:00 PM	14	45	185	60	1	106	283	63	447	60	81	409	74	55	1,883
6:00 PM to 7:00 PM	18	45	109	38	0	164	310	49	719	77	91	596	74	52	2,342
7:00 PM to 8:00 PM	20	45	50	24	0	154	285	40	711	123	136	692	73	53	2,406
8:00 PM to 9:00 PM	17	42	41	19	0	119	213	12	620	126	137	598	72	49	2,065

[1] Wednesday (September 19, 2012).

[2] Parking Lot F (Upper Level) is coned off in areas.

[3] Parking Lot F (Lower Level) is coned off in areas.

[4] Part of Parking Lot G is closed off for construction.

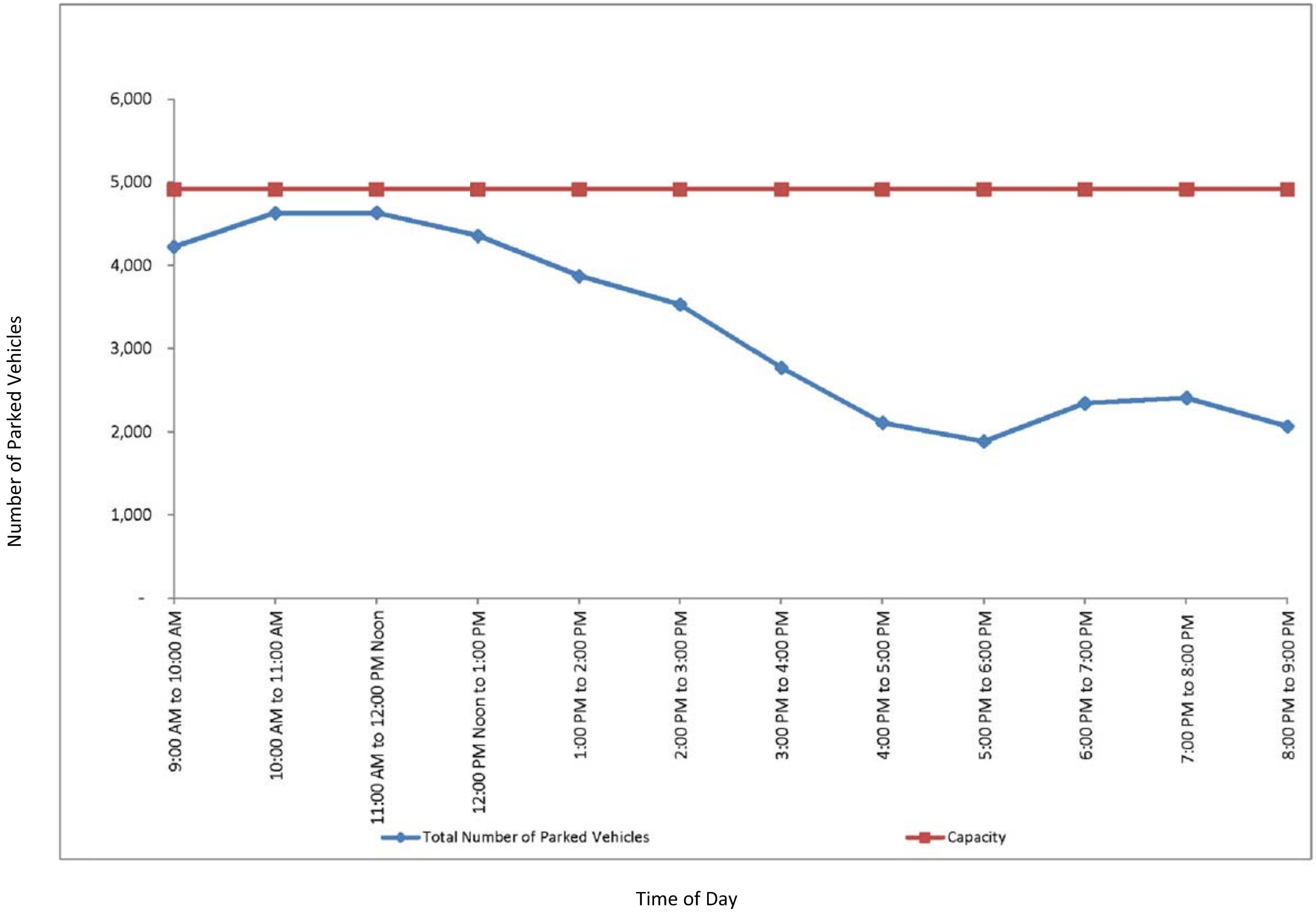
[5] Some parking spaces are used to store construction equipment and motorcycle parking in Parking Lot J.

[6] Part of Parking Lot K is closed off for construction. Some parking spaces are used to store contruction equipment.

[7] Some parking spaces are used to store construction equipment and landscaping material in Parking Lot L.

[8] Maximum observed number of parked vehicles.

Figure 3
Total Parking Demand by Time of Day



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IV. Parking Lot A

In this section, the Parking Lot A within the El Camino College campus has been reviewed. Figures 4 and 5 depict the existing and future parking area configurations for Parking Lot A.

A. Existing Conditions

Parking Lot A is located on the eastern portion of the campus. Parking Lot A has Crenshaw Boulevard on the east and the Chemistry/ Humanities/Administration/Business buildings on the west. Figure 4 depicts the existing Parking Lot A layout and Figure 5 illustrates the future Parking Lot A layout.

Parking Lot A currently provides a total of 44 parking spaces. These parking spaces are divided into 8 handicap parking spaces, 23 reserved parking spaces, 9 staff parking spaces, and 4 staff carpool parking spaces.

The angle parking spaces are accessed in the southbound direction and are served by a single north-south drive aisle that serves as the campus internal loop road.

B. Existing Parking Demand

The existing parking demand for Parking Lot A is shown in Table 3 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot A (see Figure 6).

As shown in Table 3, the maximum number of occupied parking spaces in Parking Lot A is 31 parked vehicles (70% parking lot occupancy) from 11:00 AM to 12:00 Noon. The range of parked vehicles was 14 parked vehicles (32% parking lot occupancy) to 31 parked vehicles (70% parking lot occupancy) in Parking Lot A.

C. Access Locations

The access to Parking Lot A is currently provided via three locations onto Crenshaw Boulevard. The northern access to Crenshaw Boulevard is STOP sign controlled and provides full access. The central access to Crenshaw Boulevard is traffic signal controlled and also provides full access. The southern access to Crenshaw Boulevard is STOP sign controlled and is restricted to right turns in/out only. The southern access to Crenshaw Boulevard is shared with Parking Lot K to the south.

The campus internal loop road provides additional access to Parking Lot B to the north and Parking Lot K to the south.

D. Recommendations

The following recommendations are suggested for Parking Lot A:

- Redesign the signalized entry to Crenshaw Boulevard to provide more stacking distance for vehicles entering and exiting El Camino College.

- Close the southern access from Parking Lot A/Parking Lot K to Crenshaw Boulevard.

Table 3

Parking Survey Summary for Parking Lot A

	Wednesday (September 19, 2012)		
Time Period	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	25	44	57%
10:00 AM to 11:00 AM	28	44	64%
11:00 AM to 12:00 NOON	31	44	70%
12:00 NOON to 1:00 PM	25	44	57%
1:00 PM to 2:00 PM	22	44	50%
2:00 PM to 3:00 PM	20	44	45%
3:00 PM to 4:00 PM	19	44	43%
4:00 PM to 5:00 PM	17	44	39%
5:00 PM to 6:00 PM	14	44	32%
6:00 PM to 7:00 PM	18	44	41%
7:00 PM to 8:00 PM	20	44	45%
8:00 PM to 9:00 PM	17	44	39%
Maximum	31		70%
Minimum	14		32%
Average	21		48%

Figure 4
Existing Parking Lot A

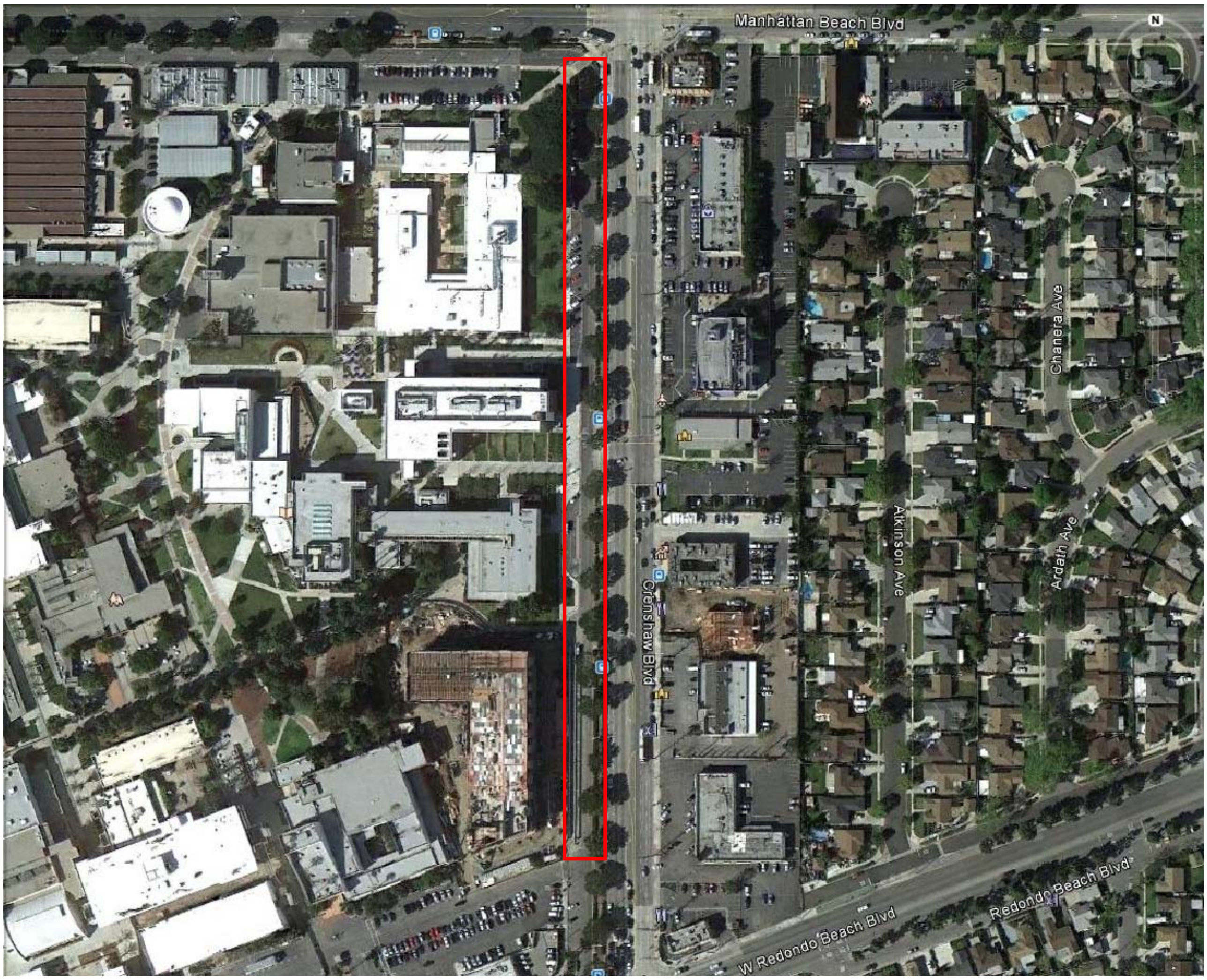

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Figure 5
Future Parking Lot A

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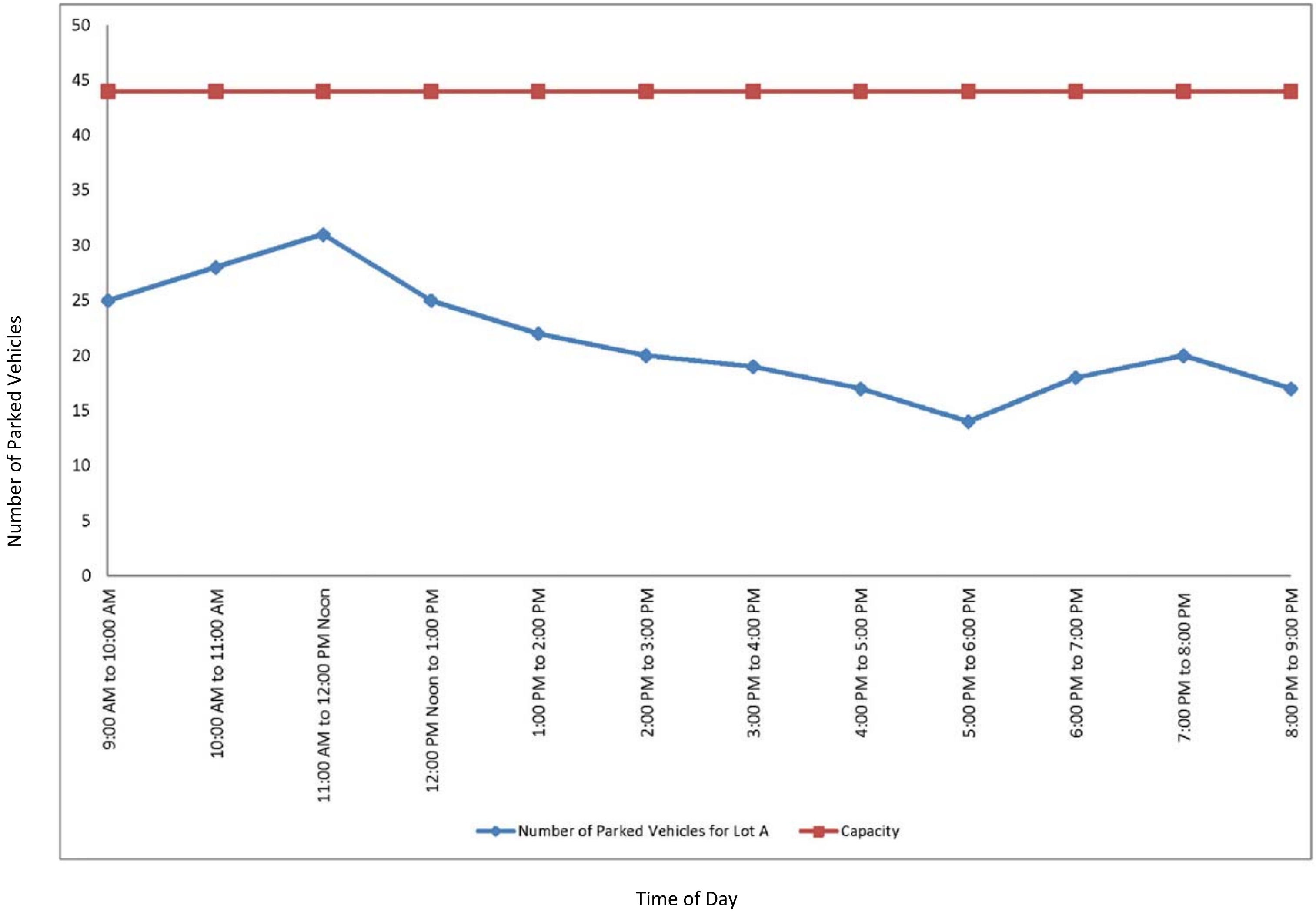
Figure 6
Parking Lot A Parking Demand by Time of Day



V. Parking Lot B

In this section, the Parking Lot B within the El Camino College campus has been reviewed. Figures 7 and 8 depict the existing and future parking area configurations for Parking Lot B.

A. Existing Conditions

Parking Lot B is located in the northeast portion of the campus. Parking Lot B has Manhattan Beach Boulevard on the north and the Life Science building on the south. Figure 7 depicts the existing Parking Lot B layout and Figure 8 illustrates the future Parking Lot B layout.

Parking Lot B currently provides a total of 48 parking spaces. These parking spaces are divided into 1 handicap parking spaces, 4 reserved parking spaces, and 43 staff parking spaces.

The 90 degree parking spaces are accessed in the east-west drive aisle.

B. Existing Parking Demand

The existing parking demand for Parking Lot B is shown in Table 4 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot B (see Figure 9).

As shown in Table 4, the maximum number of occupied parking spaces in Parking Lot B is 47 parked vehicles (98% parking lot occupancy) from 10:00 AM to 11:00 AM, 11:00 AM to 12:00 Noon, and 12:00 Noon to 1:00 PM. The range of parked vehicles was 42 parked vehicles (88% parking lot occupancy) to 47 parked vehicles (98% parking lot occupancy) in Parking Lot B.

C. Access Locations

The access to Parking Lot B is currently provided via two locations onto Manhattan Beach Boulevard. The access to Manhattan Beach Boulevard is STOP sign controlled and provide right turns in/out and left turns in only access. Left turns out are restricted.

The campus internal loop road provides additional access to Parking Lot C to the west and Parking Lot A to the south.

D. Recommendations

The following recommendations are suggested for Parking Lot B:

- Parking Lot B is proposed to expand its parking to provide approximately 64 parking spaces. Consideration should be given to provide handicap and staff parking within Parking Lot B.

Table 4

Parking Survey Summary for Parking Lot B

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	46	48	96%
10:00 AM to 11:00 AM	47	48	98%
11:00 AM to 12:00 NOON	47	48	98%
12:00 NOON to 1:00 PM	47	48	98%
1:00 PM to 2:00 PM	42	48	88%
2:00 PM to 3:00 PM	46	48	96%
3:00 PM to 4:00 PM	43	48	90%
4:00 PM to 5:00 PM	43	48	90%
5:00 PM to 6:00 PM	45	48	94%
6:00 PM to 7:00 PM	45	48	94%
7:00 PM to 8:00 PM	45	48	94%
8:00 PM to 9:00 PM	42	48	88%
Maximum	47		98%
Minimum	42		88%
Average	45		93%

Figure 7
Existing Parking Lot B

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Figure 8
Future Parking Lot B

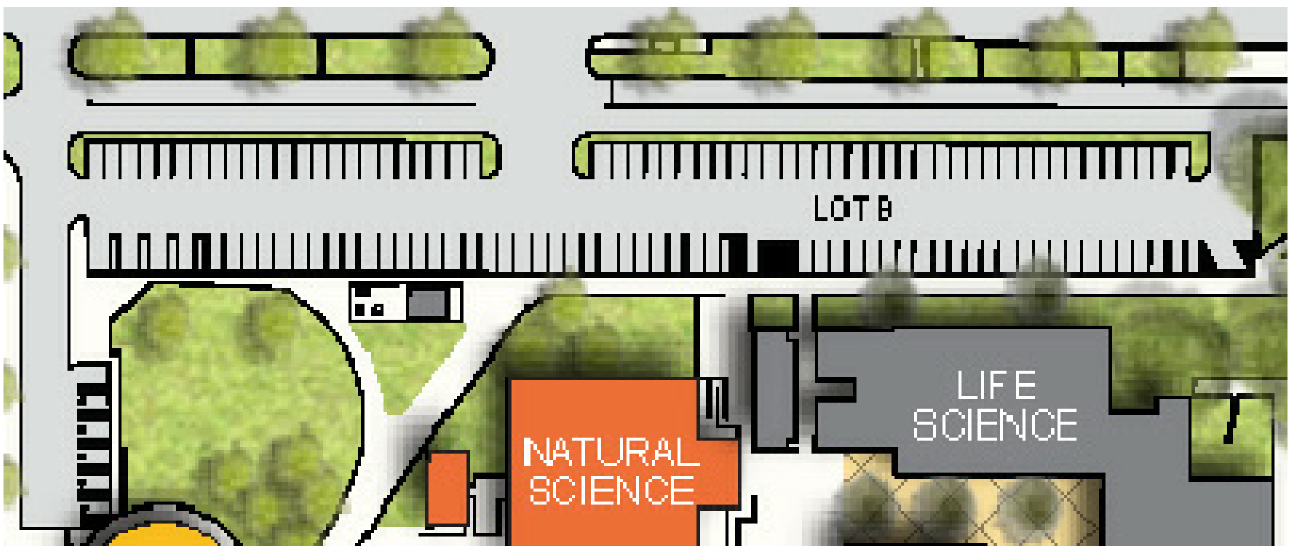

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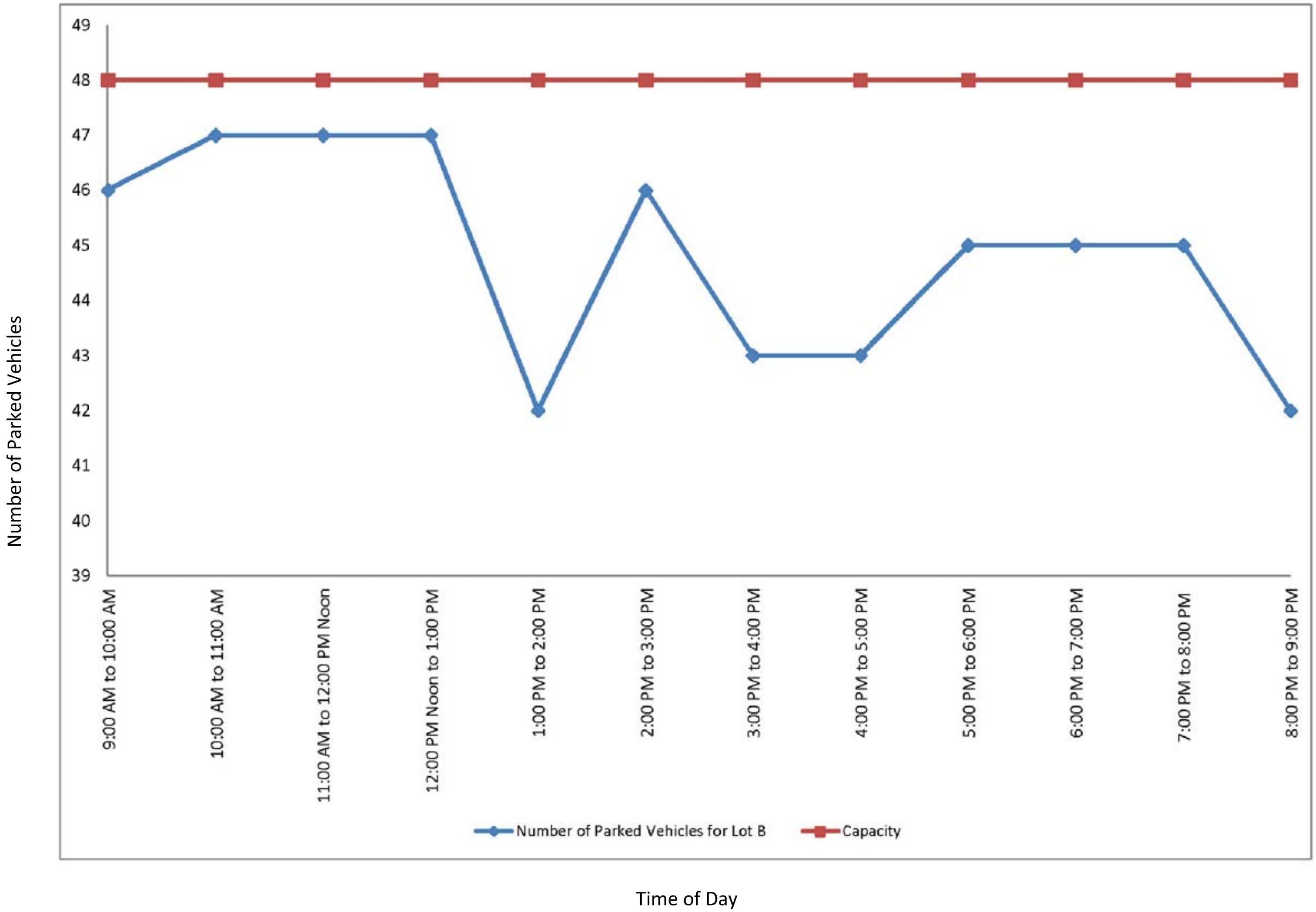
Figure 9
Parking Lot B Parking Demand by Time of Day



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VI. Parking Lot C

In this section, the Parking Lot C within the El Camino College campus has been reviewed. Figures 10 and 11 depict the existing and future parking area configurations for Parking Lot C North.

A. Existing Conditions

Parking Lot C is located in the northern portion of the campus. Parking Lot C has Manhattan Beach Boulevard on the north, the Cafeteria/Bookstore building on the south, Parking Lot D on the west, and the Shops building on the east. Figure 10 depicts the existing Parking Lot C layout and Figure 11 illustrates the future Parking Lot C layout.

Parking Lot C currently provides a total of 233 parking spaces. These parking spaces are divided into 18 handicap parking spaces, 18 reserved parking spaces, 192 staff parking spaces, and 5 staff carpool parking spaces.

Parking Lot C is currently designed with 90 degree parking.

B. Existing Parking Demand

The existing parking demand for Parking Lot C is shown in Table 5 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot C (see Figure 12).

As shown in Table 5, the maximum number of occupied parking spaces in Parking Lot C is 230 parked vehicles (99% parking lot occupancy) from 10:00 AM to 11:00 AM. The range of parked vehicles was 41 parked vehicles (18% parking lot occupancy) to 230 parked vehicles (99% parking lot occupancy) in Parking Lot C.

C. Access Locations

The access to Parking Lot C is currently provided via Manhattan Beach Boulevard. The access to Manhattan Beach Boulevard is STOP sign controlled and provides right turns in/out and left turns in only access. Left turns out are restricted. The access to Manhattan Beach Boulevard is shared with Parking Lot D to the west and Parking Lot G to the south.

The campus internal loop road provides additional access to Parking Lot D to the west and Parking Lot B to the east.

D. Recommendations

The following recommendations are suggested for Parking Lot C:

- Additional parking is anticipated to be provided with the Parking Lot C parking structure and redesign.

- Close the easterly secondary access to Manhattan Beach Boulevard.

- Realign the skewed main access to Manhattan Beach Boulevard. The main access should be designed to provide additional stacking distance for vehicles entering and exiting El Camino College.

Table 5

Parking Survey Summary for Parking Lot C

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	222	233	95%
10:00 AM to 11:00 AM	230	233	99%
11:00 AM to 12:00 NOON	222	233	95%
12:00 NOON to 1:00 PM	212	233	91%
1:00 PM to 2:00 PM	199	233	85%
2:00 PM to 3:00 PM	200	233	86%
3:00 PM to 4:00 PM	203	233	87%
4:00 PM to 5:00 PM	194	233	83%
5:00 PM to 6:00 PM	185	233	79%
6:00 PM to 7:00 PM	109	233	47%
7:00 PM to 8:00 PM	50	233	21%
8:00 PM to 9:00 PM	41	233	18%
Maximum	230		99%
Minimum	41		18%
Average	172		74%

Figure 10
Existing Parking Lot C

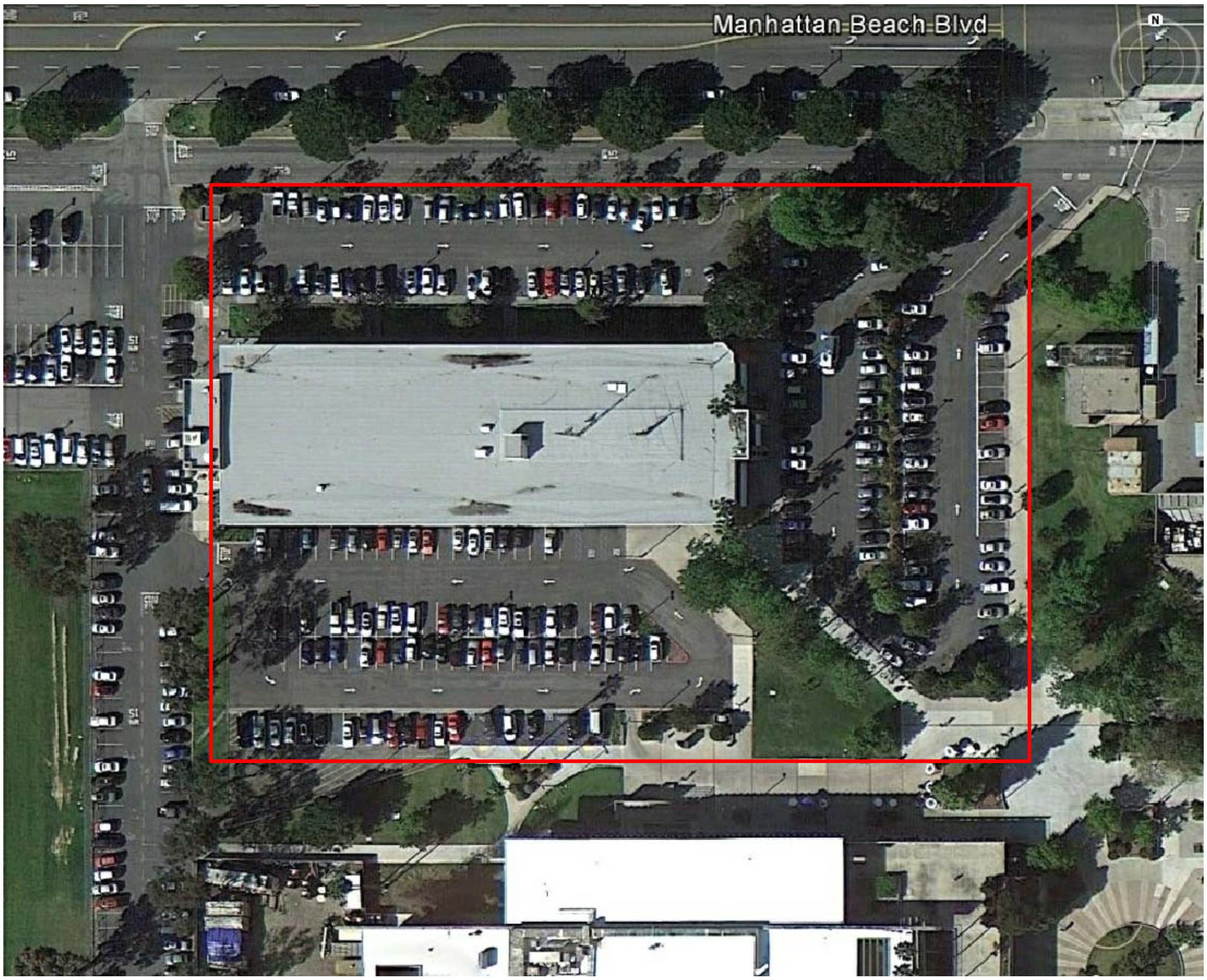

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Figure 11
Future Parking Lot C

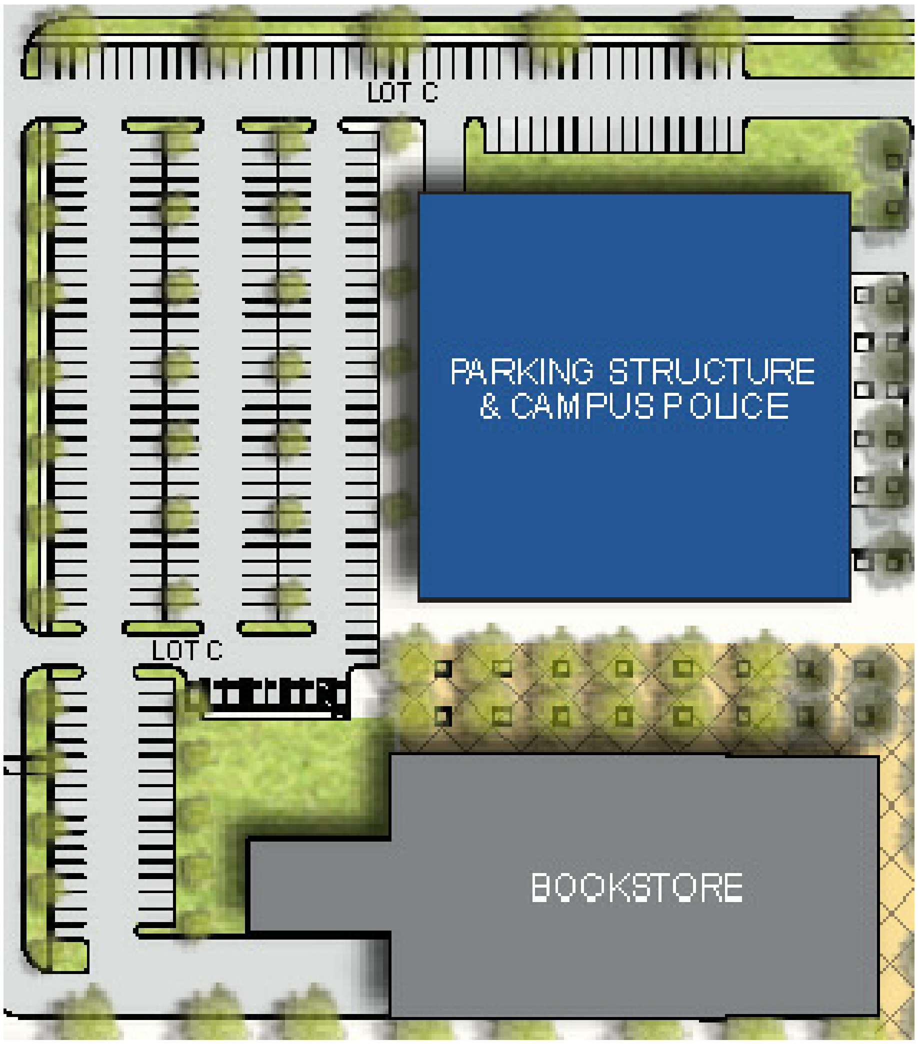

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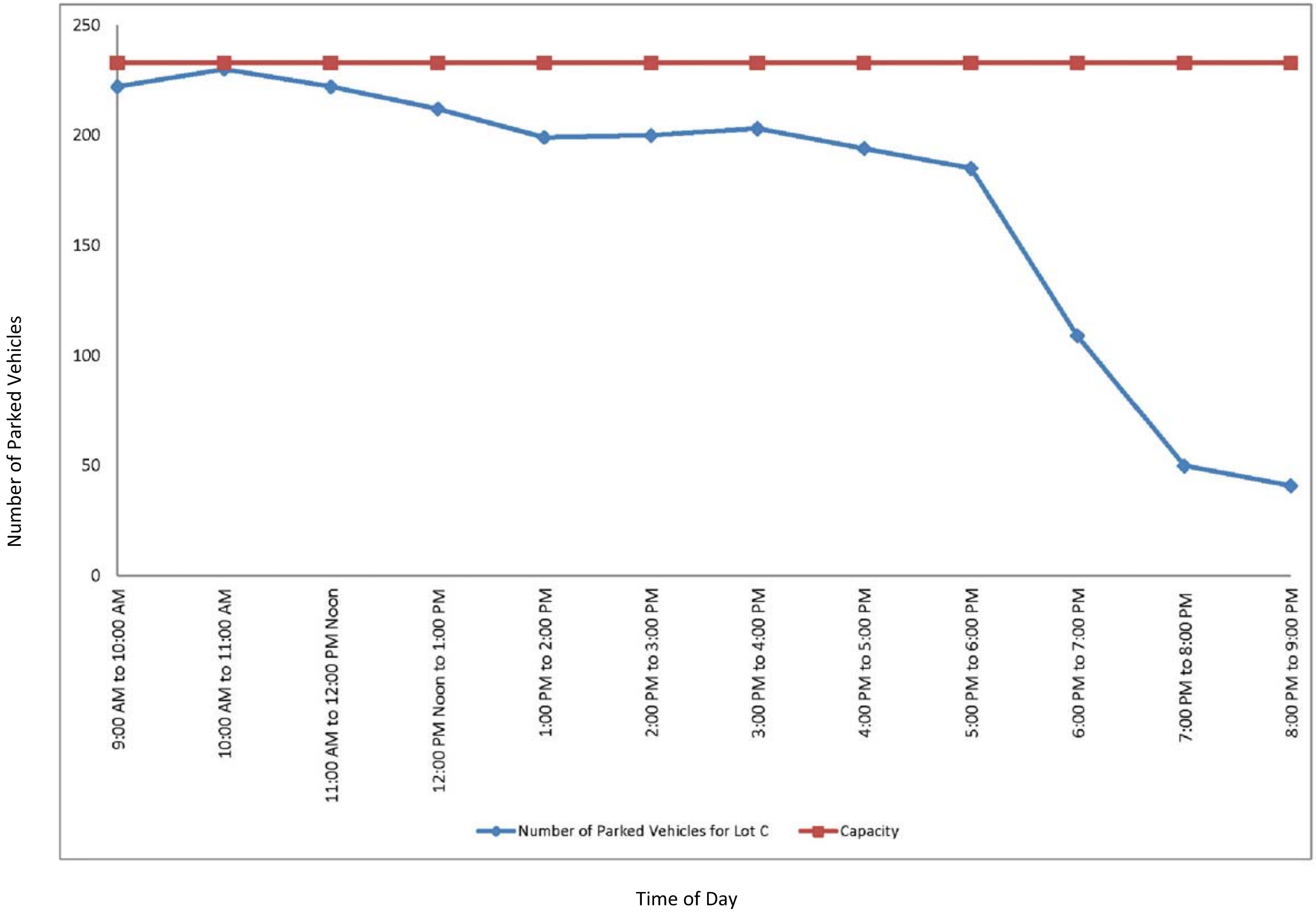
Figure 12
Parking Lot C Parking Demand by Time of Day



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VII. Parking Lot D

In this section, the Parking Lot D within the El Camino College campus has been reviewed. Figures 13 and 14 depict the existing and future parking area configurations for Parking Lot D.

A. Existing Conditions

Parking Lot D is located in the northwest portion of the campus. Parking Lot D has Parking Lot G on the south, the Maintenance building on the west, and the Technical Arts building on the east. Figure 13 depicts the existing Parking Lot D layout and Figure 14 illustrates the future Parking Lot D layout.

Parking Lot D currently provides a total of 182 parking spaces. These parking spaces are divided into 2 handicap parking spaces, 137 staff parking spaces, 7 van parking spaces, and 36 visitor parking spaces.

Parking Lot D is currently designed with 90 degree parking.

B. Existing Parking Demand

The existing parking demand for Parking Lot D is shown in Table 6 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot D (see Figure 15).

As shown in Table 6, the maximum number of occupied parking spaces in Parking Lot D is 159 parked vehicles (87% parking lot occupancy) from 11:00 AM to 12:00 Noon. The range of parked vehicles was 19 parked vehicles (10% parking lot occupancy) to 159 parked vehicles (87% parking lot occupancy) in Parking Lot D.

C. Access Locations

The access to Parking Lot D is currently provided via two locations onto Manhattan Beach Boulevard. The western access to Manhattan Beach Boulevard is STOP sign controlled and is restricted to right turns only. The eastern access to Manhattan Beach Boulevard is also STOP sign controlled and provides right turns in/out and left turns in only access. Left turns out are restricted. The eastern access to Manhattan Beach Boulevard is shared with Parking Lot C to the east and Parking Lot G to the south.

The campus internal loop road provides additional access to Parking Lot E to the west and Parking Lot C to the east.

D. Recommendations

The following recommendations are suggested for Parking Lot D:

- Parking Lot D is proposed to be reconfigured to provide 108 parking spaces due to the new Parking Lot C parking structure. Consideration should be given to provide handicap and staff parking within Parking Lot D.

Table 6

Parking Survey Summary for Parking Lot D

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	130	182	71%
10:00 AM to 11:00 AM	151	182	83%
11:00 AM to 12:00 NOON	159	182	87%
12:00 NOON to 1:00 PM	119	182	65%
1:00 PM to 2:00 PM	111	182	61%
2:00 PM to 3:00 PM	97	182	53%
3:00 PM to 4:00 PM	80	182	44%
4:00 PM to 5:00 PM	68	182	37%
5:00 PM to 6:00 PM	60	182	33%
6:00 PM to 7:00 PM	38	182	21%
7:00 PM to 8:00 PM	24	182	13%
8:00 PM to 9:00 PM	19	182	10%
Maximum	159		87%
Minimum	19		10%
Average	88		48%

Figure 13
Existing Parking Lot D

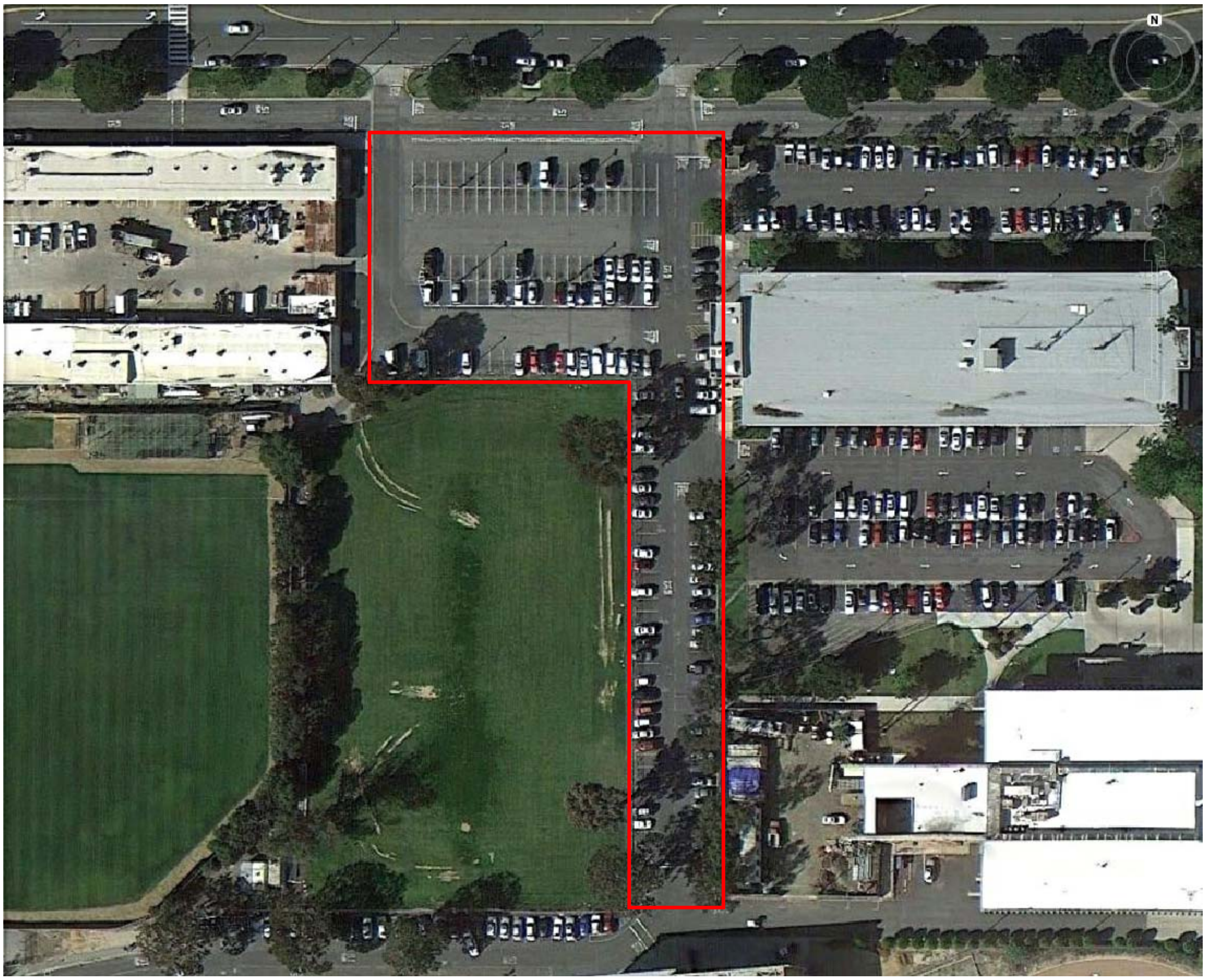

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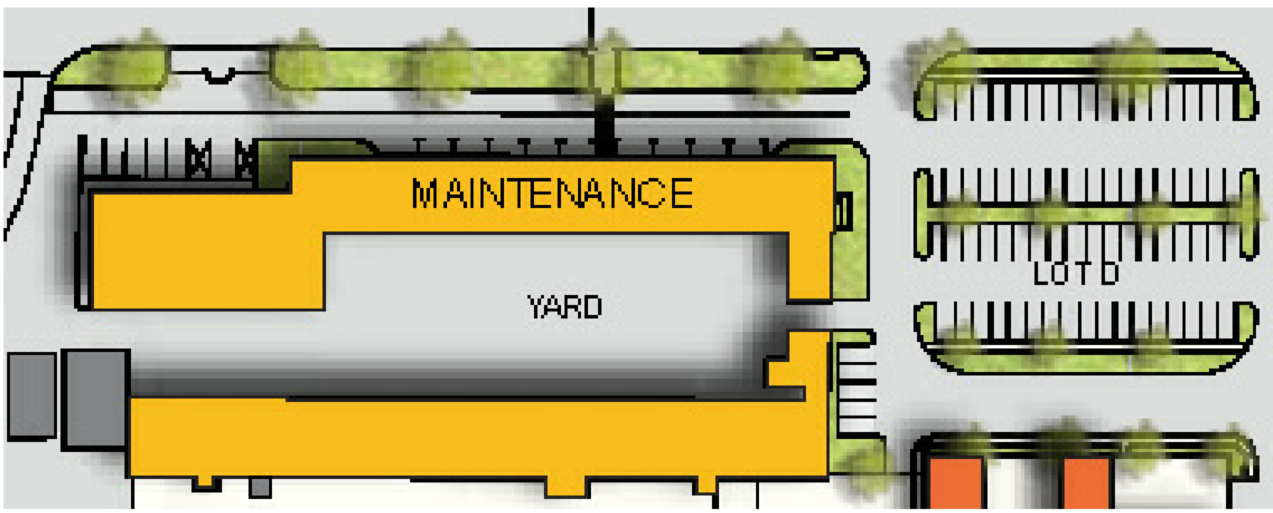
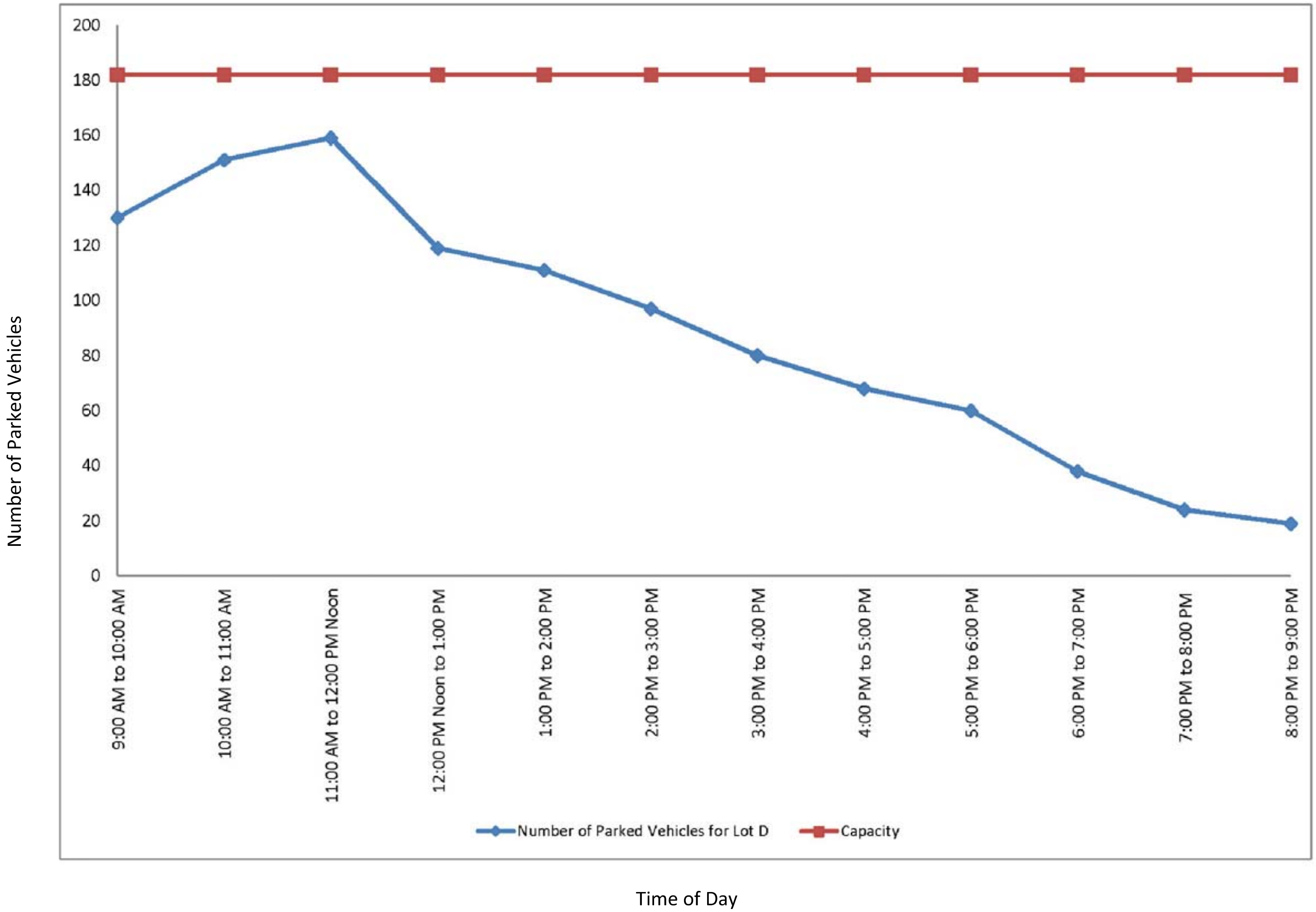
Figure 14
Future Parking Lot D



4897a/14

Figure 15
Parking Lot D Parking Demand by Time of Day



4897a/15

VIII. Parking Lot E

In this section, the Parking Lot E within the El Camino College campus has been reviewed. Figures 16 and 17 depict the existing and future parking area configurations for Parking Lot E.

A. Existing Conditions

Parking Lot E is located in the northwest corner of the campus. Parking Lot E has the Maintenance building on the east. Figure 16 depicts the existing Parking Lot E layout and Figure 17 illustrates the future Parking Lot E layout. No changes are anticipated between the two plans.

Parking Lot E currently provides a total of 32 parking spaces. These parking spaces are for staff use only.

Parking Lot E is currently designed with 90 degree parking and two east-west drive aisles.

B. Existing Parking Demand

The existing parking demand for Parking Lot E is shown in Table 7 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot E (see Figure 18).

As shown in Table 7, the maximum number of occupied parking spaces in Parking Lot E is 23 parked vehicles (72% parking lot occupancy) from 1:00 PM to 2:00 PM and 2:00 PM to 3:00 PM. The range of parked vehicles was 0 parked vehicles (0% parking lot occupancy) to 23 parked vehicles (72% parking lot occupancy) in Parking Lot E.

C. Access Locations

The access to Parking Lot E is currently provided via two locations onto Manhattan Beach Boulevard. The western primary access to Manhattan Beach Boulevard is STOP sign controlled and provides right turns in/out and left turns in only access. Left turns out are restricted. The eastern secondary access to Manhattan Beach Boulevard is also STOP sign controlled and is restricted to right turns only. This eastern secondary access mainly provides loading dock access for the Maintenance building located adjacent to Parking Lot E.

The campus internal loop road provides additional access to Parking Lot D to the east. The northern entrance to the existing Parking Lot F parking structure is located directly south of Parking Lot E.

D. Recommendations

The following recommendations are suggested for Parking Lot E:

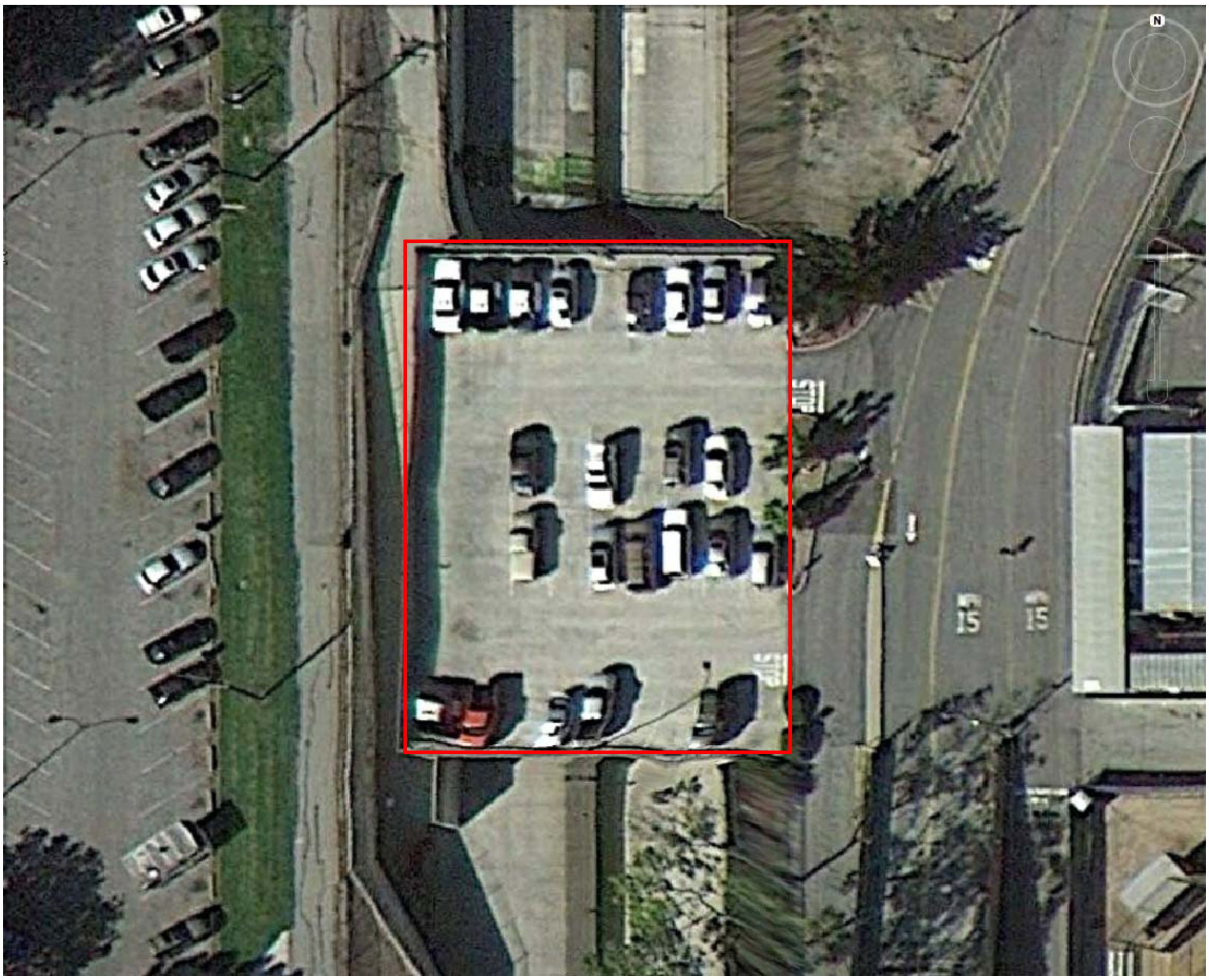
- Close the easterly secondary access to Manhattan Beach Boulevard.

Table 7

Parking Survey Summary for Parking Lot E

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	20	32	63%
10:00 AM to 11:00 AM	18	32	56%
11:00 AM to 12:00 NOON	21	32	66%
12:00 NOON to 1:00 PM	20	32	63%
1:00 PM to 2:00 PM	23	32	72%
2:00 PM to 3:00 PM	23	32	72%
3:00 PM to 4:00 PM	16	32	50%
4:00 PM to 5:00 PM	2	32	6%
5:00 PM to 6:00 PM	1	32	3%
6:00 PM to 7:00 PM	0	32	0%
7:00 PM to 8:00 PM	0	32	0%
8:00 PM to 9:00 PM	0	32	0%
Maximum	23		72%
Minimum	-		0%
Average	12		38%

Figure 16
Existing Parking Lot E



4897a/16

Figure 17
Future Parking Lot E

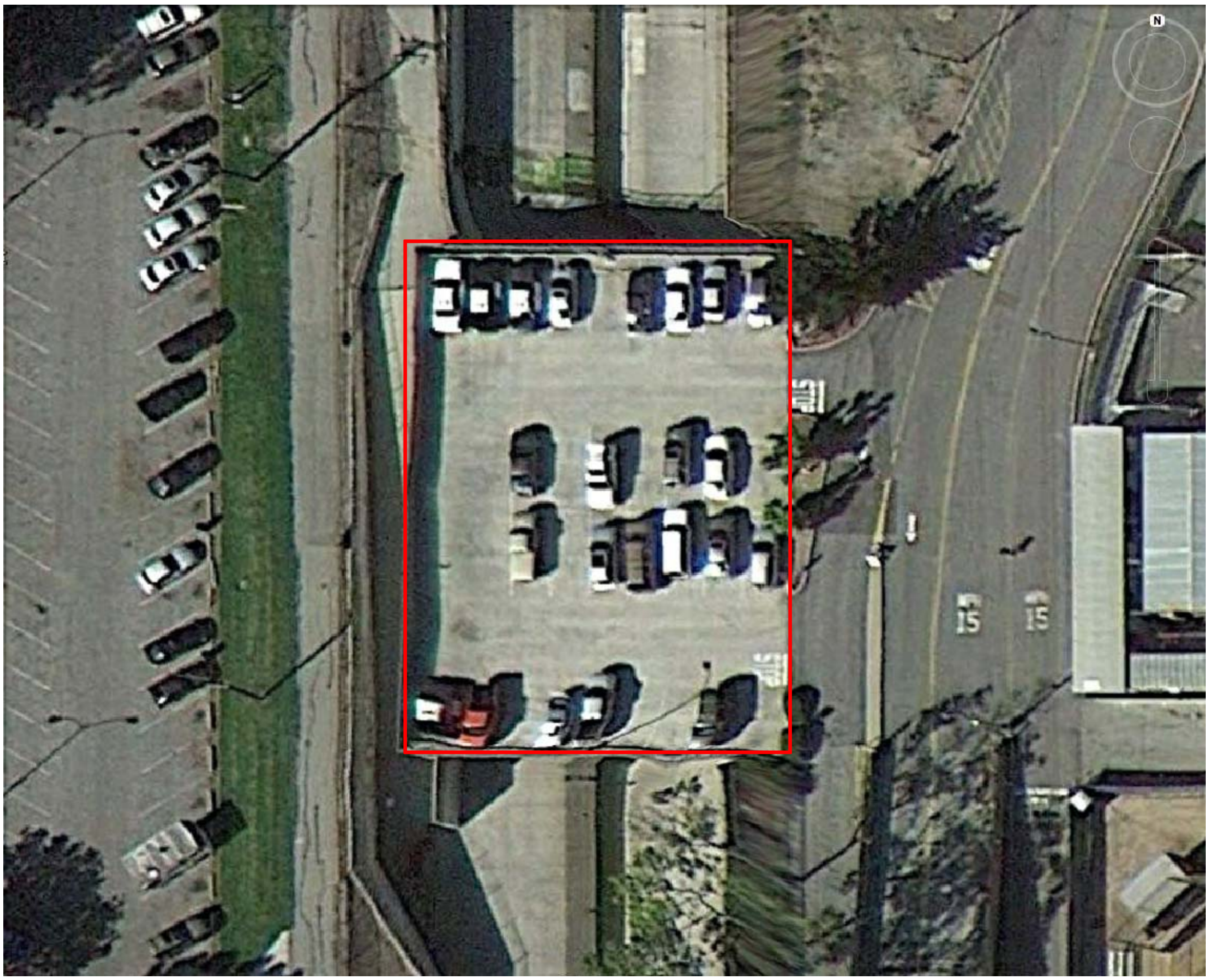
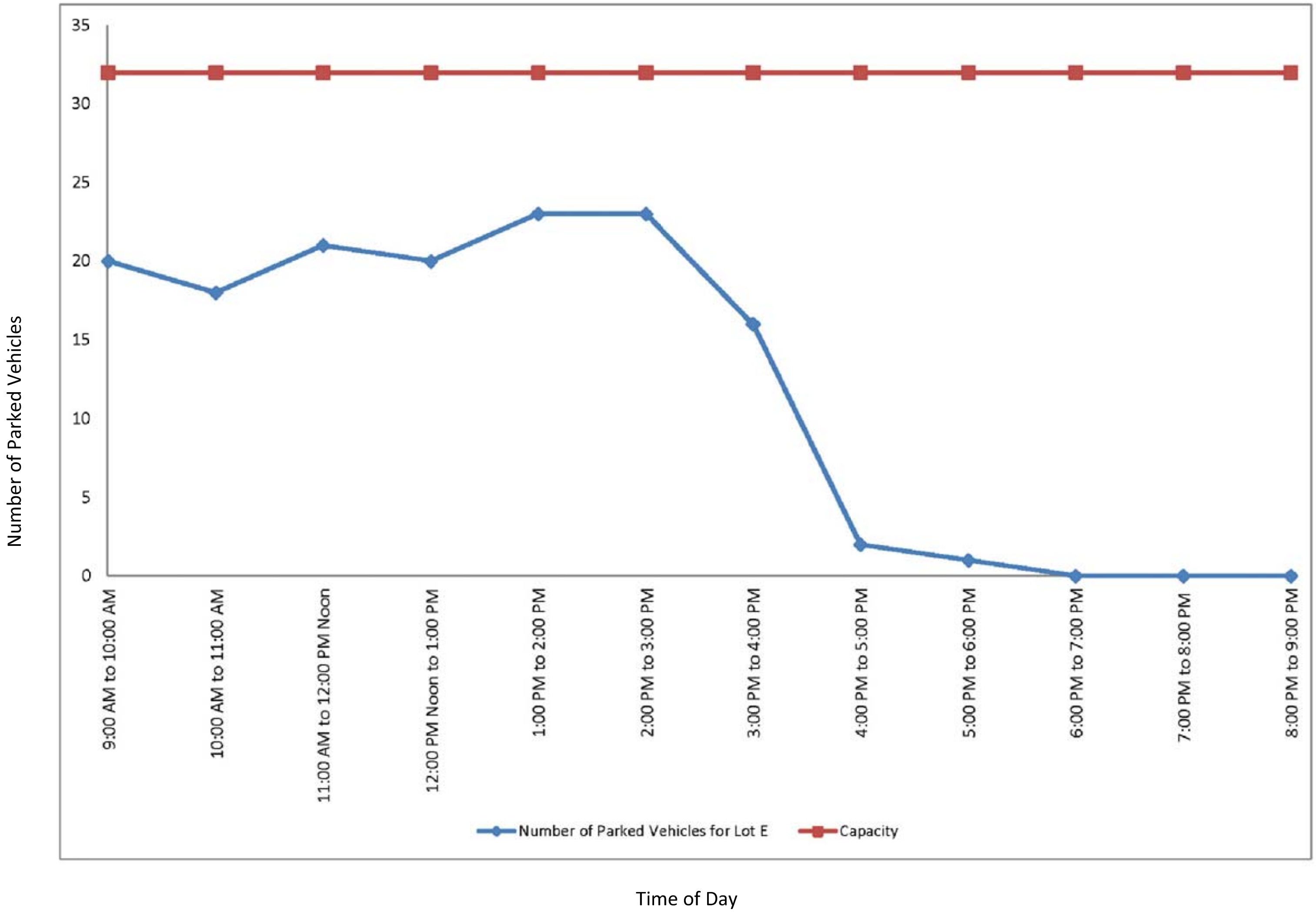


Figure 18
Parking Lot E Parking Demand by Time of Day



4897a/18

IX. Parking Lot F Upper

In this section, the Parking Lot F Upper within the El Camino College campus has been reviewed. Figures 19 and 20 depict the existing and future parking area configurations for Parking Lot F Upper.

A. Existing Conditions

Parking Lot F Upper is located parallel to the west edge of the campus. Figure 13 depicts the existing Parking Lot F Upper layout and Figure 14 illustrates the future Parking Lot F Upper layout.

Parking Lot F Upper currently provides a total of 704 parking spaces. These parking spaces are for student use only. Parking Lot F Upper is currently coned off in areas.

The Parking Lot F Upper is laid out with 90 degree parking and east-west drive aisles. The parking access roadway is located on the west side of the parking structure and provides access to the parking structure north entry and southeast entry.

B. Existing Parking Demand

The existing parking demand for Parking Lot F Upper is shown in Table 8 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot F Upper (see Figure 21).

As shown in Table 8, the maximum number of occupied parking spaces in Parking Lot F Upper is 640 parked vehicles (91% parking lot occupancy) from 10:00 AM to 11:00 AM. The range of parked vehicles was 106 parked vehicles (15% parking lot occupancy) to 640 parked vehicles (91% parking lot occupancy) in Parking Lot F Upper.

C. Access Locations

The access to Parking Lot F Upper is currently provided via Manhattan Beach Boulevard to the north and Redondo Beach Boulevard to the south. The northern access to Manhattan Beach Boulevard is STOP sign controlled and provides right turns in/out and left turns in only access. Left turns out are restricted. The southern access to Redondo Beach Boulevard is traffic signal controlled with full access.

The northern entrance to Manhattan Beach Boulevard is located adjacent to Parking Lot E. The southern access to Redondo Beach Boulevard is shared with Parking Lot H to the east.

D. Recommendations

The following recommendations are suggested for Parking Lot F Upper:

- A temporary parking program shall be implemented during the rehabilitation of the Parking Lot F parking structure construction. A communication program identifying available parking lots on campus shall also be implemented during the parking structure construction period.

- Parking Lot F Upper is proposed to expand its parking to provide approximately 889 parking spaces after the rehabilitation. Consideration should be given to provide handicap and staff parking within Parking Lot F Upper.

Table 8

Parking Survey Summary for Parking Lot F Upper[1]

Time Period	Wednesday (September 19, 2012) Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	554	704	79%
10:00 AM to 11:00 AM	640	704	91%
11:00 AM to 12:00 NOON	639	704	91%
12:00 NOON to 1:00 PM	560	704	80%
1:00 PM to 2:00 PM	422	704	60%
2:00 PM to 3:00 PM	380	704	54%
3:00 PM to 4:00 PM	190	704	27%
4:00 PM to 5:00 PM	145	704	21%
5:00 PM to 6:00 PM	106	704	15%
6:00 PM to 7:00 PM	164	704	23%
7:00 PM to 8:00 PM	154	704	22%
8:00 PM to 9:00 PM	119	704	17%
Maximum	640		91%
Minimum	106		15%
Average	339		48%

[1] Parking Lot F (Upper Level) is coned off in areas.

Figure 19
Existing Parking Lot F Upper

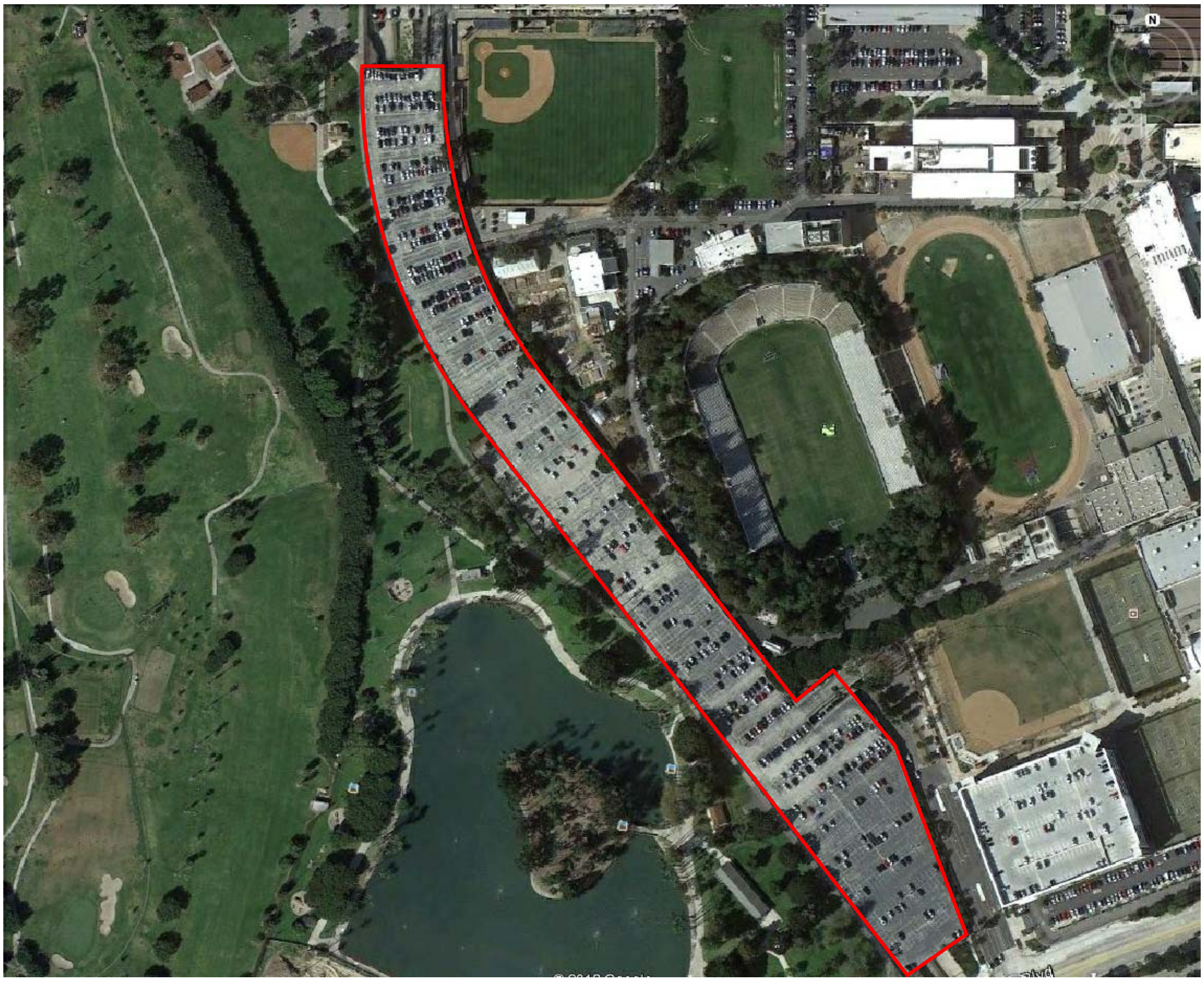


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Figure 20
Future Parking Lot F Upper

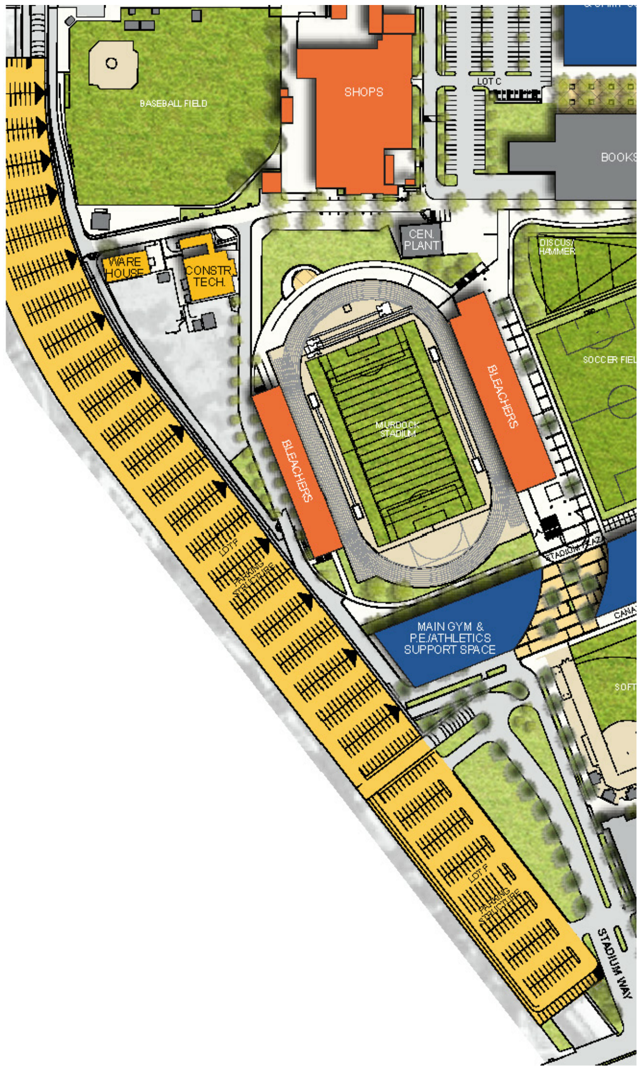

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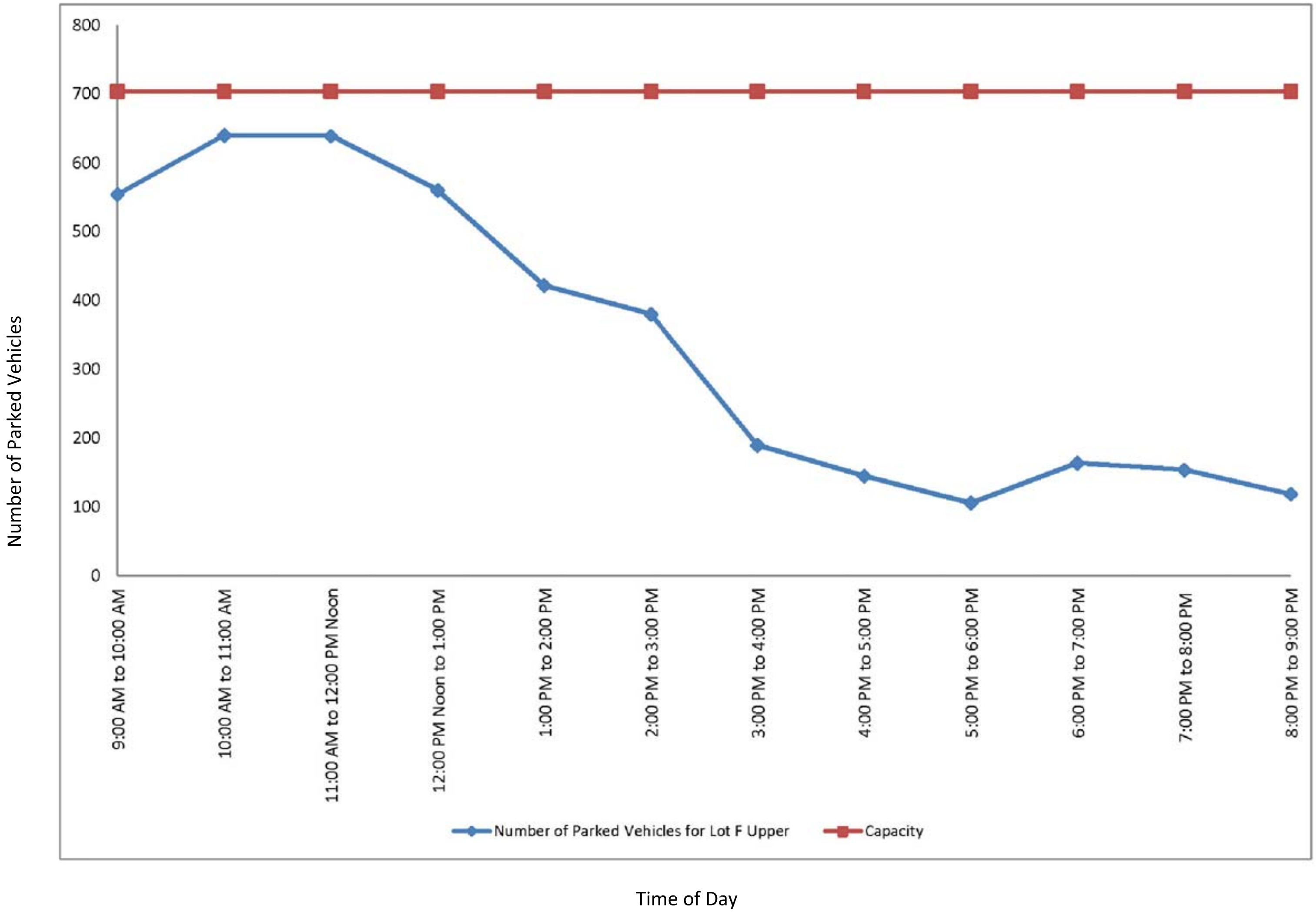
Figure 21
Parking Lot F Upper Parking Demand by Time of Day



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X. Parking Lot F Lower

In this section, the Parking Lot F Lower within the El Camino College campus has been reviewed. Figures 22 and 23 depict the existing and future parking area configurations for Parking Lot F Lower.

A. Existing Conditions

Parking Lot F Lower is located parallel to the west edge of the campus. Figure 15 depicts the existing Parking Lot F Lower layout and Figure 16 illustrates the future Parking Lot F Lower layout.

Parking Lot F Lower currently provides a total of 747 parking spaces. These parking spaces are for student use only. Parking Lot F Lower is currently coned off in areas.

The Parking Lot F Lower is laid out with 90 degree parking and east-west drive aisles. The parking access roadways are located on the western and eastern edges of the parking structure and provide access to the parking structure north entry and southeast entry.

B. Existing Parking Demand

The existing parking demand for Parking Lot F Lower is shown in Table 9 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot F Lower (see Figure 24).

As shown in Table 9, the maximum number of occupied parking spaces in Parking Lot F Lower is 746 parked vehicles (100% parking lot occupancy) from 10:00 AM to 11:00 AM. The range of parked vehicles was 213 parked vehicles (29% parking lot occupancy) to 746 parked vehicles (100% parking lot occupancy) in Parking Lot F Lower.

C. Access Locations

The access to Parking Lot F Lower is currently provided via Manhattan Beach Boulevard to the north and Redondo Beach Boulevard to the south. The northern access to Manhattan Beach Boulevard is STOP sign controlled and provides right turns in/out and left turns in only access. Left turns out are restricted. The southern access to Redondo Beach Boulevard is traffic signal controlled with full access.

The northern entrance to Manhattan Beach Boulevard is located adjacent to Parking Lot E. The southern access to Redondo Beach Boulevard is shared with Parking Lot H to the east.

D. Recommendations

The following recommendations are suggested for Parking Lot F Lower:

- A temporary parking program shall be implemented during the rehabilitation of the Parking Lot F parking structure construction. A communication program identifying available parking lots on campus shall also be implemented during the parking structure construction period.

- Parking Lot F Lower is proposed to expand its parking to provide approximately 850 parking spaces after the rehabilitation. Consideration should be given to provide handicap and staff parking within Parking Lot F Lower.

Table 9

Parking Survey Summary for Parking Lot F Lower[1]

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	661	747	88%
10:00 AM to 11:00 AM	746	747	100%
11:00 AM to 12:00 NOON	742	747	99%
12:00 NOON to 1:00 PM	720	747	96%
1:00 PM to 2:00 PM	621	747	83%
2:00 PM to 3:00 PM	525	747	70%
3:00 PM to 4:00 PM	413	747	55%
4:00 PM to 5:00 PM	304	747	41%
5:00 PM to 6:00 PM	283	747	38%
6:00 PM to 7:00 PM	310	747	41%
7:00 PM to 8:00 PM	285	747	38%
8:00 PM to 9:00 PM	213	747	29%
Maximum	746		100%
Minimum	213		29%
Average	485		65%

[1] Parking Lot F (Lower Level) is coned off in areas.

Figure 22
Existing Parking Lot F Lower

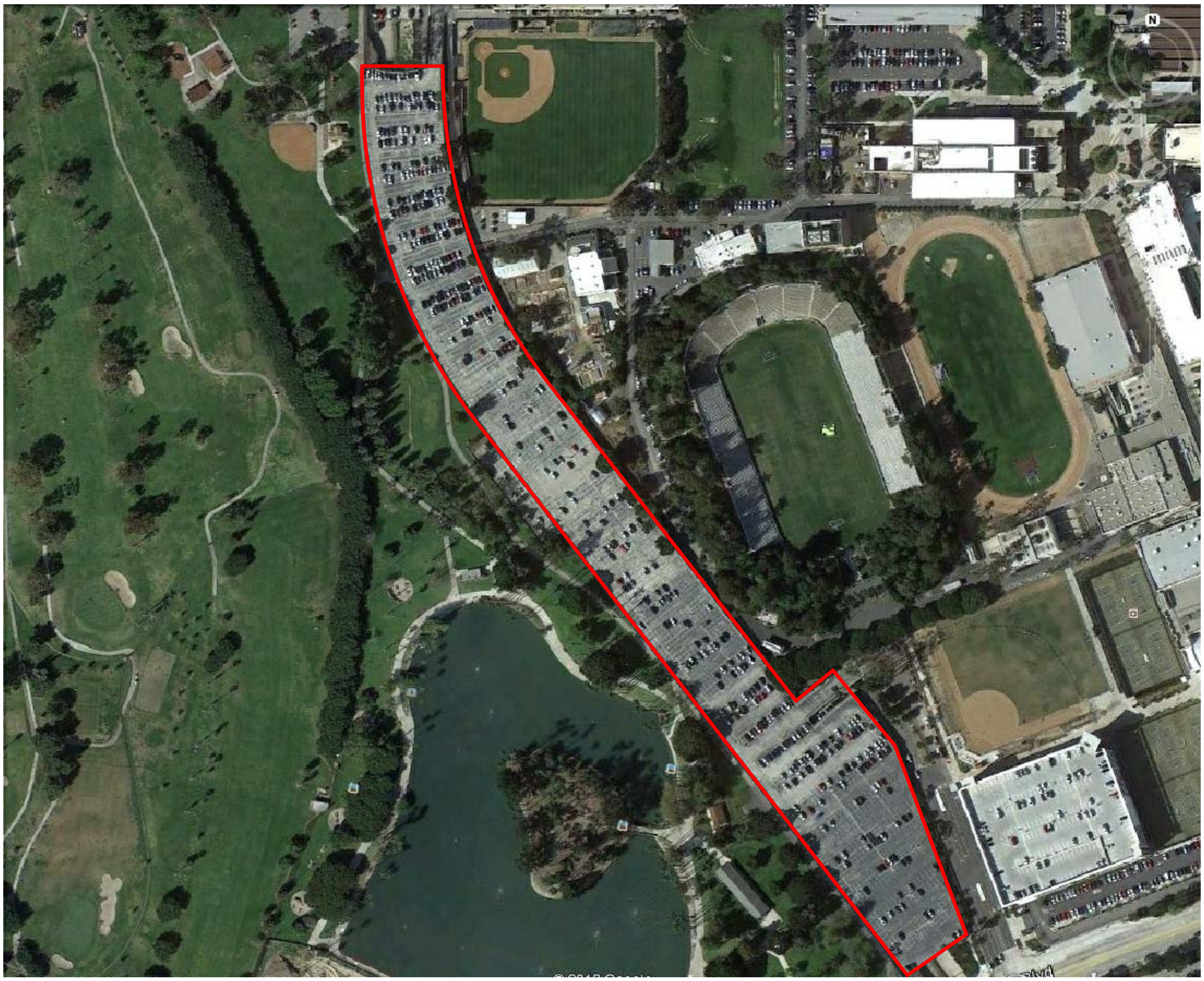

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Figure 23
Future Parking Lot F Lower

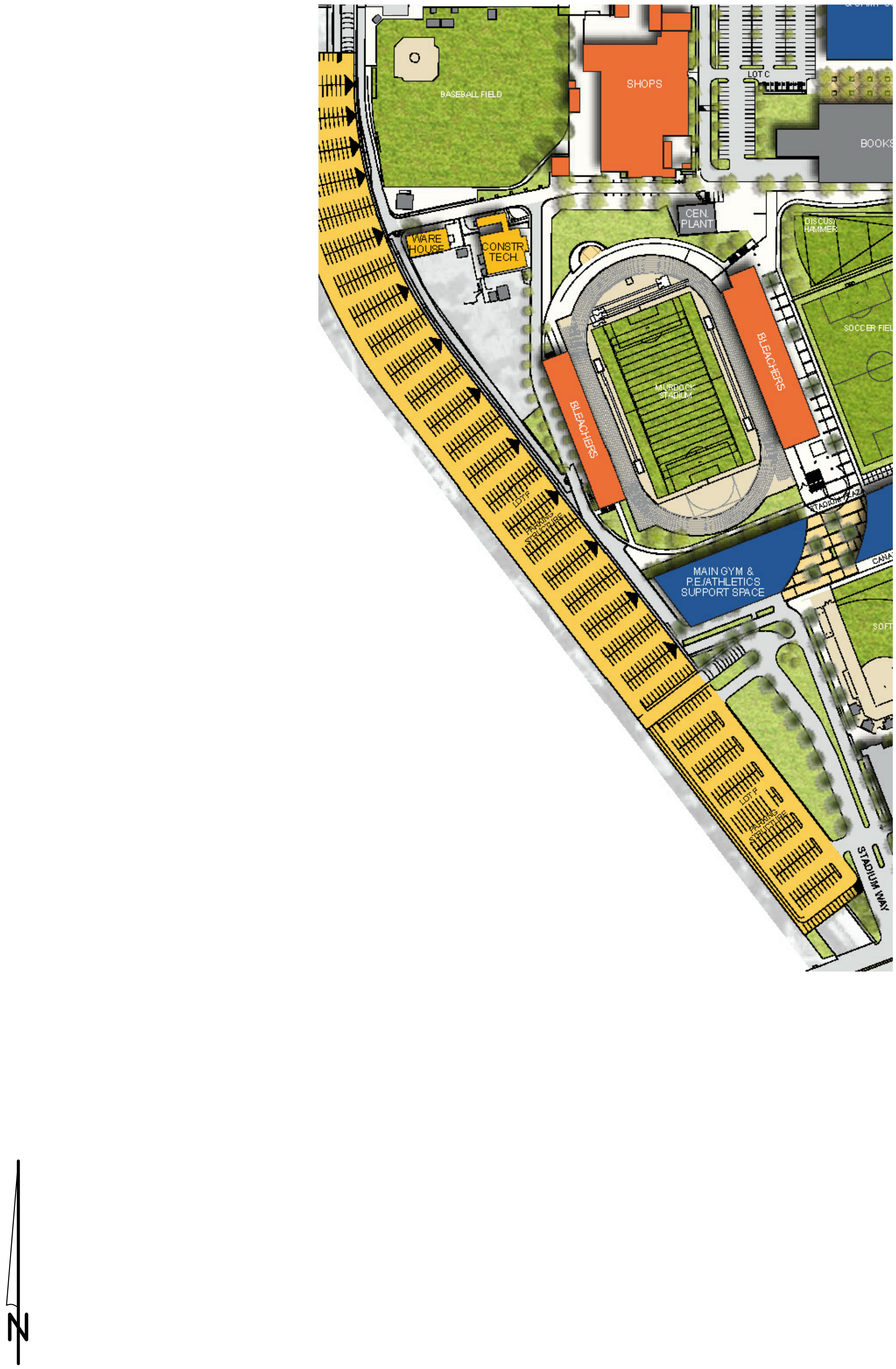

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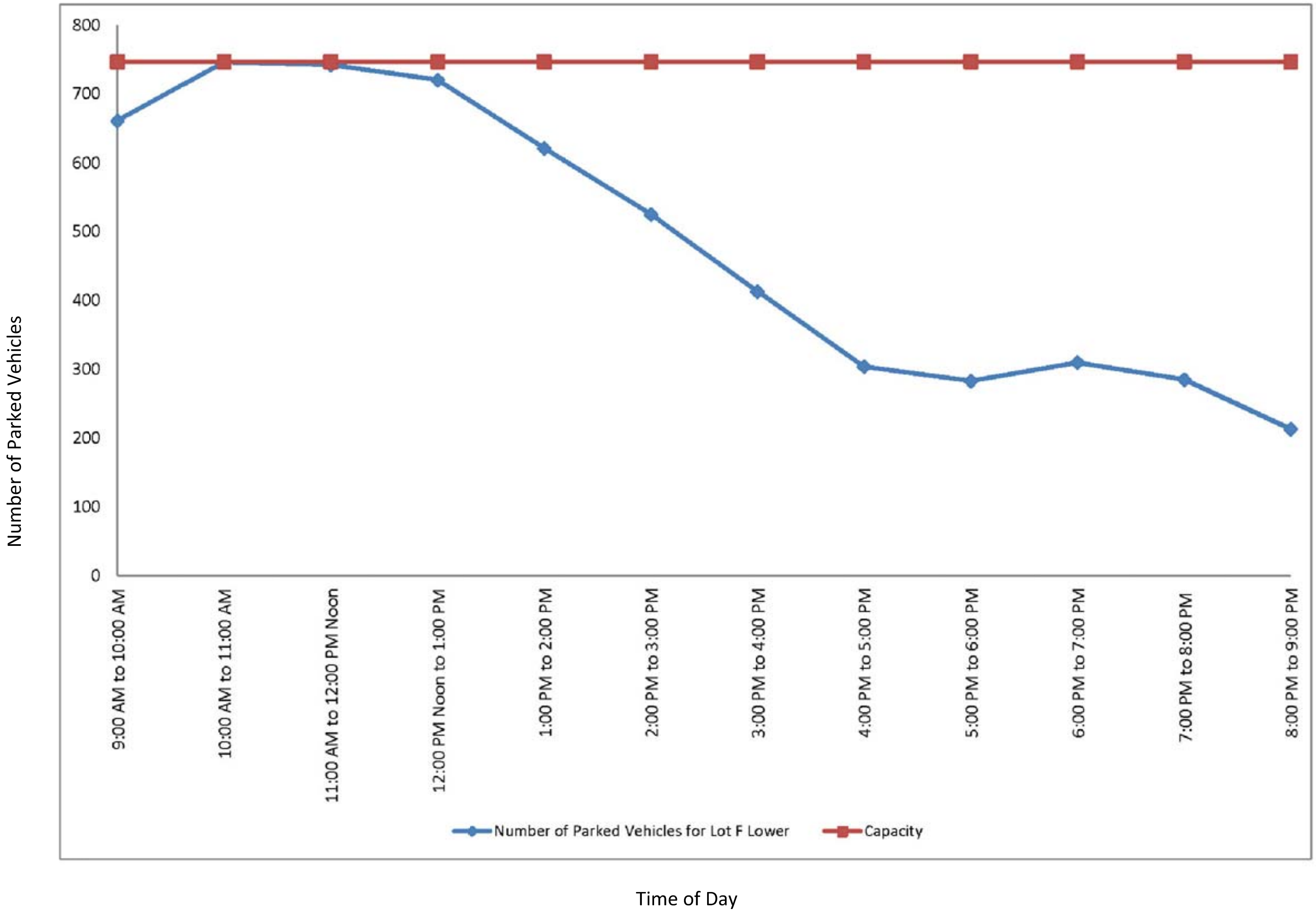
Figure 24
Parking Lot F Lower Parking Demand by Time of Day



XI. Parking Lot G

In this section, the Parking Lot G within the El Camino College campus has been reviewed. Figures 25 and 26 depict the existing and future parking area configurations for Parking Lot G.

A. Existing Conditions

Parking Lot G is located parallel to the west edge of the campus. Figure 17 depicts the existing Parking Lot G layout and Figure 18 illustrates the future Parking Lot G layout.

Parking Lot G currently provides a total of 86 parking spaces. These parking spaces are divided into 2 copy center parking spaces, 1 handicap parking space, 2 reserved parking spaces, 12 staff parking spaces, and 69 student parking spaces. Currently, part of Parking Lot G is closed off for construction. It is anticipated that Parking Lot G parking will be eliminated with the realignment of the sports fields.

The Parking Lot G is laid out with 90 degree parking. The parking access roadways are located on the western and eastern edges of the parking structure and provide access to the parking structure north entry and southeast entry.

B. Existing Parking Demand

The existing parking demand for Parking Lot G is shown in Table 10 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot G (see Figure 27).

As shown in Table 10, the maximum number of occupied parking spaces in Parking Lot G is 76 parked vehicles (88% parking lot occupancy) from 10:00 AM to 11:00 AM. The range of parked vehicles was 12 parked vehicles (14% parking lot occupancy) to 76 parked vehicles (88% parking lot occupancy) in Parking Lot G.

C. Access Locations

The access to Parking Lot G is currently provided via Manhattan Beach Boulevard. The access to Manhattan Beach Boulevard is STOP sign controlled and provides right turns in/out and left turns in only access. Left turns out are restricted. The access to Manhattan Beach Boulevard is located to the north and shared with Parking Lot D and Parking Lot C.

D. Recommendations

The following recommendations are suggested for Parking Lot G:

- Parking Lot G is proposed to be eliminated in the future.

Table 10

Parking Survey Summary for Parking Lot G[1]

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	70	86	81%
10:00 AM to 11:00 AM	76	86	88%
11:00 AM to 12:00 NOON	68	86	79%
12:00 NOON to 1:00 PM	66	86	77%
1:00 PM to 2:00 PM	61	86	71%
2:00 PM to 3:00 PM	52	86	60%
3:00 PM to 4:00 PM	50	86	58%
4:00 PM to 5:00 PM	58	86	67%
5:00 PM to 6:00 PM	63	86	73%
6:00 PM to 7:00 PM	49	86	57%
7:00 PM to 8:00 PM	40	86	47%
8:00 PM to 9:00 PM	12	86	14%
Maximum	76		88%
Minimum	12		14%
Average	55		67%

[1] Part of Parking Lot G is closed off for construction.

Figure 25
Existing Parking Lot G

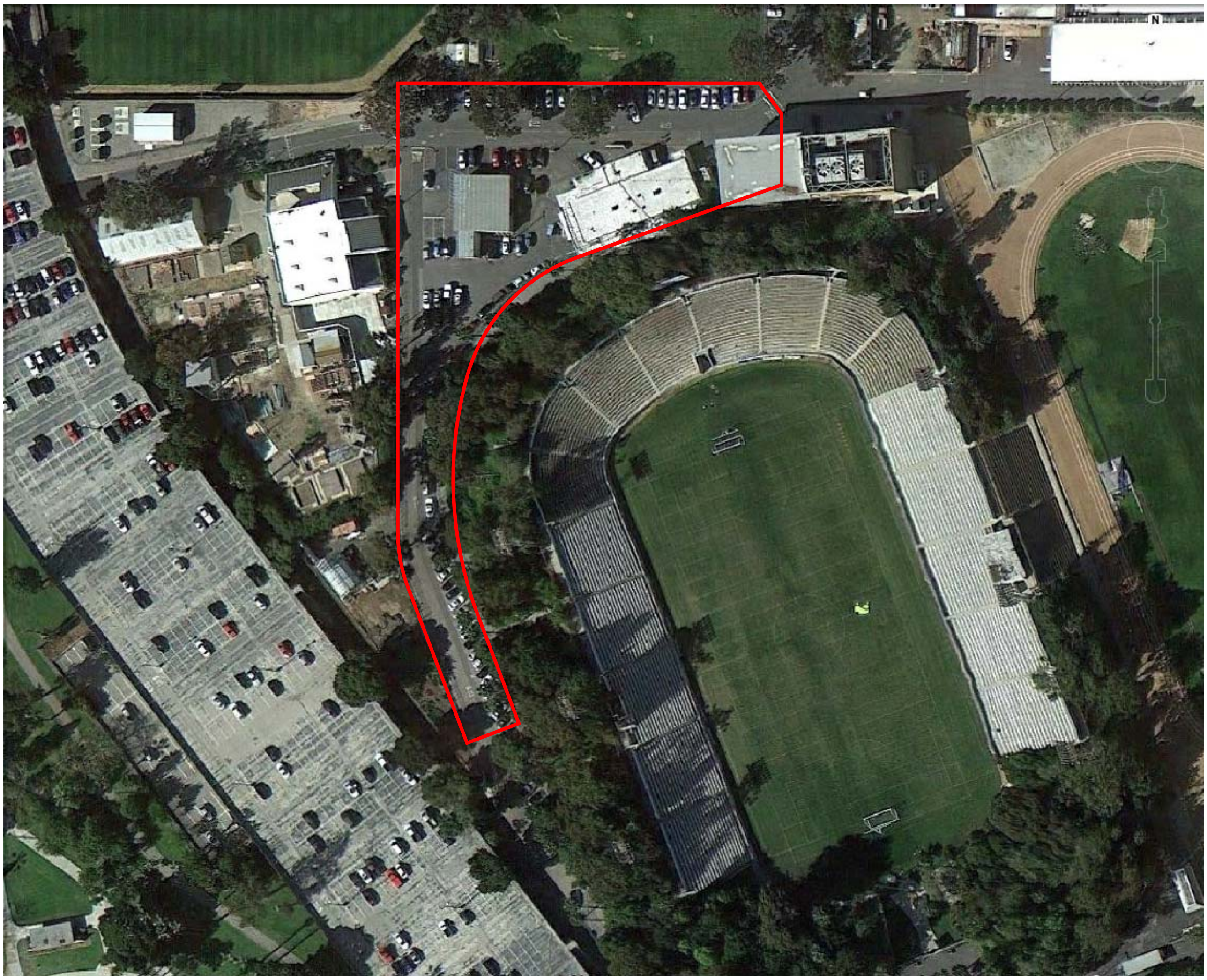


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Figure 26
Future Parking Lot G

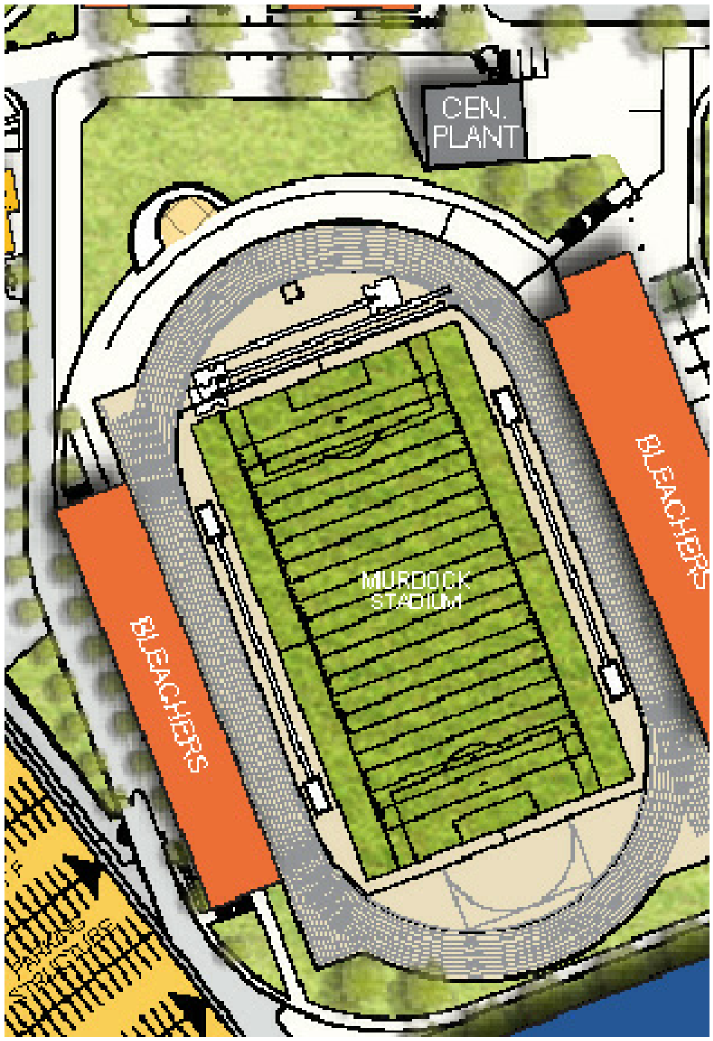

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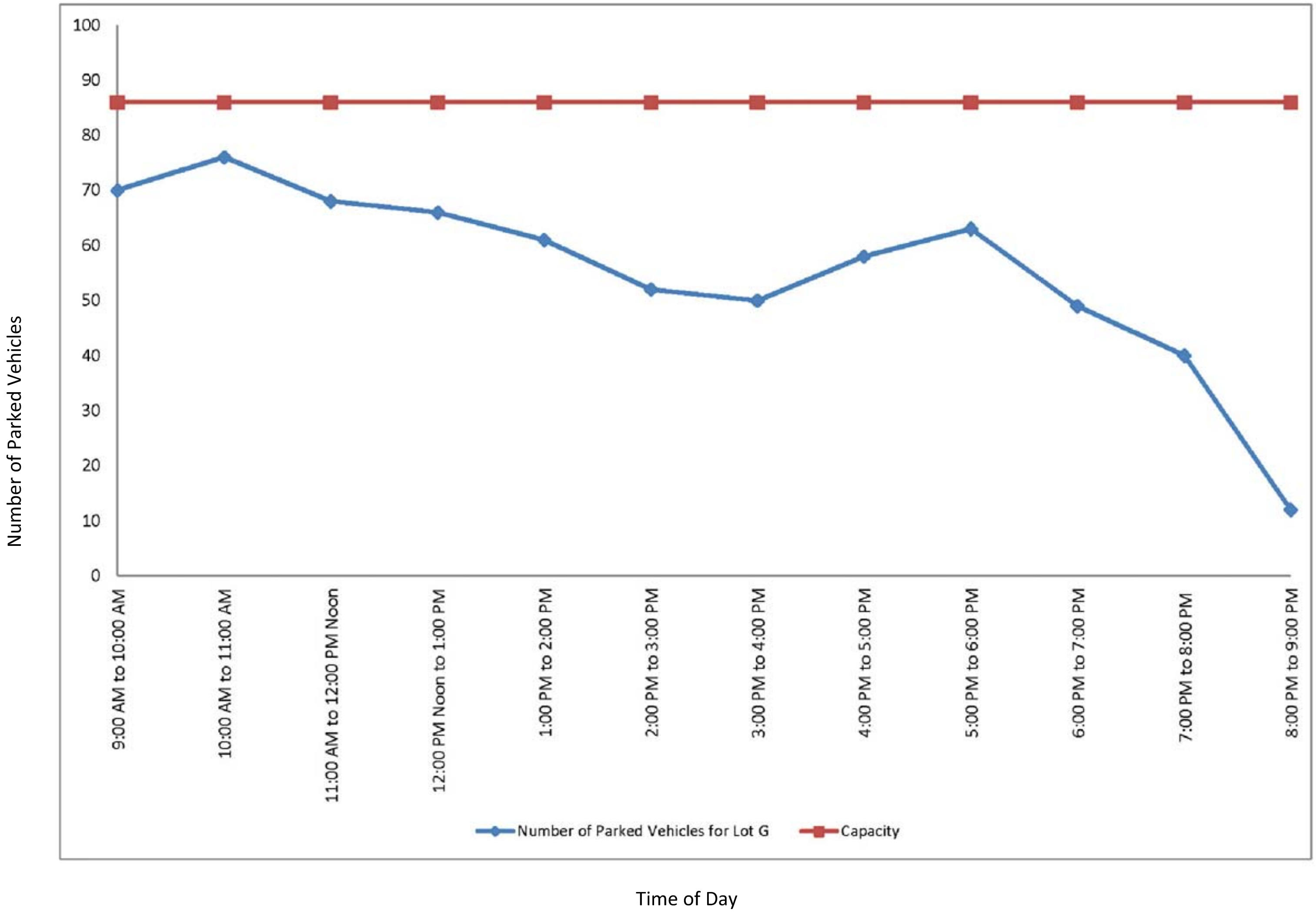
Figure 27
Parking Lot G Parking Demand by Time of Day



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XII. Parking Lot H

In this section, the Parking Lot H within the El Camino College campus has been reviewed. Figures 28 and 29 depict the existing and future parking area configurations for Parking Lot H.

A. Existing Conditions

Parking Lot H is located in the southern portion of the campus. Figure 28 depicts the existing Parking Lot H layout and Figure 29 illustrates the future Parking Lot H layout.

Parking Lot H currently provides a total of 1,149 parking spaces. These parking spaces are divided into 26 handicap parking spaces, 2 reserved parking spaces, 105 staff parking spaces, 7 staff carpool parking spaces, and 1,009 student parking spaces.

Currently, Parking Lot H consists of a parking structure and open parking lot, designed with 90 degree parking, and has access to Redondo Beach Boulevard.

B. Existing Parking Demand

The existing parking demand for Parking Lot H is shown in Table 11 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot H (see Figure 30).

As shown in Table 11, the maximum number of occupied parking spaces in Parking Lot H is 1,106 parked vehicles (96% parking lot occupancy) from 11:00 AM to 12:00 Noon. The range of parked vehicles was 447 parked vehicles (39% parking lot occupancy) to 1,106 parked vehicles (96% parking lot occupancy) in Parking Lot H.

C. Access Locations

The access to Parking Lot H is currently provided via Redondo Beach Boulevard to the south. The westerly access to Redondo Beach Boulevard is traffic signal controlled with full access. The easterly access to Redondo Beach Boulevard is via the pedestrian/vehicular bridge.

D. Recommendations

The following recommendations are suggested for Parking Lot H:

- No recommended change for Parking Lot H.

Table 11

Parking Survey Summary for Parking Lot H

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	995	1,149	87%
10:00 AM to 11:00 AM	1,096	1,149	95%
11:00 AM to 12:00 NOON	1,106	1,149	96%
12:00 NOON to 1:00 PM	1,086	1,149	95%
1:00 PM to 2:00 PM	977	1,149	85%
2:00 PM to 3:00 PM	896	1,149	78%
3:00 PM to 4:00 PM	726	1,149	63%
4:00 PM to 5:00 PM	511	1,149	44%
5:00 PM to 6:00 PM	447	1,149	39%
6:00 PM to 7:00 PM	719	1,149	63%
7:00 PM to 8:00 PM	711	1,149	62%
8:00 PM to 9:00 PM	620	1,149	54%
Maximum	1,106		96%
Minimum	447		39%
Average	824		72%

Figure 28
Existing Parking Lot H

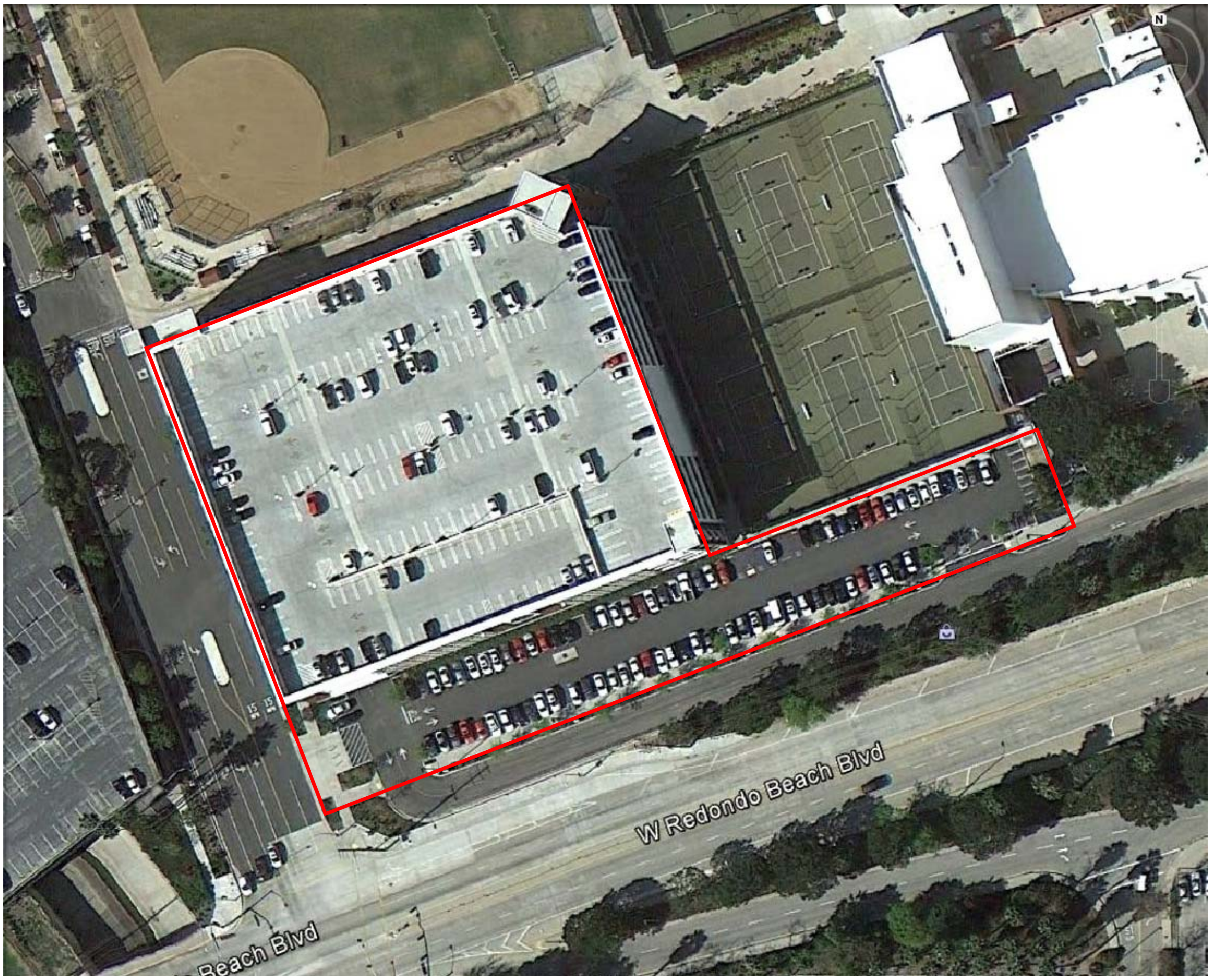

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Figure 29
Future Parking Lot H

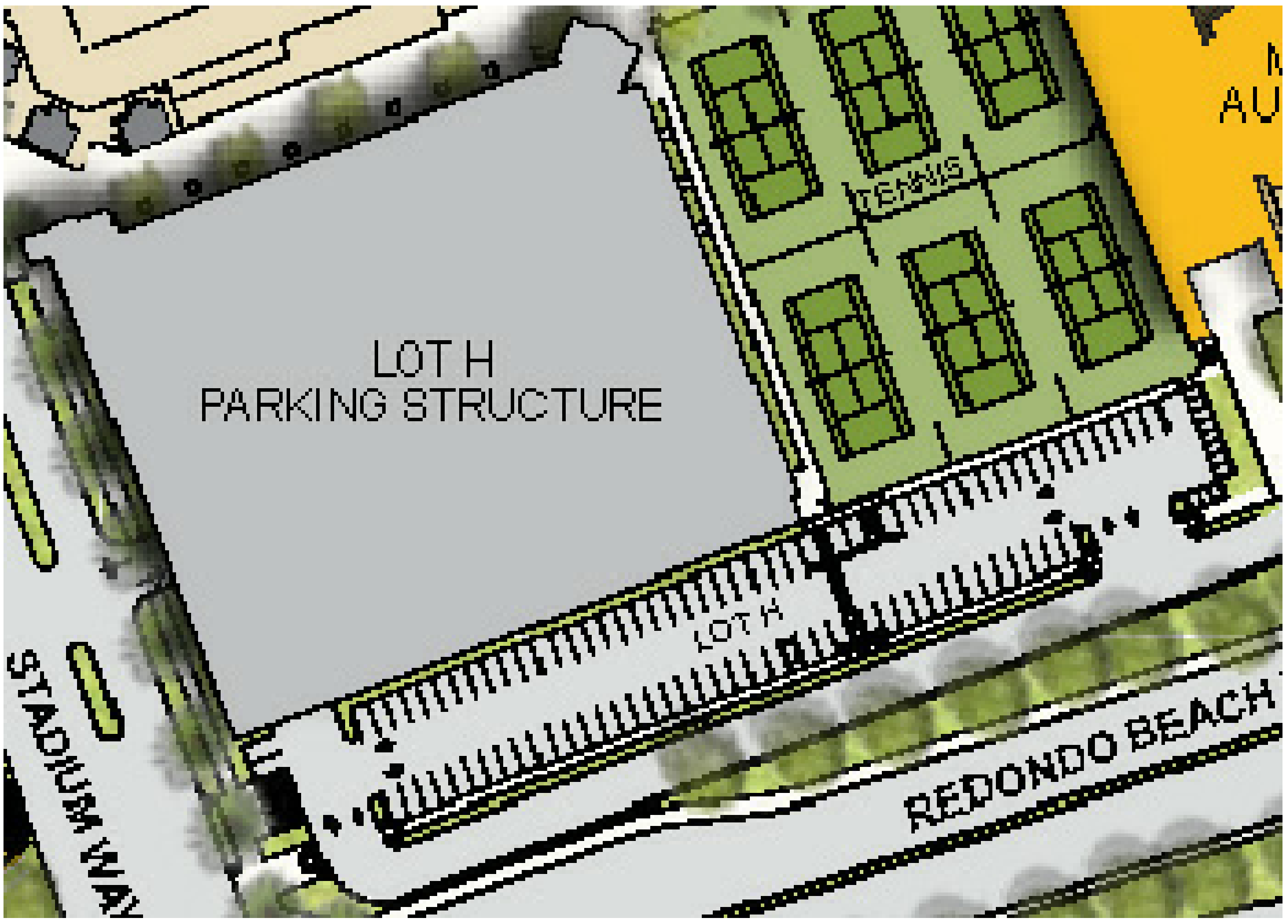

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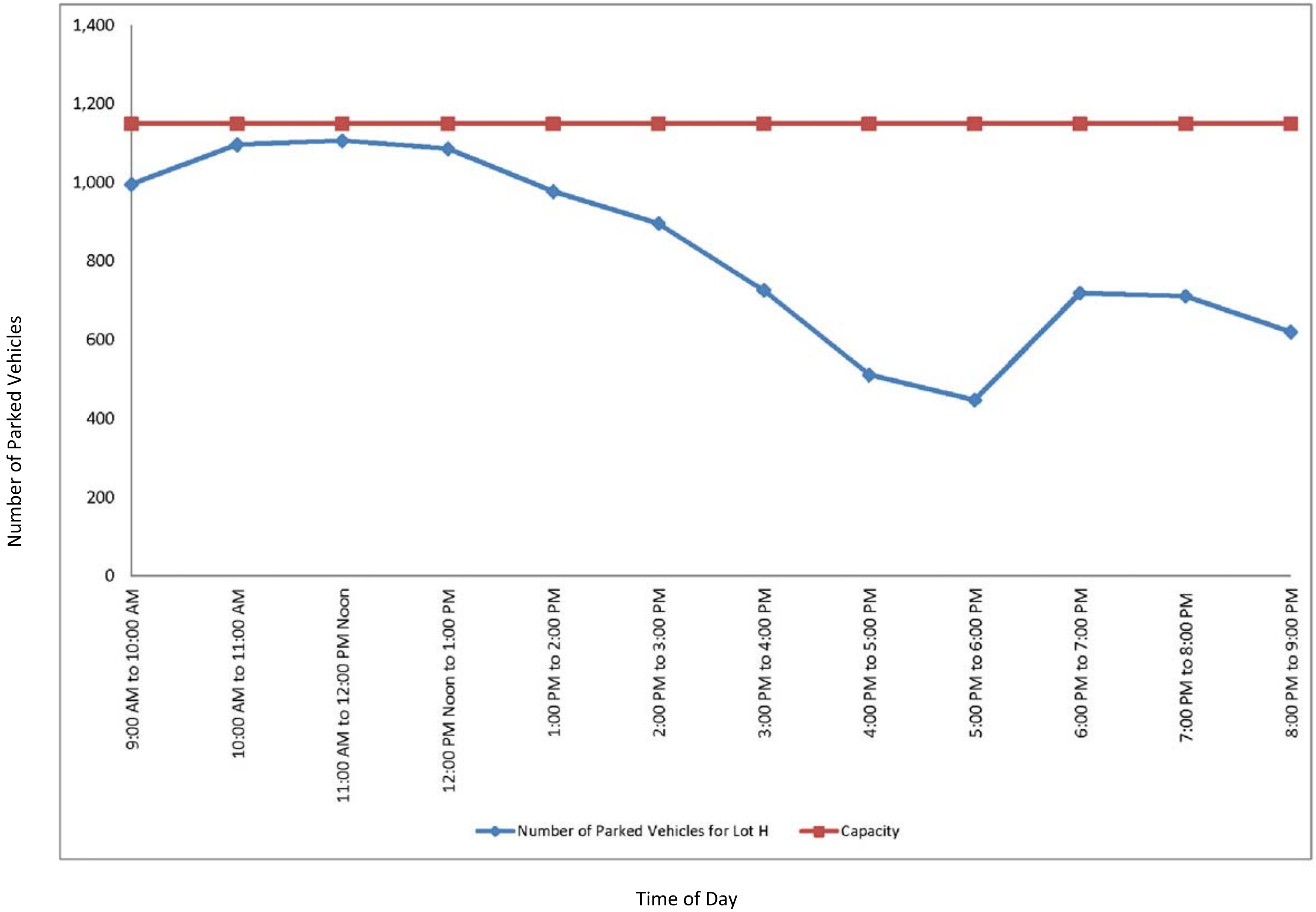
Figure 30
Parking Lot H Parking Demand by Time of Day



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XIII. Parking Lot J

In this section, the Parking Lot J within the El Camino College campus has been reviewed. Figures 31 and 32 depict the existing and future parking area configurations for Parking Lot J.

A. Existing Conditions

Parking Lot J is located in the southern portion of the campus. Parking Lot J has Redondo Beach Boulevard on the south, the Social Science building on the north, and the Marsee Auditorium on the west. Figure 31 depicts the existing Parking Lot J layout and Figure 32 illustrates the future Parking Lot J layout.

Parking Lot J currently provides a total of 134 parking spaces. These parking spaces are divided into 3 box office parking spaces, 13 handicap parking spaces, 3 reserved parking spaces, 111 staff parking spaces, and 4 staff carpool parking spaces. Currently, some parking spaces are used to store construction equipment and for motorcycle parking.

Parking Lot J is currently designed with 90 degree parking and three east-west drive aisles.

B. Existing Parking Demand

The existing parking demand for Parking Lot J is shown in Table 12 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot J (see Figure 33).

As shown in Table 12, the maximum number of occupied parking spaces in Parking Lot J is 126 parked vehicles (94% parking lot occupancy) from 8:00 PM to 9:00 PM. The range of parked vehicles was 60 parked vehicles (45% parking lot occupancy) to 126 parked vehicles (94% parking lot occupancy) in Parking Lot J.

C. Access Locations

The access to Parking Lot J is currently provided via two locations onto Redondo Beach Boulevard. The accesses are restricted to right turns only.

D. Recommendations

The following recommendations are suggested for Parking Lot J:

- No recommended change for Parking Lot J.

Table 12

Parking Survey Summary for Parking Lot J[1]

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	104	134	78%
10:00 AM to 11:00 AM	125	134	93%
11:00 AM to 12:00 NOON	122	134	91%
12:00 NOON to 1:00 PM	119	134	89%
1:00 PM to 2:00 PM	124	134	93%
2:00 PM to 3:00 PM	109	134	81%
3:00 PM to 4:00 PM	99	134	74%
4:00 PM to 5:00 PM	74	134	55%
5:00 PM to 6:00 PM	60	134	45%
6:00 PM to 7:00 PM	77	134	57%
7:00 PM to 8:00 PM	123	134	92%
8:00 PM to 9:00 PM	126	134	94%
Maximum	126		94%
Minimum	60		45%
Average	105		80%

[1] Some parking spaces are used to store construction equipment and motorcycle parking in Parking Lot J.

Figure 31
Existing Parking Lot J

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Figure 32
Future Parking Lot J

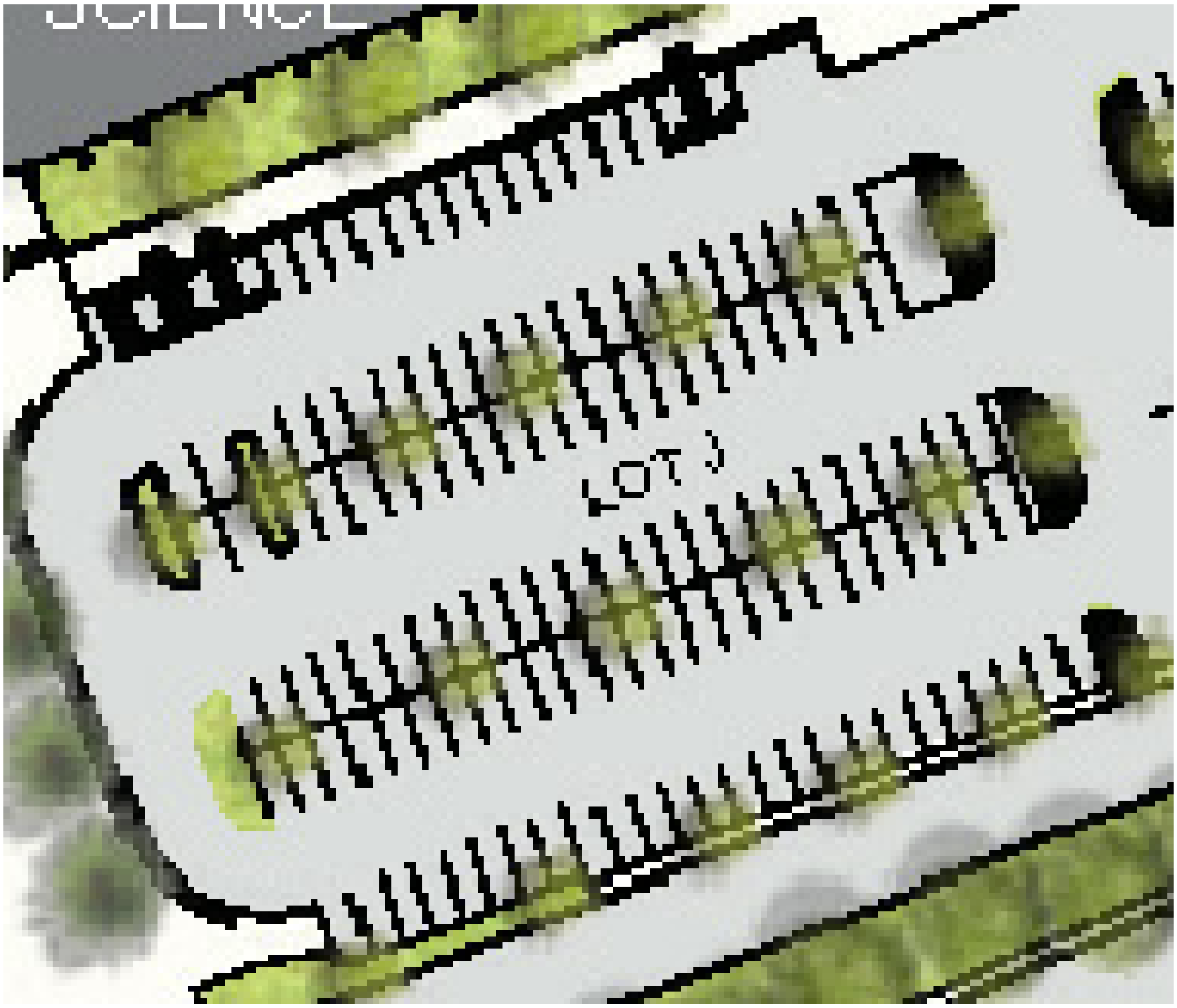

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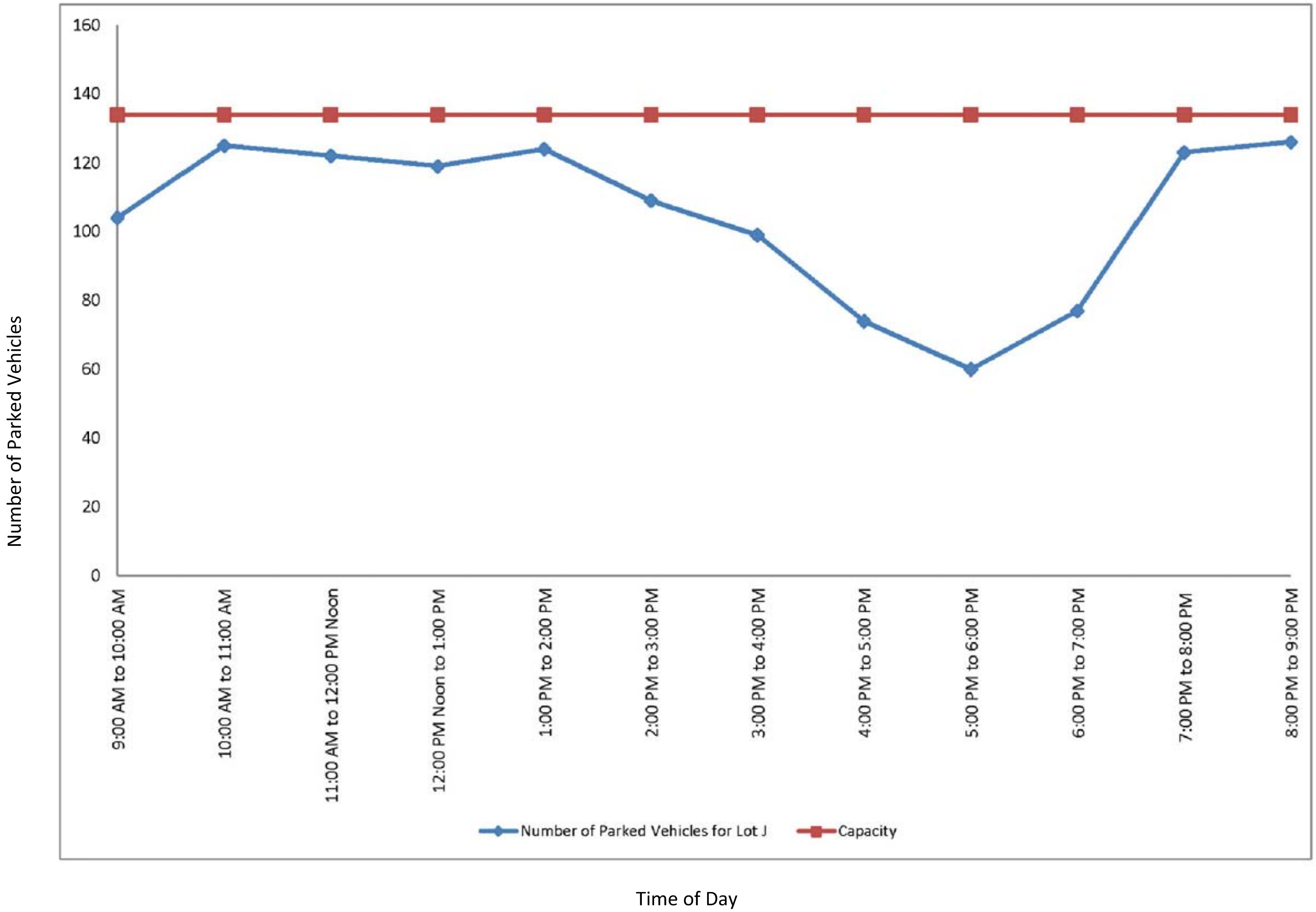
Figure 33
Parking Lot J Parking Demand by Time of Day



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XIV. Parking Lot K

In this section, the Parking Lot K within the El Camino College campus has been reviewed. Figures 34 and 35 depict the existing and future parking area configurations for Parking Lot K.

A. Existing Conditions

Parking Lot K is located in the southern portion of the campus. Parking Lot K has Redondo Beach Boulevard on the south, Crenshaw Boulevard on the east, and the Fine Arts Music Theatre building on the north. Figure 34 depicts the existing Parking Lot K layout and Figure 35 illustrates the future Parking Lot K layout.

Parking Lot K currently provides a total of 144 parking spaces. These parking spaces are divided into 6 handicap parking spaces, 8 police services parking spaces, 5 police vehicle parking spaces, 4 reserved parking spaces, 112 staff parking spaces, and 9 visitor parking spaces. Currently, part of Parking Lot K is closed off for construction and some parking spaces are used to store construction equipment.

B. Existing Parking Demand

The existing parking demand for Parking Lot K is shown in Table 13 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot K (see Figure 36).

As shown in Table 16, the maximum number of occupied parking spaces in Parking Lot K is 141 parked vehicles (98% parking lot occupancy) from 10:00 AM to 11:00 AM on September 19, 2012. The range of parked vehicles was 81 parked vehicles (56% parking lot occupancy) to 141 parked vehicles (98% parking lot occupancy) in Parking Lot K.

C. Access Locations

The access to Parking Lot K is currently provided via two locations. The Redondo Beach Boulevard and Crenshaw Boulevard accesses are restricted to right turns only.

D. Recommendations

The following recommendations are suggested for Parking Lot K:

- Parking Lot K is proposed to expand its parking to provide approximately 166 parking spaces after the relocation of the Police Department. Consideration should be given to provide handicap and staff parking within Parking Lot K.

Table 13

Parking Survey Summary for Parking Lot K[1]

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	140	144	97%
10:00 AM to 11:00 AM	141	144	98%
11:00 AM to 12:00 NOON	137	144	95%
12:00 NOON to 1:00 PM	140	144	97%
1:00 PM to 2:00 PM	139	144	97%
2:00 PM to 3:00 PM	129	144	90%
3:00 PM to 4:00 PM	123	144	85%
4:00 PM to 5:00 PM	101	144	70%
5:00 PM to 6:00 PM	81	144	56%
6:00 PM to 7:00 PM	91	144	63%
7:00 PM to 8:00 PM	136	144	94%
8:00 PM to 9:00 PM	137	144	95%
Maximum	141		98%
Minimum	81		56%
Average	125		99%

[1] Part of Parking Lot K is closed off for construction. Some parking spaces are used to store contruction equipment.

Figure 34
Existing Parking Lot K

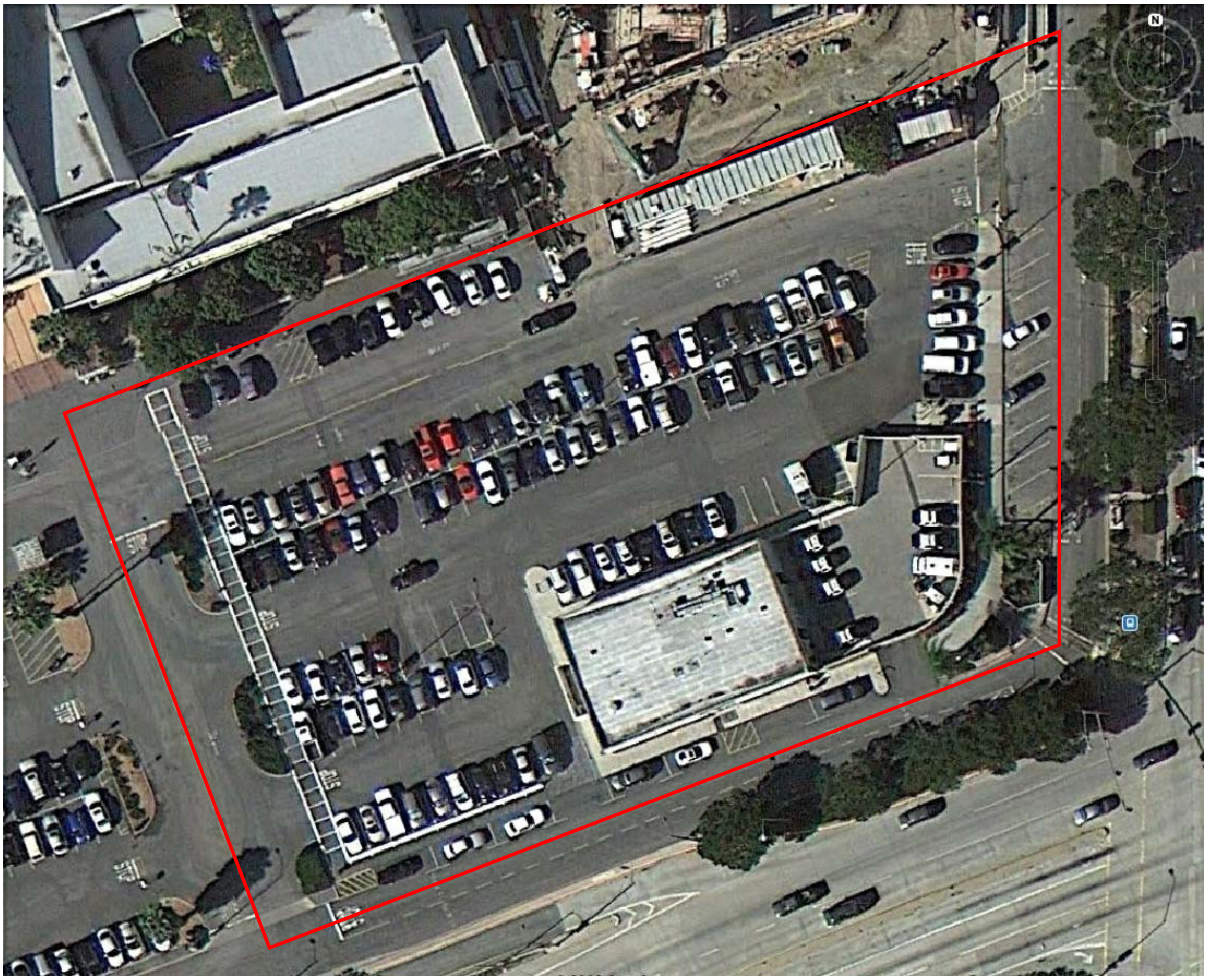

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Figure 35
Future Parking Lot K

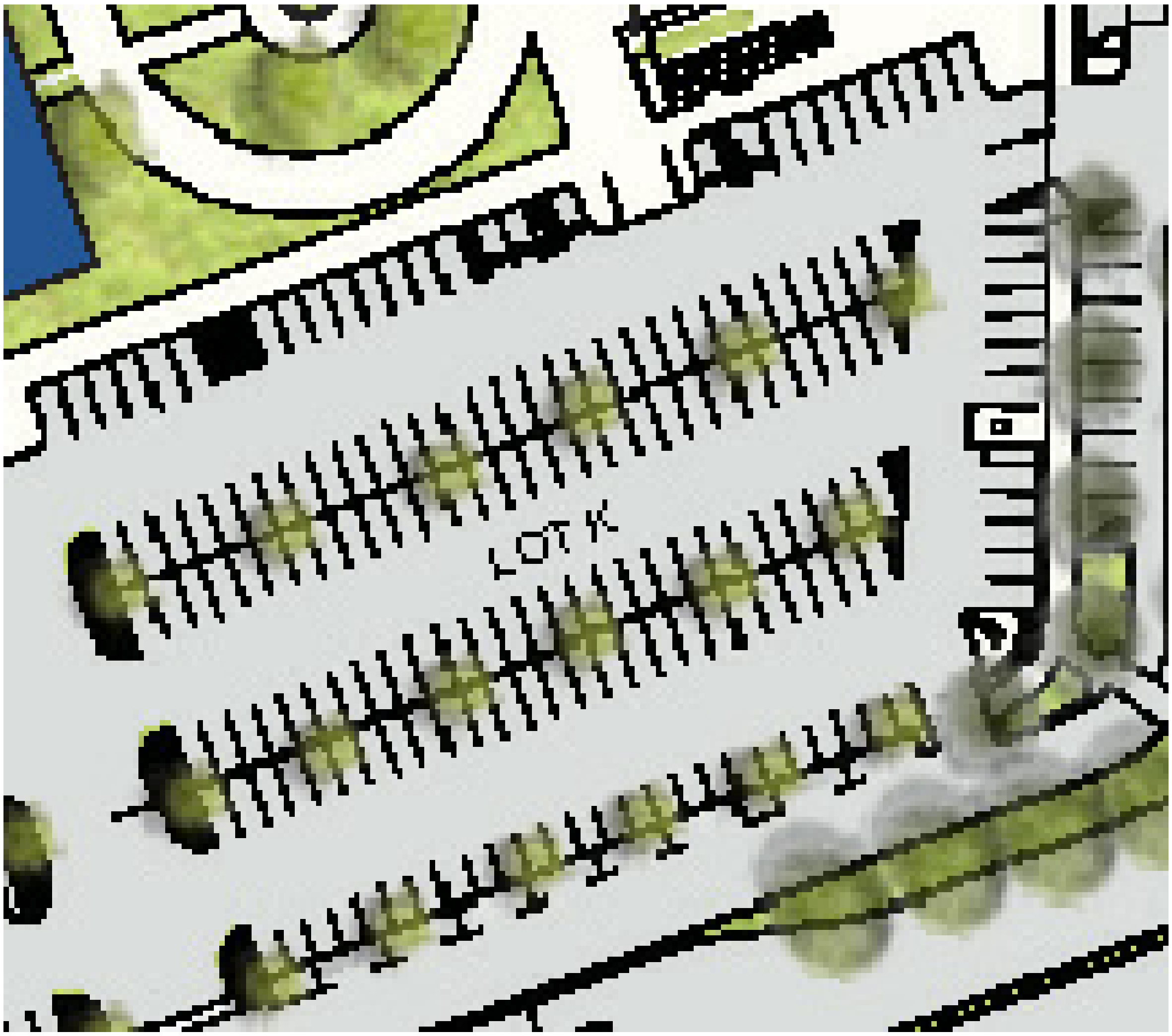

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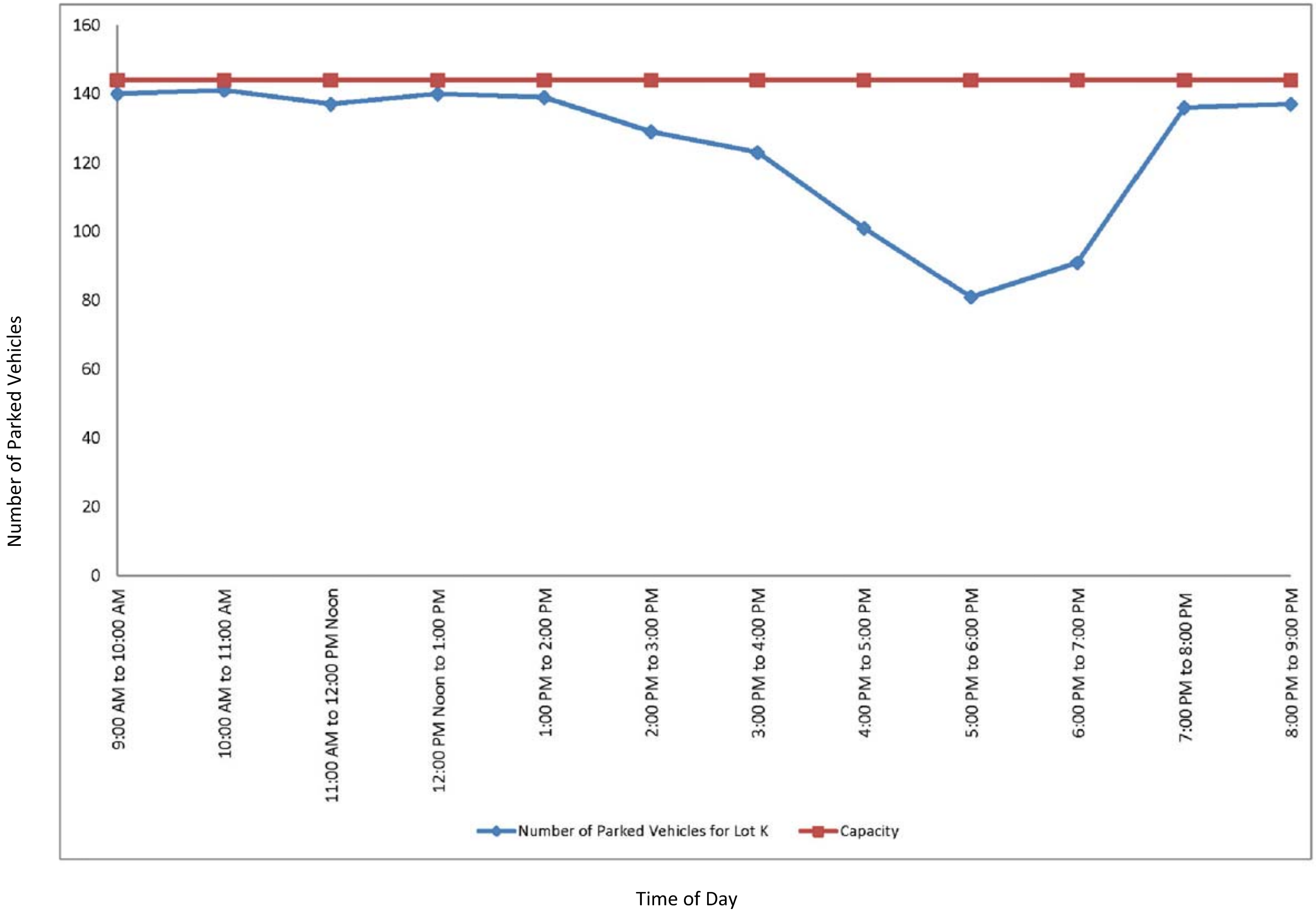
Figure 36
Parking Lot K Parking Demand by Time of Day



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XV. Parking Lot L

In this section, the Parking Lot L within the El Camino College campus has been reviewed. Figures 37 and 38 depict the existing and future parking area configurations for Parking Lot L.

A. Existing Conditions

Parking Lot L is located in the southern most portion of the campus. Parking Lot L has Redondo Beach Boulevard on the north and Crenshaw Boulevard on the east. Figure 37 depicts the existing Parking Lot L layout and Figure 38 illustrates the future Parking Lot L layout.

Parking Lot L currently provides a total of 1,249 parking spaces. These parking spaces are divided into 1 bus parking space, 9 childcare parking spaces, 2 handicap parking spaces, 37 staff parking spaces, 1,200 student parking spaces.

Parking Lot L is currently designed with 90 degree parking and multiple east-west drive aisles.

B. Existing Parking Demand

The existing parking demand for Parking Lot L is shown in Table 14 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for Parking Lot L (see Figure 39).

As shown in Table 17, the maximum number of occupied parking spaces in Parking Lot L is 1,216 parked vehicles (97% parking lot occupancy) from 10:00 AM to 11:00 AM. The range of parked vehicles was 409 parked vehicles (33% parking lot occupancy) to 1,216 parked vehicles (97% parking lot occupancy) in Parking Lot L.

C. Access Locations

The access to Parking Lot L is currently provided via three locations. The Redondo Beach Boulevard access is restricted to right turns only. The Crenshaw Boulevard accesses are STOP sign controlled with full access.

D. Recommendations

The following recommendations are suggested for Parking Lot L:

- No recommended change for Parking Lot L.

Table 14

Parking Survey Summary for Parking Lot L[1]

Time Period	Wednesday (September 19, 2012) Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	1,140	1,249	91%
10:00 AM to 11:00 AM	1,216	1,249	97%
11:00 AM to 12:00 NOON	1,208	1,249	97%
12:00 NOON to 1:00 PM	1,142	1,249	91%
1:00 PM to 2:00 PM	997	1,249	80%
2:00 PM to 3:00 PM	913	1,249	73%
3:00 PM to 4:00 PM	688	1,249	55%
4:00 PM to 5:00 PM	472	1,249	38%
5:00 PM to 6:00 PM	409	1,249	33%
6:00 PM to 7:00 PM	596	1,249	48%
7:00 PM to 8:00 PM	692	1,249	55%
8:00 PM to 9:00 PM	598	1,249	48%
Maximum	1,216		97%
Minimum	409		33%
Average	839		67%

[1] Some parking spaces are used to store construction equipment and landscaping material in Parking Lot L.

Figure 37
Existing Parking Lot L

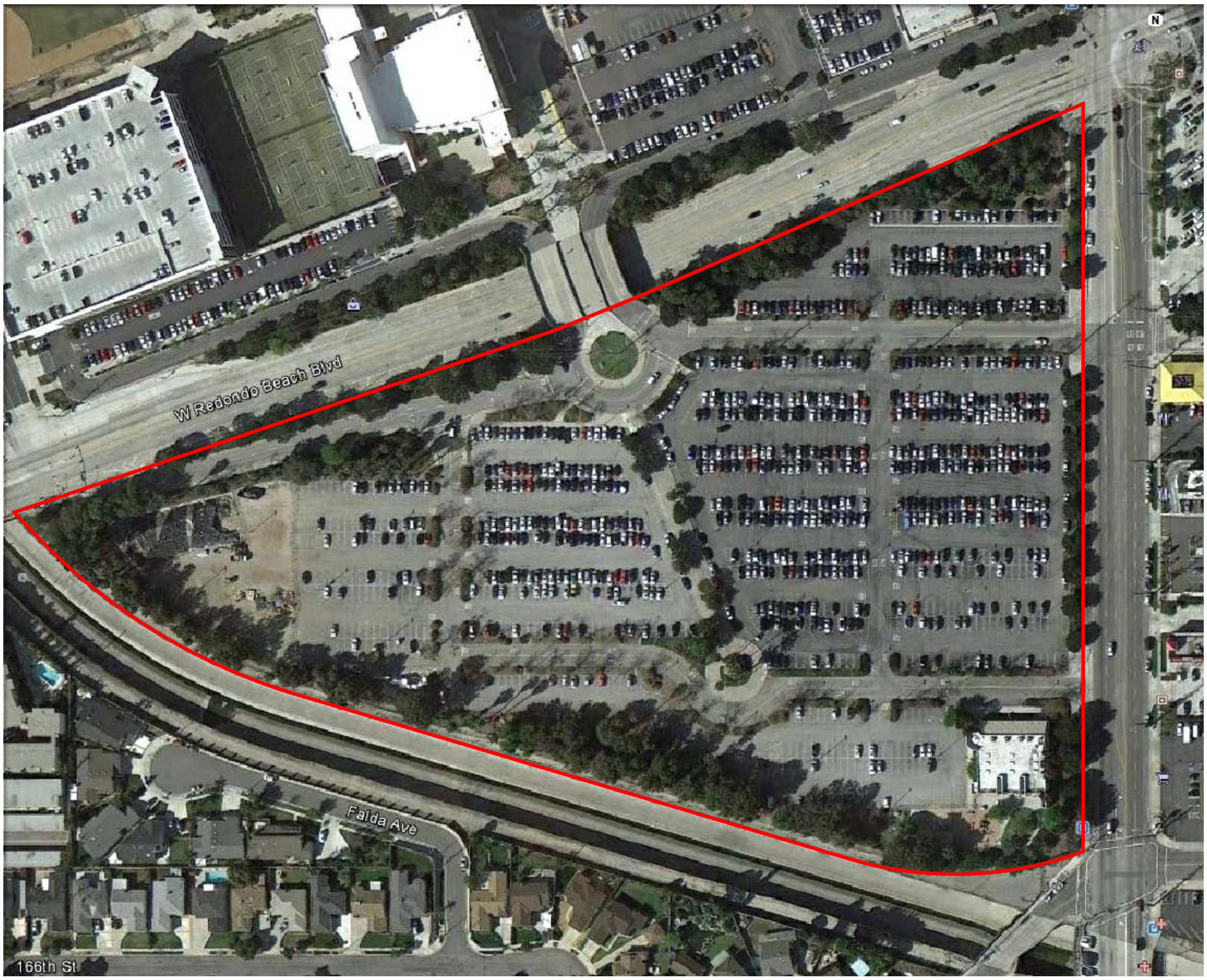

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Figure 38
Future Parking Lot L

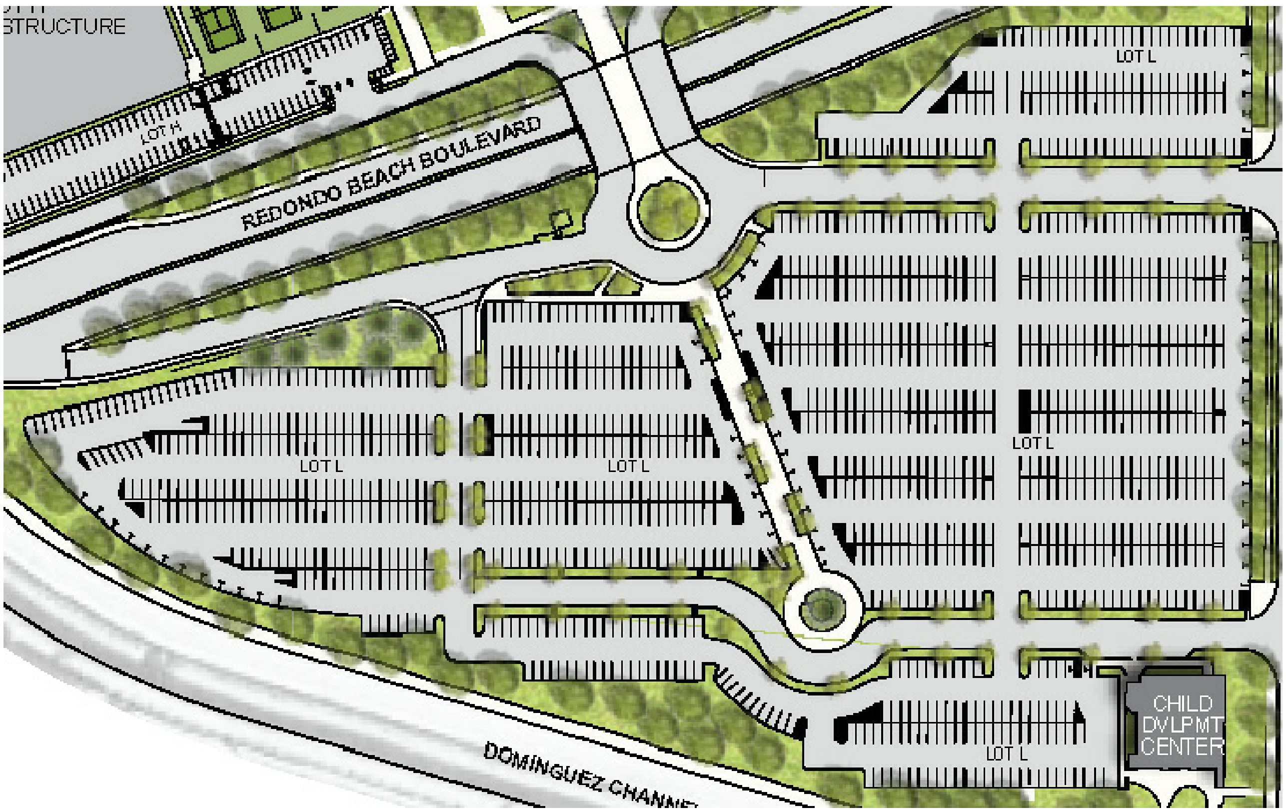

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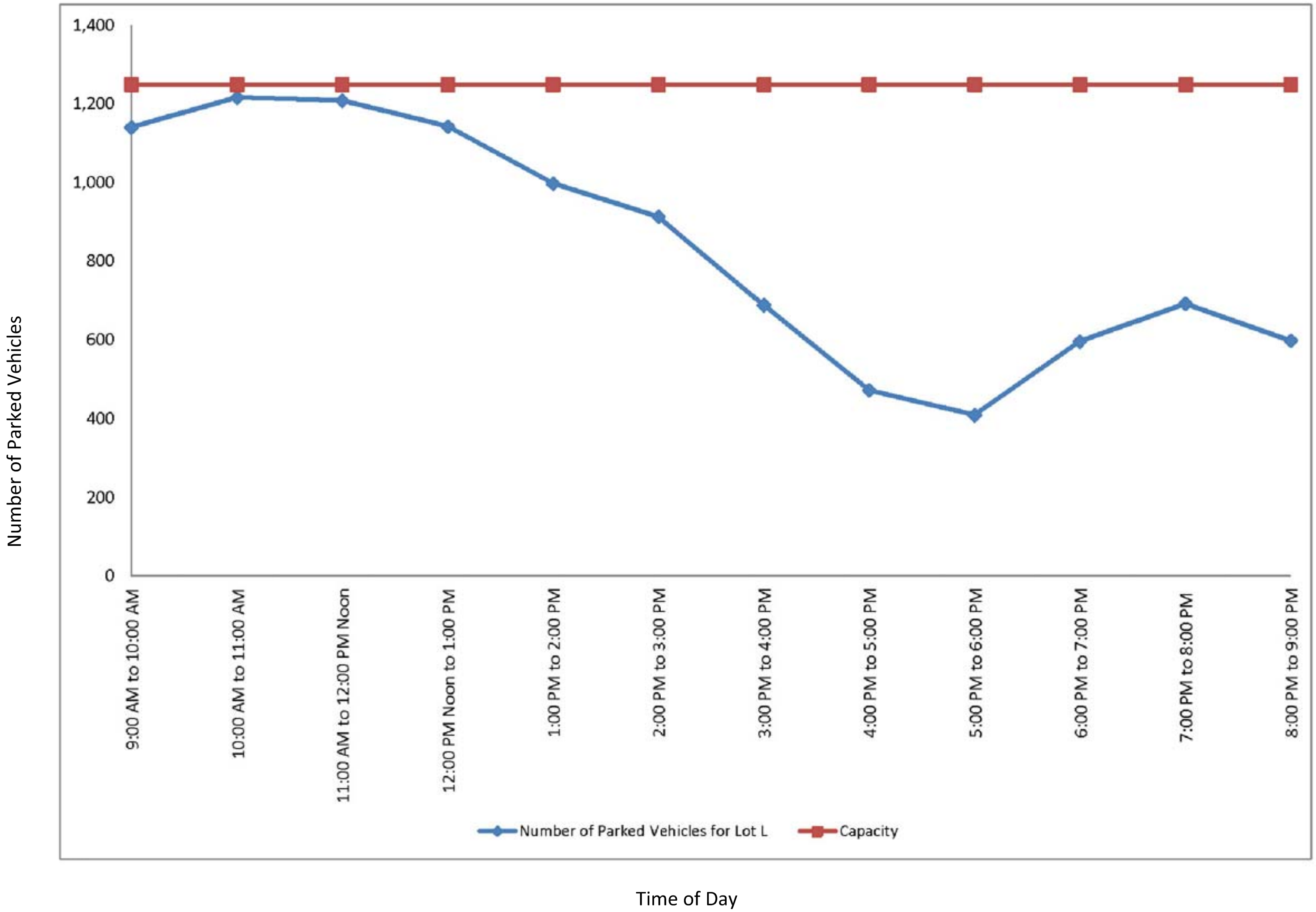
Figure 39
Parking Lot L Parking Demand by Time of Day



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XVI. Parking Area – Manhattan Beach Boulevard

In this section, the Manhattan Beach Boulevard Parking Area adjacent to the El Camino College campus has been reviewed.

A. Existing Conditions

The Manhattan Beach Boulevard Parking Area is located on the northern most portion of the campus. The Manhattan Beach Boulevard Parking Area is bounded by the El Camino College west boundary to Crenshaw Boulevard.

Parking is restricted in the El Camino Village residential area north of Manhattan Beach Boulevard. While permits are exempt, no parking occurs from 7:30 AM to 9:00 PM Monday to Thursday and from 7:30 AM to 1:00 PM Friday except holidays.

The Manhattan Beach Boulevard Parking Area currently provides a total of 97 parking spaces on the northside of Manhattan Beach Boulevard and 68 parking spaces on the southside of Manhattan Beach Boulevard. The Manhattan Beach Boulevard Parking Area is for parallel parking only.

B. Existing Parking Demand

The existing parking demand for the Manhattan Beach Boulevard (northside and southside) Parking Area is shown in Tables 15 and 16 for the first month of the fall semester on a Wednesday (September 19, 2012). The existing parking demand is also shown graphically for the Manhattan Beach Boulevard (northside and southside) Parking Area (see Figures 40 and 41).

As shown in Table 15, the maximum number of occupied parking spaces in the Manhattan Beach Boulevard Parking Area (northside) is 86 parked vehicles (89% parking lot occupancy) from 2:00 PM to 3:00 PM. The range of parked vehicles was 61 parked vehicles (63% parking lot occupancy) to 86 parked vehicles (89% parking lot occupancy) in the Manhattan Beach Boulevard Parking Area (northside).

As shown in Table 16, the maximum number of occupied parking spaces in the Manhattan Beach Boulevard Parking Area (southside) is 55 parked vehicles (81% parking lot occupancy) from 5:00 PM to 6:00 PM. The range of parked vehicles was 40 parked vehicles (59% parking lot occupancy) to 55 parked vehicles (81% parking lot occupancy) in the Manhattan Beach Boulevard Parking Area (southside).

C. Recommendations

The following recommendations are suggested for the Manhattan Beach Boulevard Parking Area:

- No recommended change for the Manhattan Beach Boulevard Parking Area.

Table 15

Parking Survey Summary for Parking Area - Manhattan Beach Boulevard (Northside)

Time Period	Wednesday (September 19, 2012) Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	72	97	74%
10:00 AM to 11:00 AM	70	97	72%
11:00 AM to 12:00 NOON	81	97	84%
12:00 NOON to 1:00 PM	61	97	63%
1:00 PM to 2:00 PM	84	97	87%
2:00 PM to 3:00 PM	86	97	89%
3:00 PM to 4:00 PM	69	97	71%
4:00 PM to 5:00 PM	67	97	69%
5:00 PM to 6:00 PM	74	97	76%
6:00 PM to 7:00 PM	74	97	76%
7:00 PM to 8:00 PM	73	97	75%
8:00 PM to 9:00 PM	72	97	74%
Maximum	86		89%
Minimum	61		63%
Average	74		76%

Table 16

Parking Survey Summary for Parking Area - Manhattan Beach Boulevard (Southside)

Time Period	Wednesday (September 19, 2012)		
	Number of Parked Vehicles	Parking Spaces Provided	% Occupancy
9:00 AM to 10:00 AM	45	68	66%
10:00 AM to 11:00 AM	47	68	69%
11:00 AM to 12:00 NOON	51	68	75%
12:00 NOON to 1:00 PM	40	68	59%
1:00 PM to 2:00 PM	52	68	76%
2:00 PM to 3:00 PM	54	68	79%
3:00 PM to 4:00 PM	51	68	75%
4:00 PM to 5:00 PM	53	68	78%
5:00 PM to 6:00 PM	55	68	81%
6:00 PM to 7:00 PM	52	68	76%
7:00 PM to 8:00 PM	53	68	78%
8:00 PM to 9:00 PM	49	68	72%
Maximum	55		81%
Minimum	40		59%
Average	50		74%

Figure 40
Parking Area - Manhattan Beach Boulevard (Northside)
Parking Demand by Time of Day

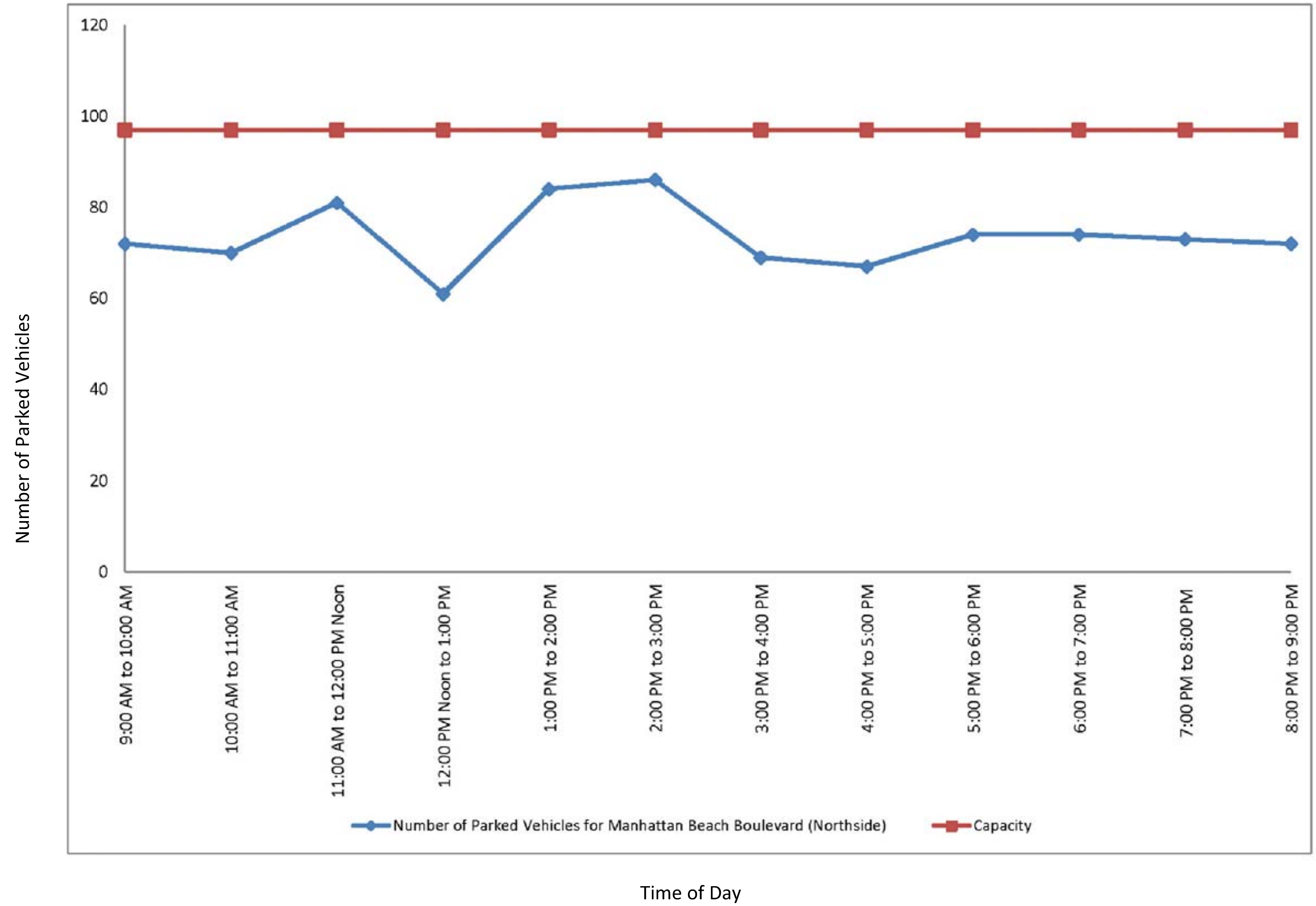

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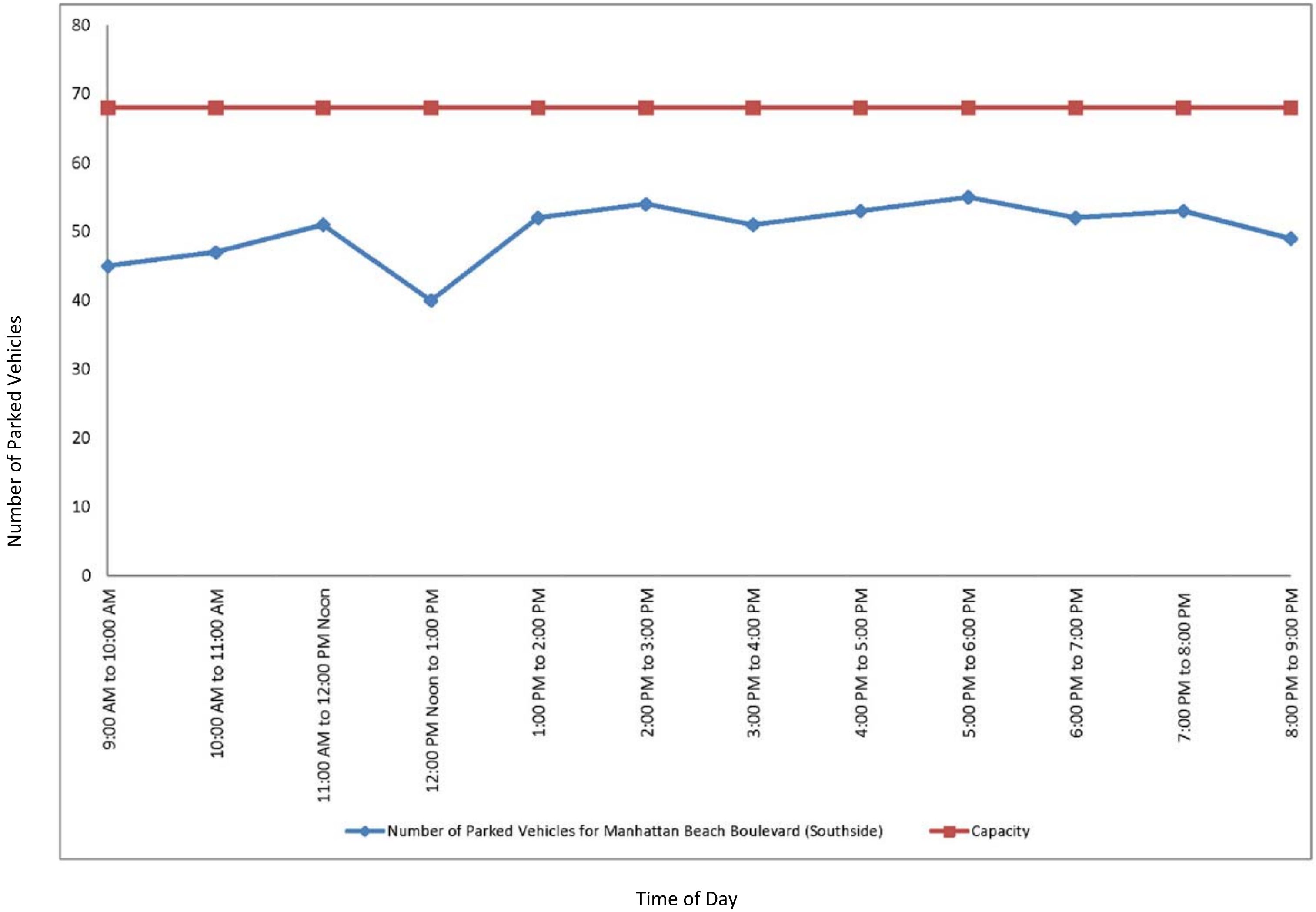
Figure 41
Parking Area - Manhattan Beach Boulevard (Southside)
Parking Demand by Time of Day



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XVII. Other Considerations

A. Parking Summary

Table 17 depicts the existing and proposed parking space comparison by parking area. A total of approximately 4,917 parking spaces are currently available for the El Camino College campus. In the future, a total of approximately 5,096 parking spaces will be available for the El Camino College campus (without the proposed north and south parking structures). With campus construction, a net gain of 179 parking spaces is projected to occur (see Table 17). The gain of approximately 179 parking spaces is because of the changes in Parking Lots B, D, F, G, and K.

As shown in Table 18, an existing parking ratio of 0.28 per FTEs has been calculated for the El Camino College.

The recommended demand rate of 0.28 parking spaces per FTEs is recommended. The design value was based upon the existing parking ratio at El Camino College (0.28), at Mt. San Antonio College (0.244), recommended by the Eno Foundation (0.15 – 0.45), and recommended by the Urban Land Institute – ULI (0.25 – 0.50), as shown in Appendix A.

The estimated future parking demand and supply is shown in Table 18. For Year 2020, it is proposed that Parking Lot C parking structure be constructed with 3 levels and a total of 700 to 800 parking spaces, Parking Lot F third level parking structure be constructed with a minimum of 700 parking spaces, and Parking Lot 1 be constructed with 72 parking spaces. With construction of the Parking Lot C parking structure, the Parking Lot F third level parking structure, and Parking Lot 1, the El Camino College campus will provide a total of approximately 6,568 parking spaces for Year 2020. Figures 42 to 44 illustrate the proposed parking structures. The parking space demand by Year 2020 is expected to be 5,607 parking spaces for the 20,025 FTEs.

The current on-street parking adjacent to the project site is depicted on Figure 45.

B. Pedestrian Summary

The current pedestrian access adjacent to the project site is depicted on Figure 46. To accommodate bus service on adjacent roadways, transit stops have been provided adjacent to the project site (see Figure 46). Pedestrian access to the transit system has been provided, as shown on Figure 46.

The project site should provide pedestrian sidewalks along Manhattan Beach Boulevard and Crenshaw Boulevard adjacent to the project site. Figures 47 and 48 depict the existing and future internal pedestrian access.

B. <u>Off-Campus Adjacent Parking</u>

The current off-campus adjacent parking is depicted on Figure 49. As shown in Table 19, there are approximately 822 off-campus adjacent parking spaces available to students.

Table 17

Parking Space Comparison by Parking Area

Descriptor	Lot A	Lot B	Lot C	Lot D	Lot E	Lot F Upper	Lot F Lower	Lot G	Lot H	Lot J	Lot K	Lot L	Manhattan Beach Boulevard Northside	Manhattan Beach Boulevard Southside	Total
Existing	44	48	233	182	32	704 [1]	747 [2]	86 [3]	1,149	134 [4]	144 [5]	1,249 [6]	97	68	4,917
Proposed	44	64	233	108	32	889	850	-	1,149	134	166	1,262	97	68	5,096
Difference	-	+16	-	-74	-	+185	+103	-86	-	-	+22	+13	-	-	+179

[1] Parking Lot F (Upper Level) is coned off in areas.

[2] Parking Lot F (Lower Level) is coned off in areas.

[3] Part of Parking Lot G is closed off for construction.

[4] Some parking spaces are used to store construction equipment and motorcycle parking in Parking Lot J.

[5] Part of Parking Lot K is closed off for construction. Some parking spaces are used to store construction equipment.

[6] Some parking spaces are used to store construction equipment and landscaping material in Parking Lot L.

Table 18

Parking Demand and Supply

Descriptor	Year	
	2012	2020
Full Time Equivalent (FTES) Students	16,400	20,025
Existing Parking Demand in Parked Vehicles[1]	4,634	-
Existing Parking Ratio	0.28	-
Future Parking Ratio[2] (Parked Vehicles/FTES)	-	0.28
Future Parking Demand in Parked Vehicles[3]	-	5,607
Parking Spaces Provided[4] (Without New Parking Structures)	4,917	5,096
Additional Parking Spaces Needed	-	511
Parking Lot C Structure Parking Spaces Provided (3 Levels)	-	700 [5]
Parking Lot F Structure Parking Spaces Provided (Third Level)	-	700
Parking Lot 1 Parking Spaces Provided	-	72
Total Future Parking Spaces Provided	-	6,568
Parking Over Supply		+961
Added Spaces for 90% Utilization		657
Adjusted Parking Surplus		304

[1] See Table 2.

[2] The existing parking ratio at El Camino College (0.28), recommended by the Eno Foundation (0.15 - 0.45), and recommendedby the Urban Land Institute - ULI (0.25 - 0.50), as shown in Appendix A.

[3] 0.28 x Adjusted FTES in 2020 of 20,025 = 5,607.

[4] See Table 17.

[5] For a conservative analysis, 700 was used from the proposed range of 700 to 800 parking spaces provided.

Table 19

Additional Off-Campus Adjacent Parking

Segments	Parking Spaces Provided	% Parking Spaces Available[1] to Students	Parking Spaces Available to Students	Hourly Restrictions
Alondra Park Parking Lot Adjacent to the Northside of Redondo Beach Boulevard[2]	200	100%	200	N/A
Manhattan Beach Boulevard - Hawthrone Boulevard to Prairie Avenue	128	88%	113	10 AM - 12 Noon[3]
Manhattan Beach Boulevard - Prairie Avenue to Campus	214	100%	214	11 PM - 6 AM
North Side of Redondo Beach Boulevard - Prairie Avenue to Campus	108	82%	89	6 AM - 8 AM, 4 PM - 6 PM, 11 PM - 6 AM
South Side of Redondo Beach Boulevard - Prairie Avenue to Campus	113	76%	86	8 AM - 12 Noon[4]
West Side fo Crenshaw Boulevard - Campus to Artesia Boulevard	75	76%	57	8 AM - 12 Noon[4]
East Side fo Crenshaw Boulevard - Campus to Artesia Boulevard	71	88%	63	7 AM - 9 AM
Total			822	

[1] Available between the hours 7AM - 12 Midnight.

[2] Proposed Use Permit and Letter Agreement with County of Los Angeles.

[3] No Parking Tuesday 10 AM - 12 Noon. The percent parking spaces available to students assumes worst case scenario.

[4] No Parking Wednesday 8 AM - 12 Noon. The percent parking spaces available to students assumes worst case scenaro.

Figure 42
Future Parking Lot - Parking Lot C Parking Structure

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Figure 43
Future Parking Lot - Parking Lot F Third Level

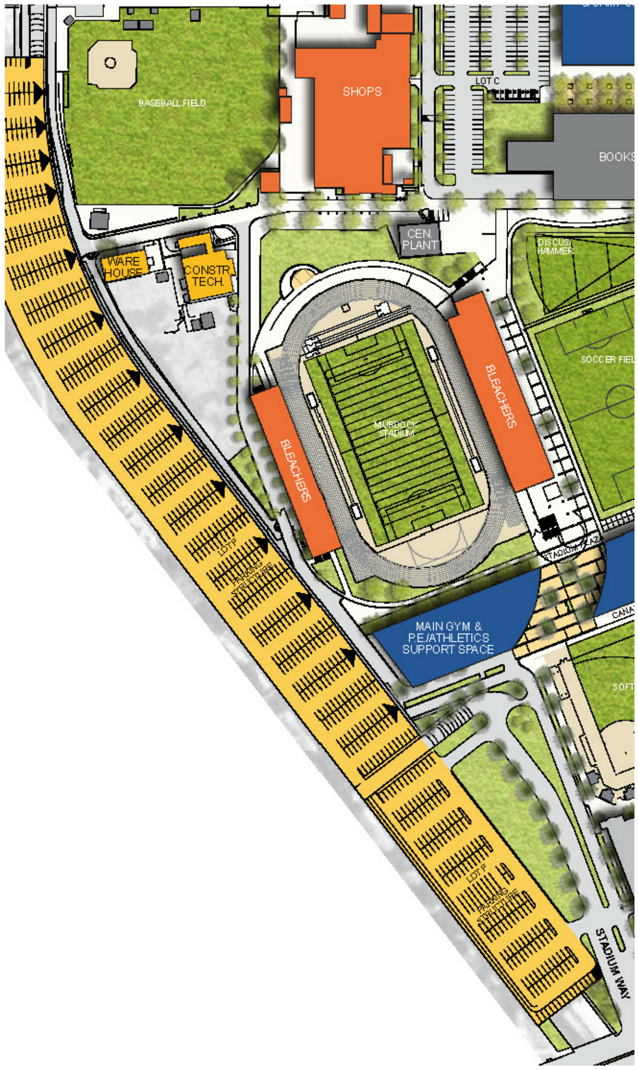

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Figure 44
Future Parking Lot - Parking Lot 1

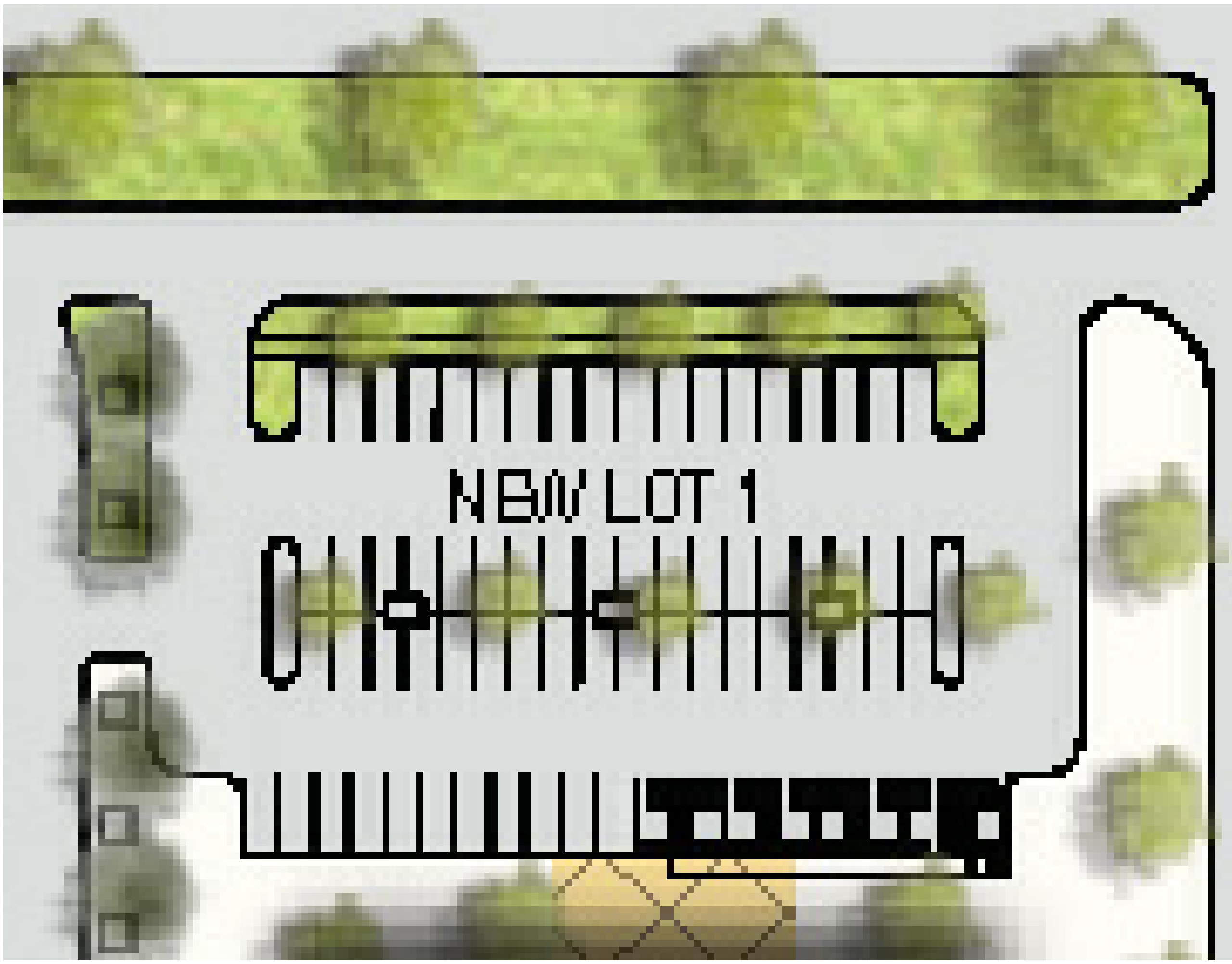

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Figure 45
On-Street Parking

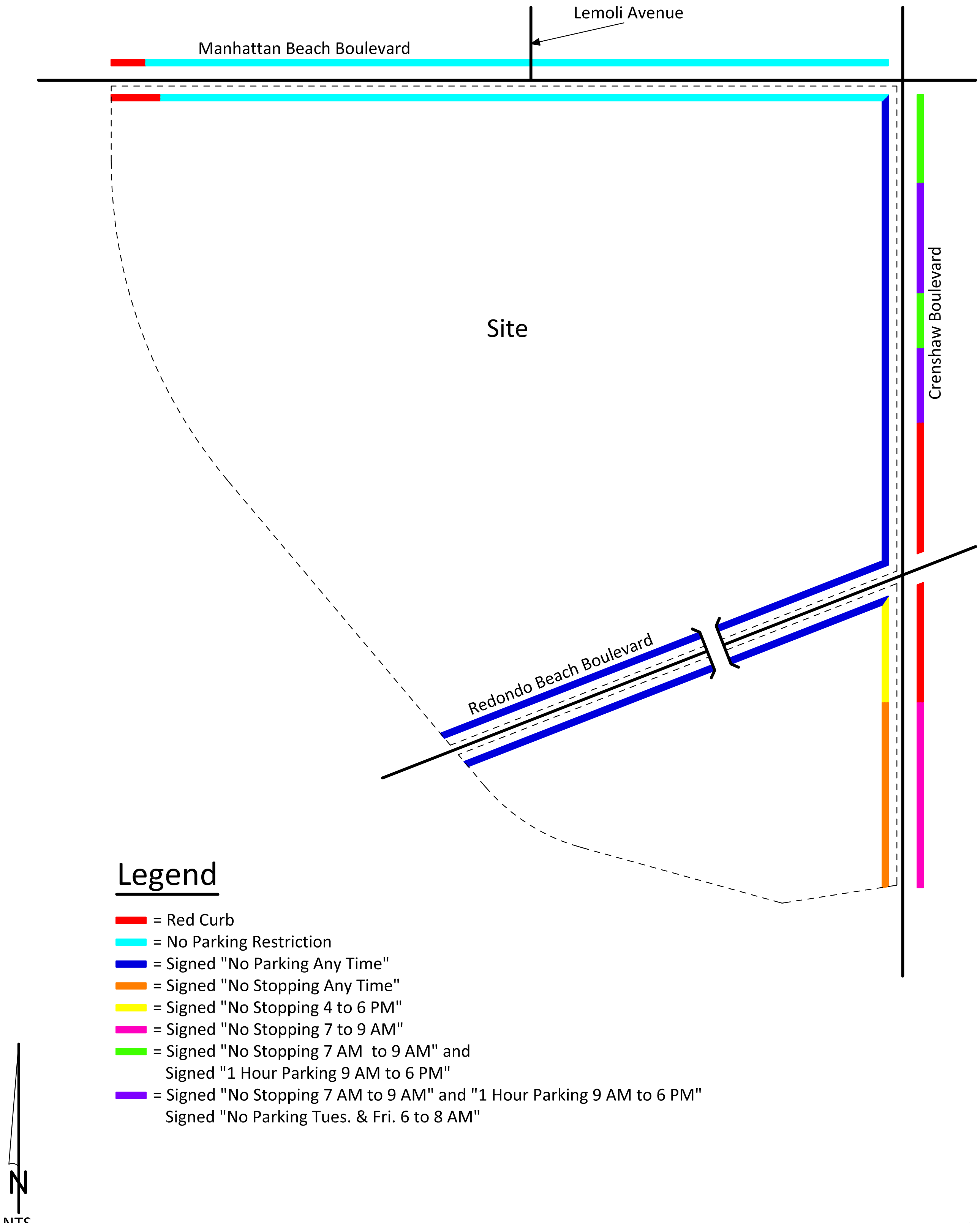

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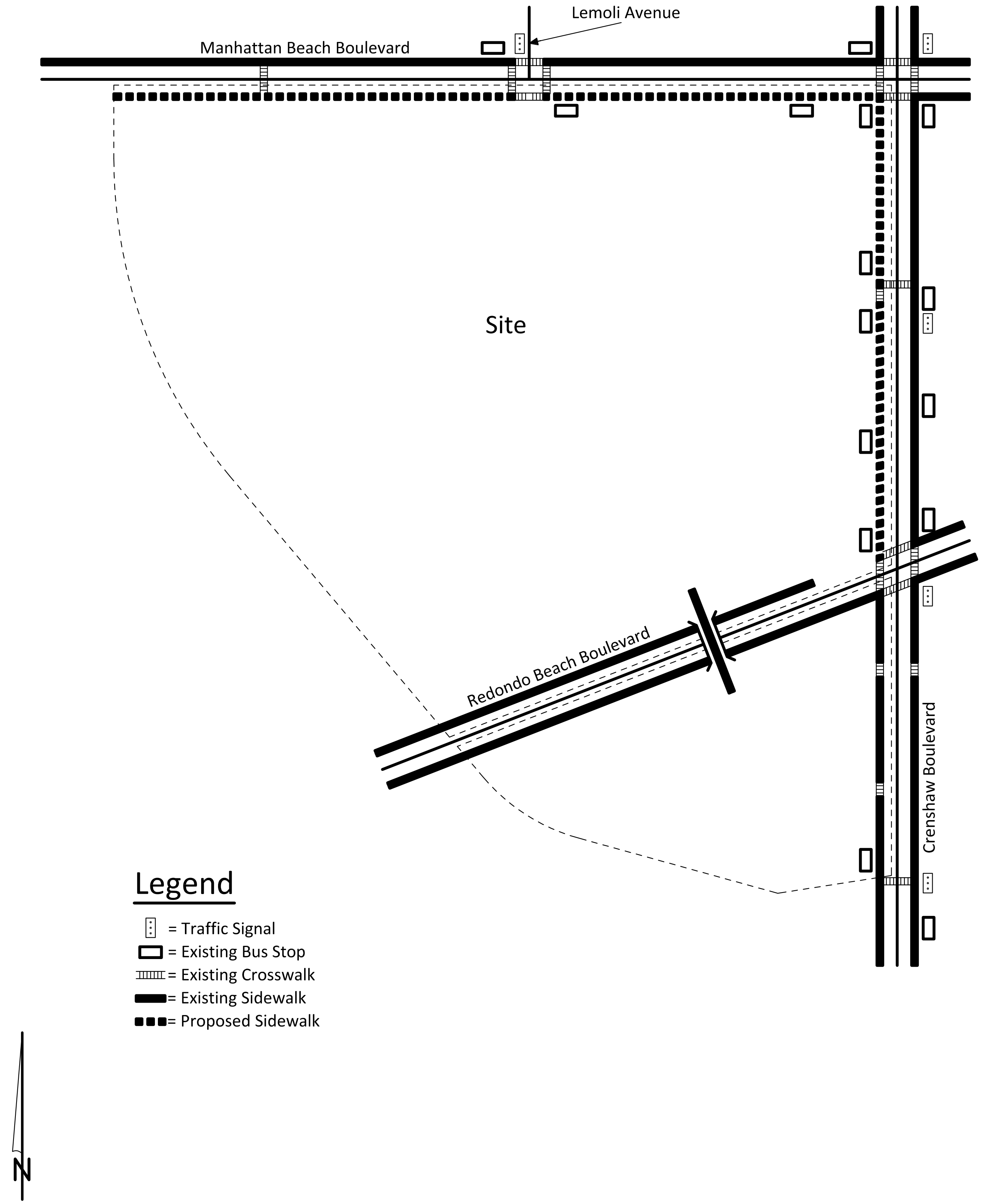
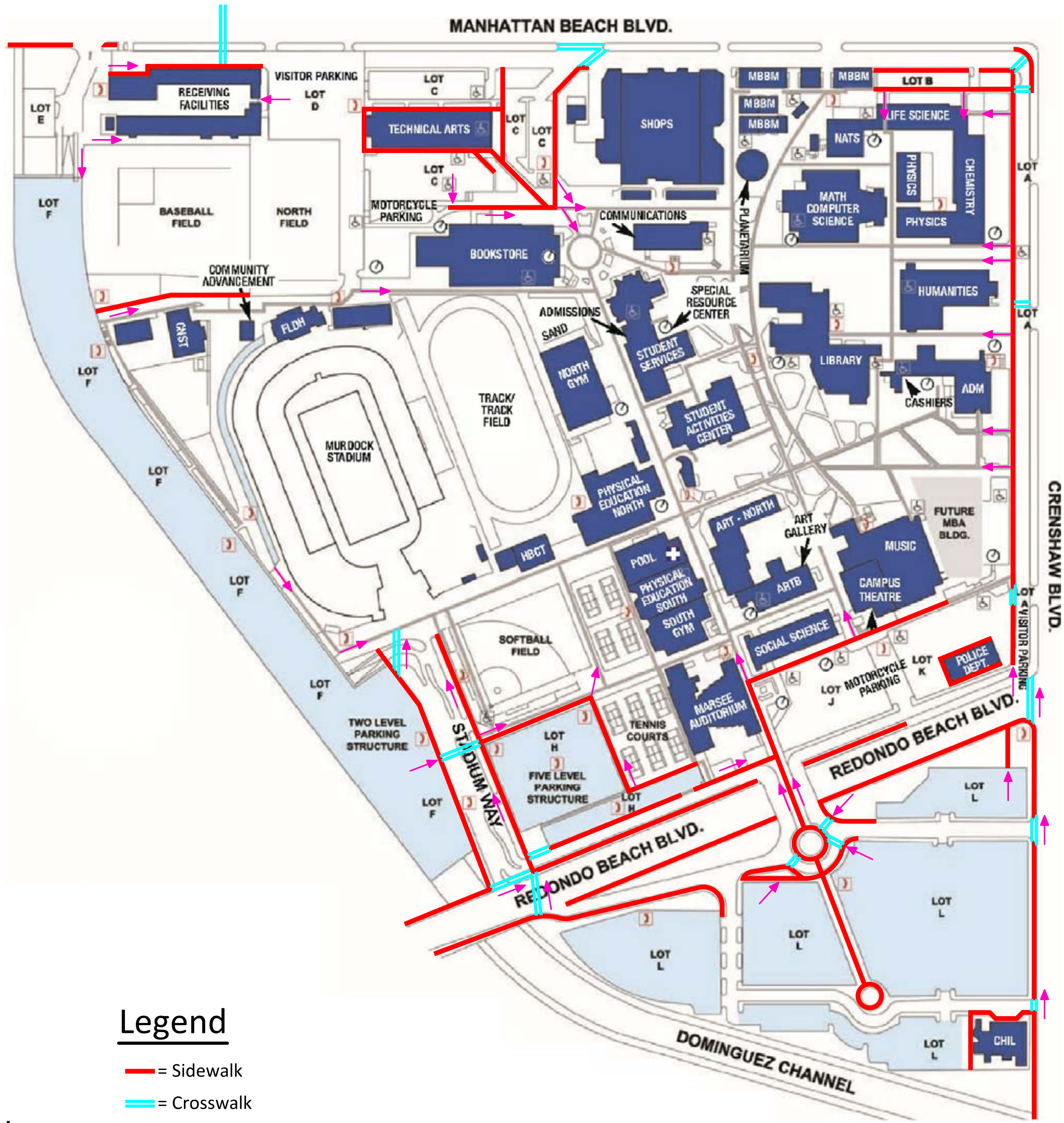
Figure 46
Pedestrian Access



4897a/46

Figure 47
Existing Campus Internal Pedestrian Access



Legend
- = Sidewalk
- = Crosswalk
- = Campus Access

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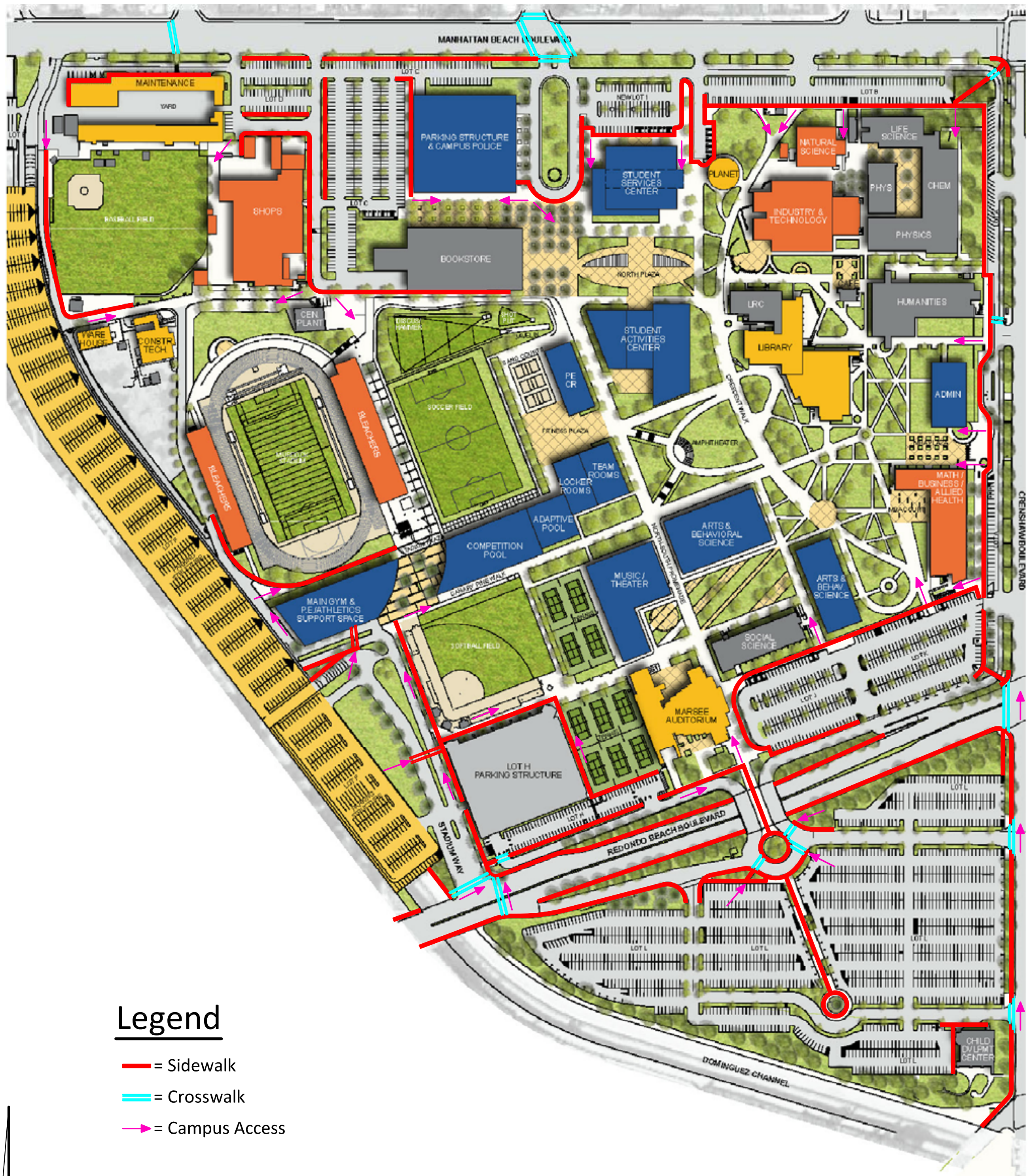
Figure 48
Future Campus Internal Pedestrian Access



Legend

= Sidewalk

= Crosswalk

= Campus Access

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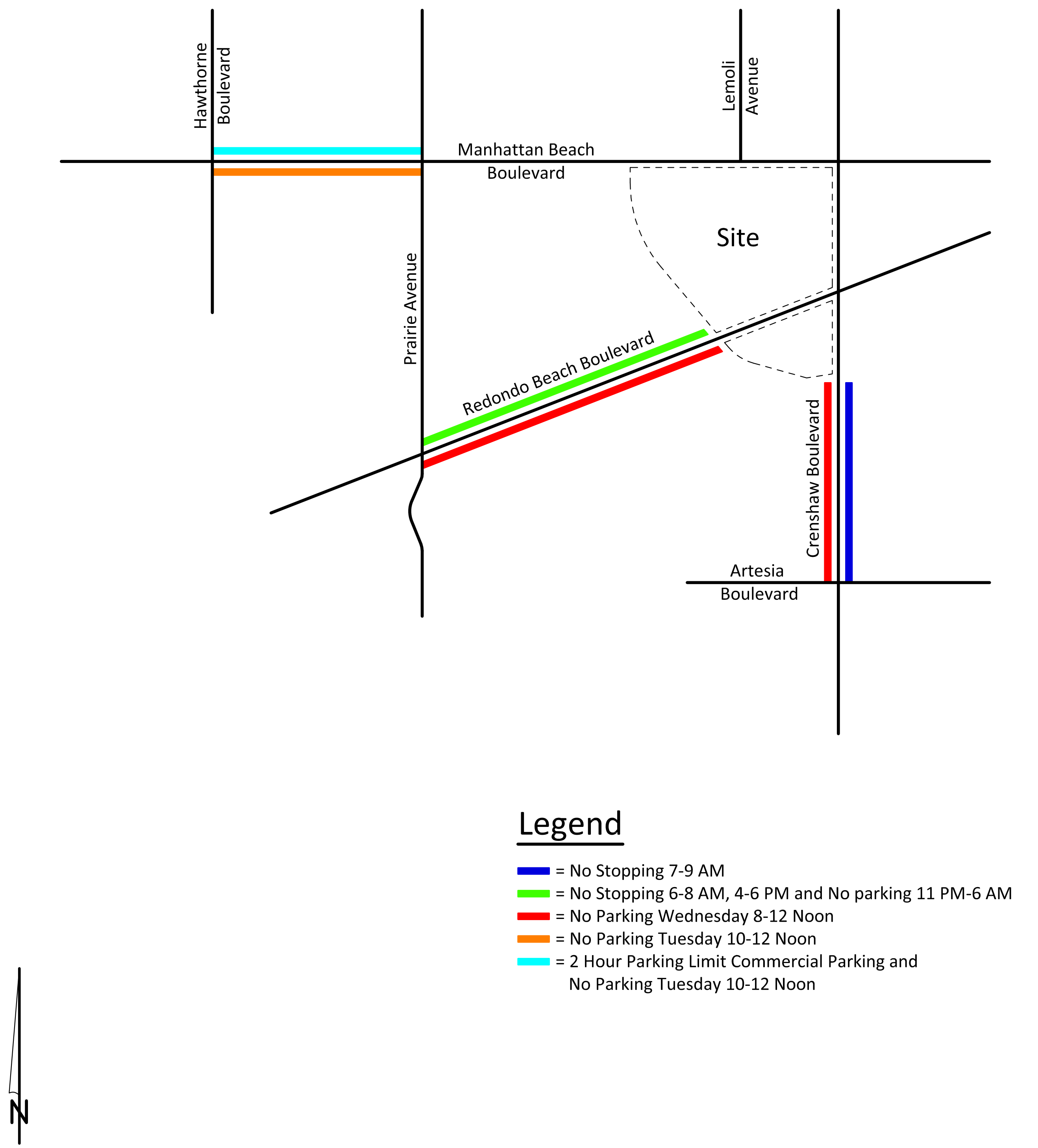
Figure 49
Off-Campus Adjacent Parking



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XVIII. Recommendations

A. Parking Mitigation Measures

1. The college shall install a total of 6,568 parking spaces at buildout of the 2012 Facilities Master Plan and maintain a minimum ratio of 0.28 spaces per FTEs. A parking space utilization rate of equal or less than 90 percent is recommended for day enrollment four weeks into the fall semester. The rate shall be evaluated every three years. Facilities Planning and Service shall monitor compliance.

2. A temporary parking program shall be implemented during the Lot F Parking Structure construction that results in less than 95 percent parking space utilization on campus weekdays. A communication program identifying available parking lots on campus shall also be implemented during the Lot F construction period. Facilities Planning and Service shall monitor compliance.

3. The college shall offer instant rebates on purchase of new discount bus passes for students during any construction phase of the Lot F Channel Parking Structure when the FTEs estimates and the parking factor of 0.28 spaces per FTEs is exceeded. The offer days and the discount shall be included in campus publications, the campus website, posters and in the communication program required by the previous parking mitigation measure. All costs shall be borne by the college. Facilities Planning and Service shall monitor compliance.

4. If parking projections indicate the need for temporary off-campus parking spaces during Lot F Channel Parking Structure construction, the college shall enter into short-term parking agreements with businesses or churches with surplus daytime surface parking east of Crenshaw Boulevard. Other options include short-term parking space rental in area more removed from the campus with shuttle service to campus during the peak morning and evening hours. Facilities Planning and Service shall monitor compliance.

5. The college shall update parking, pedestrian, circulation, and signage plans regularly to address direct and indirect public safety needs for parking on campus during the construction period. Construction employee parking areas shall be identified and the changing parking demands created by construction, increased student enrollments, and new building locations projected to balance parking demand and supply. Facilities Planning and Service shall monitor compliance.

6. The college shall implement a preferential carpool parking permits and spaces, bicycle racks and storage lockers, if needed, restripe and/or redesign existing parking lots for greater efficiency and create carpool and motorcycle parking permits. Facilities Planning and Service shall monitor compliance.

7. An internal circulation plan shall be prepared based on the 2012 Facilities Master Plan. The plan shall specify all parking areas, parking regulations, public bus stops, pathways, shuttle stops, vanpool spaces, handicapped spaces, emergency vehicle access and

signage within the campus needed for buildout of the 2012 Facilities Master Plan. The plan shall comply with all requirements of the American Disabilities Act. All recommendations of the approved internal circulation plan shall be included in construction contracts and implemented. Facilities Planning and Service shall monitor compliance.

B. <u>Pedestrian Mitigation Measures</u>

1. The college shall implement the proposed sidewalk recommendations (see Figure 48) concurrent with adjacent development on the campus. Facilities Planning and Services shall monitor compliance.

2. The future parking lots should incorporate appropriate parking spaces for persons with disabilities in terms of design, location, and access in accordance with ADA (Americans with Disabilities Act) requirements. Facilities Planning and Services shall monitor compliance.

C. <u>Construction Mitigation Measures</u>

1. Contractors shall submit traffic handling plans to Facilities Planning and Services and to the Campus Police Department prior to commencement of demolition or grading. The plans and documents shall comply with the *Work Area Traffic Control Handbook (WATCH)*. Facilities Planning and Services shall approve the final plans and monitor compliance.

2. Demolition and construction contracts shall include plans for temporary sidewalk closures, pedestrian safety on adjacent sidewalks, and vehicle and pedestrian safety along the project perimeter, along construction equipment haul routes on campus and near on-site construction parking areas. These plans shall be reviewed by the Campus Police Division and approved by Facilities Planning and Services. Facilities Planning and Services shall monitor compliance.

3. Construction contractors shall post a flag person at locations near a construction site during major truck hauling activities to protect pedestrians from conflicts with heavy equipment entering or leaving the project site. Facilities Planning and Services shall monitor compliance.

4. Each project construction site shall be adequately barricaded with temporary fencing to secure construction equipment, minimize trespassing, vandalism, short-cut attractions, and reduce hazards during demolition and construction. Facilities Planning and Services shall monitor compliance.

5. The college shall consult with the effected cities on a truck haul route plan for all major earth hauling activities with more than eighty (80) trucks per day shall be established. Hauling of earth materials shall only occur between 9:00 AM and 2:00 PM Monday through Friday and between 8:00 AM and 5:00 PM on Saturdays. Light duty trucks with a weight of no more than 8,500 pounds are exempted from this restriction. Facilities Planning and Services shall ensure compliance.

6. Each construction site shall be adequately barricaded with temporary fencing to secure construction equipment, minimize trespassing, vandalism, short-cut attractions, and reduce hazards during demolition and construction. Facilities Planning and Services shall monitor compliance.

D. **<u>Transportation Demand Management Mitigation Measures</u>**

1. Schedule/fee information for the Los Angeles County Metropolitan Transportation Authority (MTA), Torrance Transit, Municipal Area Express (MAX), and the Gardena Municipal Bus Line shall be made available for students for each term. The college shall offer students discount bus passes for transit lines which offer them. Facilities Planning and Services shall monitor compliance.

Appendices

Appendix A – Eno Foundation College Parking Requirements

APPENDIX A

Eno Foundation
College Parking Requirements

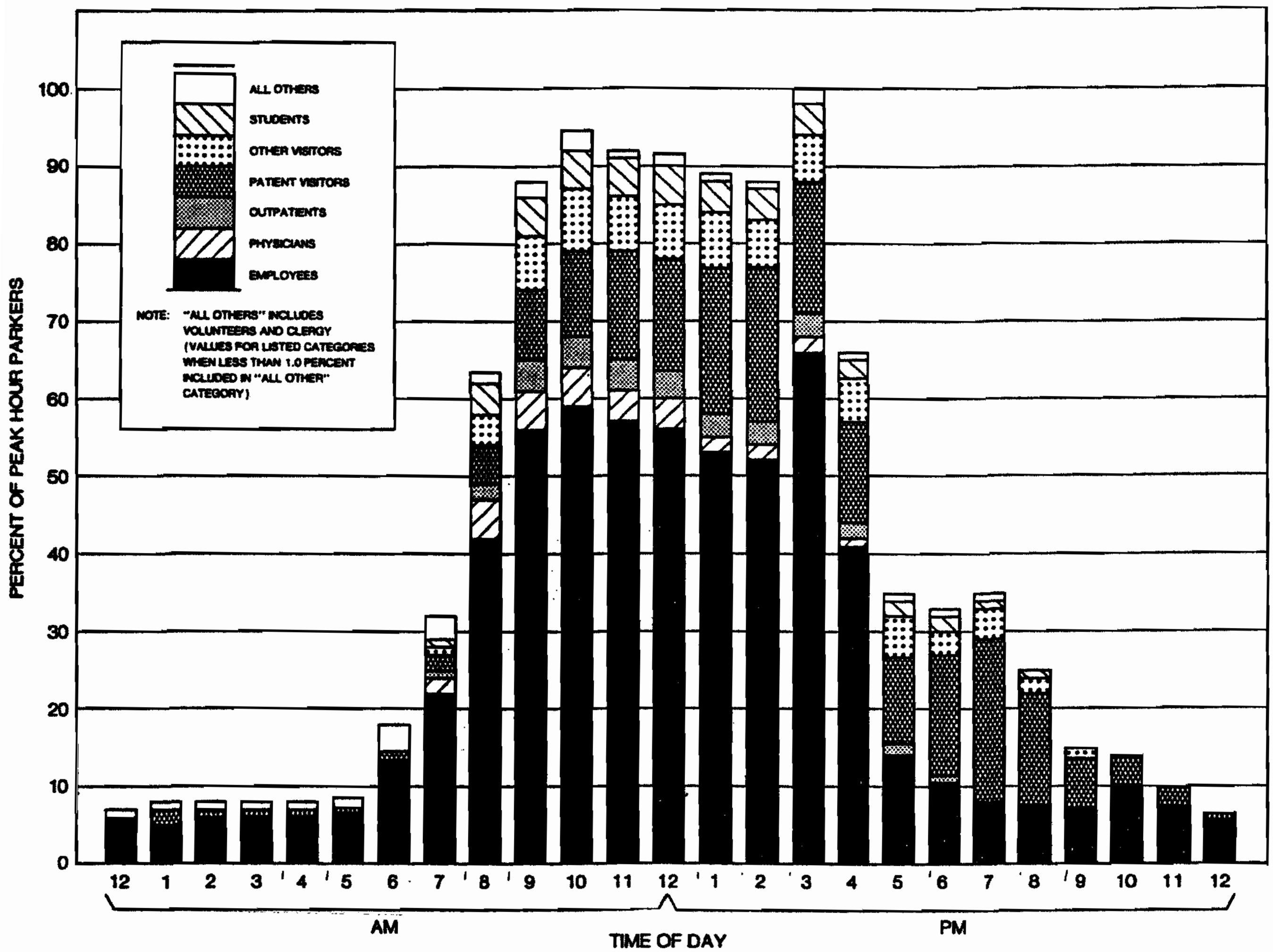


Figure 6.10. Hourly accumulation of parkers by type at medical centers

Source: Wilbur Smith and Associates.

Table 6-24. Hospital Parking Demands

	Spaces per Bed		
	Mean	*STD Deviation*	*Approximate 85 percentile*[a]
6 Hospitals[b]			
Employees (73%)	1.67	0.18	1.85
Doctors (8%)	0.18	0.05	.23
Visitors (19%)	0.43	0.10	.53
Total (100%)	2.28	0.25	2.53
14 General[c] hospitals	2.16	0.38	2.54
14 Medical centers centers	0.60	2.62	3.22
3 Specialty[c] hospitals	4.36	2.30	6.56
3 Extended[c] day care facilities	1.68	0.88	2.56

a. Mean plus 1 standard deviation.
b. Hunnicut, "Parking Loading and Terminal Facilities."
c. Whitlock, *Parking for Institutions and Special Events*, 1982.

needs of each parking demand segment, the resulting number of required parking spaces would be 10 to 25 percent greater than actual daily peak-hour demand for spaces. This emphasizes the need for medical facility parking systems to be flexible in operations and location. For example, spaces used by employees and outpatients during the morning and afternoon can serve peak-period visitor parkers in the early evening. Similar dual-use operations may be combined to provide more efficient use of parking space.

Colleges and Universities

There are more than 3,000 institutions of higher education in the United States, with an aggregate enrollment of over 12 million students.

These institutions vary in size, location, and dependence on car travel. Overall, enrollment averages about 9,000 students, but there are wide variations, with enrollment as low as 135 students (Cathedral College, Douglastown, New York) to over 75,000 students (University of Massachusetts, Boston).

The size of university and college enrollment, faculties, and staff has increased substantially during the past 30 years. During this same period, automobile use — especially by students — has increased dramatically. The combination of rapid increases in enrollment and auto usage has produced major impacts on the physical plant at most universities and colleges.

Basic Variables. Planning for parking must recognize the unique character of each campus. In estimating parking space requirements, it is important to identify specific activities. A campus is a major gathering place for students and visitors; it is a place of employment, and a place of residence for both students and staff. Many universities have large residential populations. At 2-year institutions (community colleges), in contrast, the student is a daily commuter. Many universities also host cultural programs, sporting events and other types of activity that significantly affect campus parking needs.

University parking space needs are affected by (1) daytime and evening enrollment, (2) mix between commuter and residential population, (3) size of faculty and staff, (4) location and frequency of special events, (5) opportunities for ride-sharing and public transport (often keyed to campus design and location), (6) availability and cost of parking, and (7) university policies regarding automobile usage and parking.

Travel Modes. Travel modes at universities vary widely. Analyses of 16 case study universities show that 10 to 85 percent of the students drive. A sampling of these universities (Table 6-25) indicates that auto drivers account for 57 to 81 percent of staff and 16 to 78 percent of students.

Table 6-25. Utilization of Automobile as Mode of Arrival at Selected Universities

	Percent Auto Drivers	
Study University[a]	*Staff*[b]	*Students*[b]
Virginia	81	25
Texas	86	78
Massachusetts	67	38
Texas	69	47
California	95	79
Pennsylvania	57	16
California	70	52

a. See Appendix in source for individual universities.
b. Excludes residents, where applicable.

Source: Whitlock, *Parking for Institutions and Special Events*, 1982.

Parking Accumulation. Figure 6.11 gives parking accumulation patterns for students, faculty, staff, and visitors. Peak-parking accumulation generally occurs mid-morning from about 10 to 11 AM. Resident student parking needs are substantial at 5:30 PM when commuter and staff parking space needs are relatively low.

Parking Demands. Ranges in campus parking demands are shown in Table 6-26. Peak daytime demands for representative universities are as follows:

Faculty parking needs vary from 0.50 to 0.95 parking spaces per daytime staff member. The corresponding 85 percentile design value is 0.92.

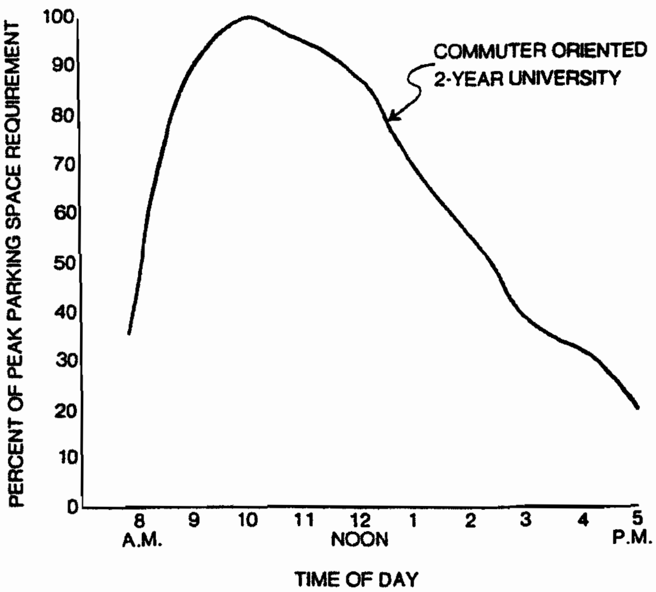
Daytime commuter parking needs range from 0.13 to 0.44 per daytime commuter student. The 85 percentile design value is about 0.37 spaces.

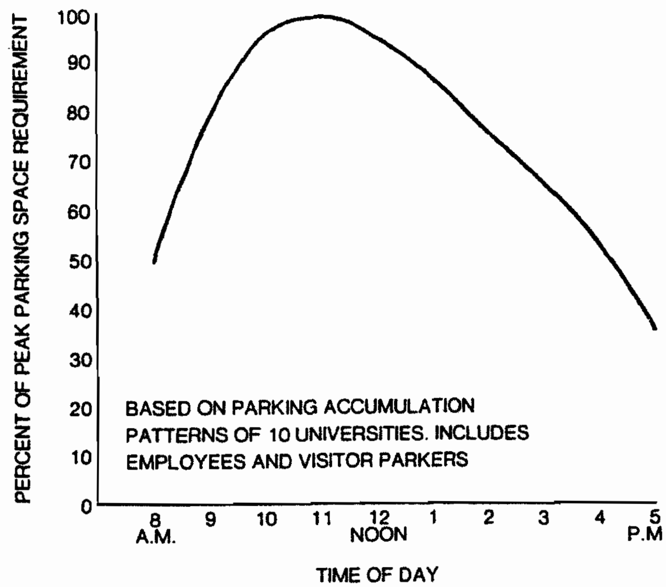
Resident commuter student demands are consistently less than 0.5 spaces per student (ranging from 0.15 to 0.40). The suggested 85 percen-

Table 6-26. Ranges in Peak-Parking Demand at Colleges and Universities

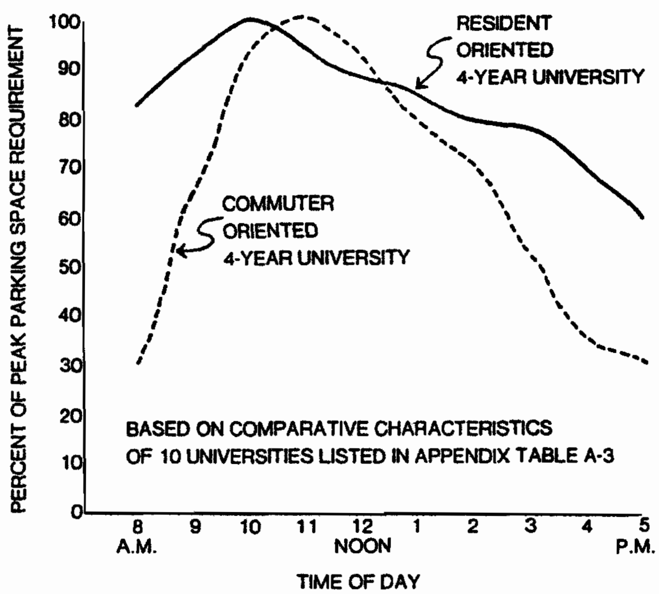
	Units	*Average (rounded)*	*Eno Range (rounded)*	*85% Design Values*	*Urban Land Institute*
Commuter students	per student	0.30	.15-.45	0.37	0.25-0.50
Resident students	per student	0.25	.15-.40	0.36	0.05-0.40
Faculty/staff	per faculty/staff	0.70	.50-1.00	0.92	0.30-.90
Visitors	per faculty/staff		N/A	N/A	.02-.05

Source: Adapted from Eno Foundation for Transportation, Inc. research and Urban Land Institute research.

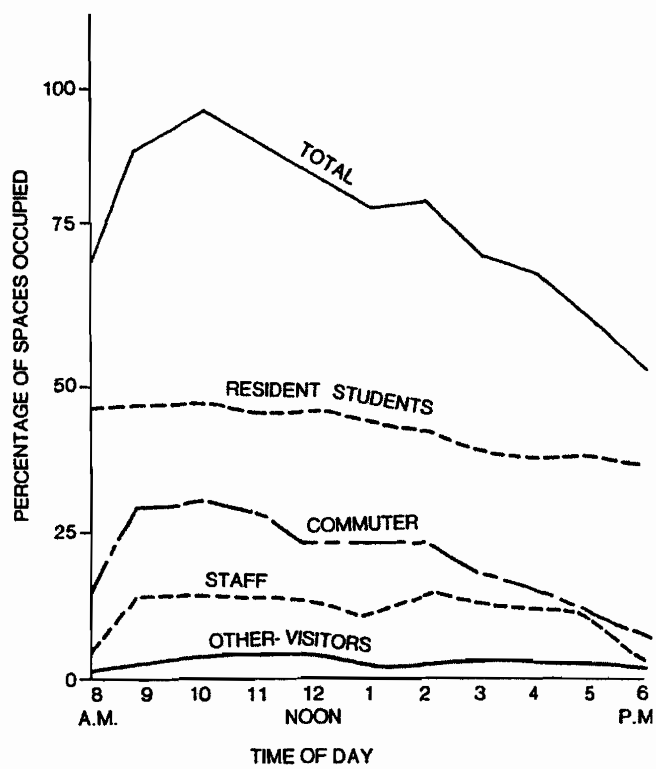




Accumulation patterns of daytime staff parkers.



Accumulation patterns of daytime student parkers.



Daily accumulation of all university parkers.

Figure 6.11. University parking accumulation patterns

Source: Edward M. Whitlock, *Parking for Institutions and Special Events* (Westport, CT: Eno Foundation for Transportation, 1982) p. 26.

tile design value approximates 0.36 spaces.

The amount of required on-campus parking space should be determined separately for each of the three categories. Ranges and design values shown in Table 6-26 provide initial guides. However, their application must be tempered by location and type of university. For financial feasibility analysis, in particular, site-specific parking studies will be required.

Industrial, Commercial, Recreational and Residential Developments

Most urban development takes the form of industrial, commercial, recreational or residential projects. Traffic, parking and planning agencies and community zoning boards are faced with the question: How much parking should specific new developments provide? In response to this question, the following sections describe demand characteristics for some common kinds of land use.

Industry. Parking characteristics of industrial developments depend on location, type and size of industry, employee density and amount of shift work. The following values are representative of industrial parking demands: industrial park, 1.0 space per employee or 2.4 spaces per 1,000 sq ft building area; light industry, 0.8 spaces per employee or 2.1 spaces per 1,000 sq ft; and heavy industry 0.6 spaces per employee or 2.3 1,000 sq ft.

Number of spaces should be based on employment where available. In other cases, demand should be based on building area. Peak demands occur during the daytime shift.

The 0.6 spaces per employee suggested for heavy industry reflects the 0.64 spaces per employee found in various surveys of industrial plants. About 0.79 spaces were actually provided by the facilities surveyed. Supply exceeded demand to reduce the need to search for a space or park illegally.[18]

Office. Office parking demand correlates closely with the number of employees and occupied floor space. Various studies have found an average parking ratio of 2.5 spaces per 1,000 sq ft of occupied floor space;[19] and an average ratio of 2.8 spaces per 1,000 sq ft of building area and 0.8 spaces for employees.[20]

The design (85 percentile) demands for a general office building approximates 0.9 spaces per employee; or 3.0 spaces per 1,000 sq ft of GLA. For office parks, a value of 3.3 spaces per 1,000 sq ft of GLA is suggested. These peaks occur during the normal working day.

Employment should be used as a basis for estimating demand wherever possible. However, where floor space must be used, periodic updates of the criteria are needed to account for changing employee densities. Over the past 40 years, employee density in general office buildings has dropped from about 6 to 3.5 employees per 1,000 sq ft. If such changes continue, appropriate adjustments will be needed to avoid excessive parking space requirements.

Hotels. Most major high-quality hotels are self-contained, multi-use developments. Major restaurants/lounges, banquet/meeting rooms and convention facilities are provided in addition to guest rooms. Various parking generation surveys suggest an average of about 1.2 parking spaces per room —with the peak normally occurring on a weekday evening usually in June, July or August.

More refined demand estimates can be obtained by disaggregating demands for each component of activity. Table 6-27 gives guidelines on an hourly basis for weekdays and Saturdays. These guidelines suggest: 1 space per guest room, 10 spaces per 1,000 sq ft of GLA for restaurants, 0.5 spaces per banquet room and up to 30 spaces per 1,000 sq ft of convention space.

Banks. Drive-in banks with more than 3,500 sq ft of floor space generate a design (85 percentile) parking demand of about 5.5 spaces per 1,000 sq ft. Studies suggest a higher rate of generation for banks with building areas of less than 3,000 sq ft (see Figure 6.12).

Shopping Centers. Shopping centers generate peak-parking demands during the 4-week period between Thanksgiving and Christmas. The Saturday before Christmas is generally the peak day. On this day peak accumulation occurs during mid-afternoon. The 20th highest hour, which is used for design purposes, usually occurs

[18] *Parking Facilities for Industrial Plants* (Washington, D.C.: Institute of Traffic Engineers, 1969), p. 13.
[19] Barton Aschman Associates, *Shared Parking* (Urban Land Institute). The formula was $Y = 2.51x + 0.41$ ($r = 0.94$). Where: x = occupied floor area in thousands of sq ft and Y = demand (spaces).
[20] *Parking Generation* (Institute of Transportation Engineers). The formulas were $LN\ Y = 0.93\ LN\ X_1 + 1.253$ ($r = 0.93$) and $Y = 0.80\ X_2$. Where: X_1 = 1000 sq ft of building area; X_2 = employment; Y = demand; LN = natural logarithm; and r = coefficient of correlation.

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AIR QUALITY ASSESSMENT FOR
EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN
COUNTY OF LOS ANGELES

REPORT #537201AQ01
FEBRUARY 27, 2013

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1.0 INTRODUCTION

The purpose of this report is to assess the potential air quality impacts from El Camino College's 2012 Facilities Master Plan (2012 FMP). A description of the project is presented below in Section 1.1. The existing setting is discussed in Section 2.0. This section provides background information on local, state and federal regulations in Section 2.1, and criteria pollutants and their potential health impacts in Section 2.2. Designations for the attainment of the state and federal ambient air quality standards (AAQS) for the South Coast Air Basin (SCAB) are presented in Section 2.4 and Section 2.3 presents information on the South Coast Air Quality Management Districts (SCAQMD) Air Quality Management Plans (AQMP) which present the plans for the basin to attain all of the AAQS. Climate characteristics of the basin which affect air pollutant concentrations are discussed in Section 2.5. Section 2.6 presents historical air quality data monitored at stations near the proposed project. Section 2.7 presents an estimate of the campuses existing air pollutant emissions. The analysis of the project's potential impacts is presented in Section 3.0. The thresholds used to determine if the project's impact will be significant are discussed in Section 3.1. Section 3.2 presents the analysis of potential short-term impacts due to construction proposed by the project and Section 3.3 analyzes the potential long-term operational impacts due to the project. Consistency with the AQMP is discussed in Section 3.4. Section 4.0 provides a discussion of mitigation measures for impacts identified in the previous sections.

1.1 Project Description

El Camino College is located on a 126-acre parcel bounded by Manhattan Beach Boulevard to the north, Dominguez Channel to the south, Crenshaw Boulevard to the east and Alondra Community Regional Park to the west. The main campus, north of Redondo Beach Boulevard, is located in in the El Camino Village Community of Unincorporated Los Angeles County. The portion of the college south of Redondo Beach Boulevard, Parking Lot L, is located in the City of Redondo Beach. The project borders the City of Gardenia, which is to the east of Crenshaw Boulevard and north of Redondo Beach Boulevard. A vicinity map showing the project location is presented in Figure 1.

Enrollment at the college was 18,224 full time equivalent students (FTES) on- and off-campus for the 2011-2012 school year. The existing facilities at the school total 819,740 assignable square feet (ASF) and 1,277,546 overall gross square footage (OGSF). Figure 2 presents a map showing the existing facilities at the school.

The District's Facilities Planning and Services Division (FPS) projects that the campus will have an on-campus student enrollment of 20,025 FTES in 2020. The 2012 Facilities Master Plan (FMP) was developed by the FPS to accommodate the projected future enrollment, to modify prior Master Plan Updates for the projected facility needs, and to address new planning elements not previously included in the 2003 FMP. The 2012 FMP includes the construction nine new buildings with a total of 695,356 OGSF and renovation of six buildings. Thirteen existing buildings with a total of 646,672 OGSF will be demolished with the project. The net increase in building space with the project is 49,684 OGSF (34,721 ASF). Figure 3 presents a map of the college with the buildout of the 2012 FMP.

The 2012 FMP also includes the structural rehabilitation of the Lot F Channel Parking Structure located on the western campus boundary along with the addition of a third parking level to add approximately 700 parking spaces.

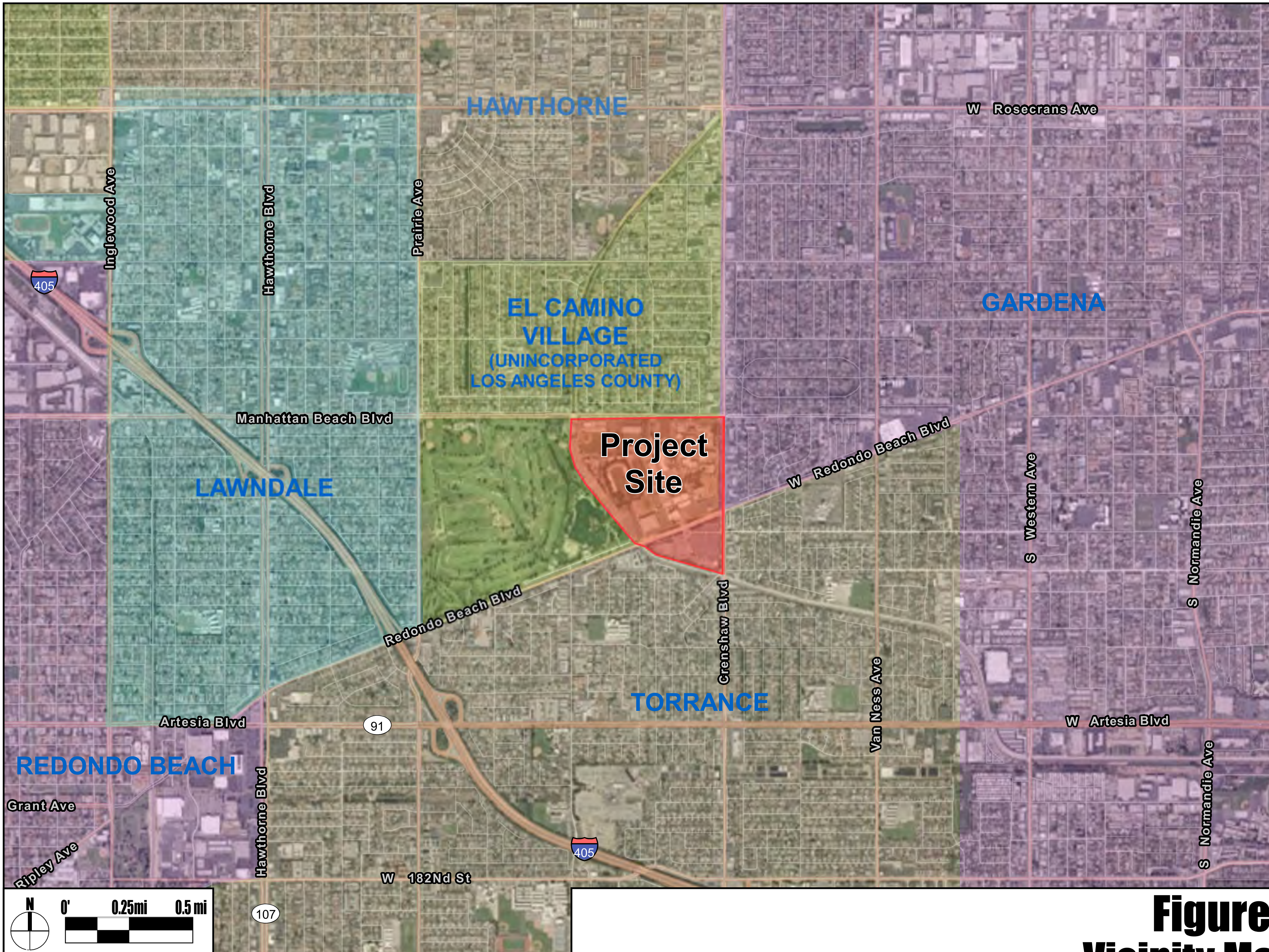

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Figure 1
Vicinity Map

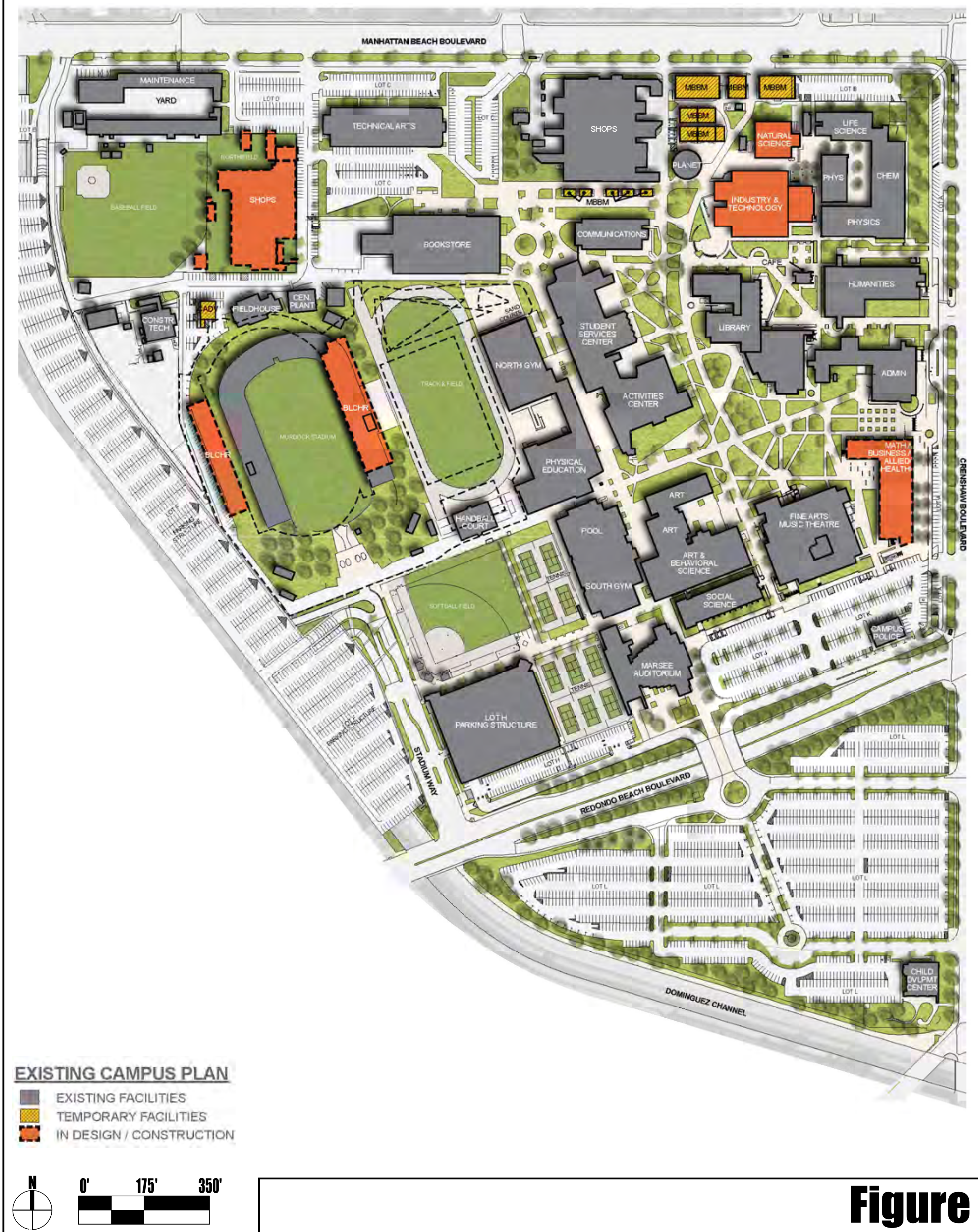

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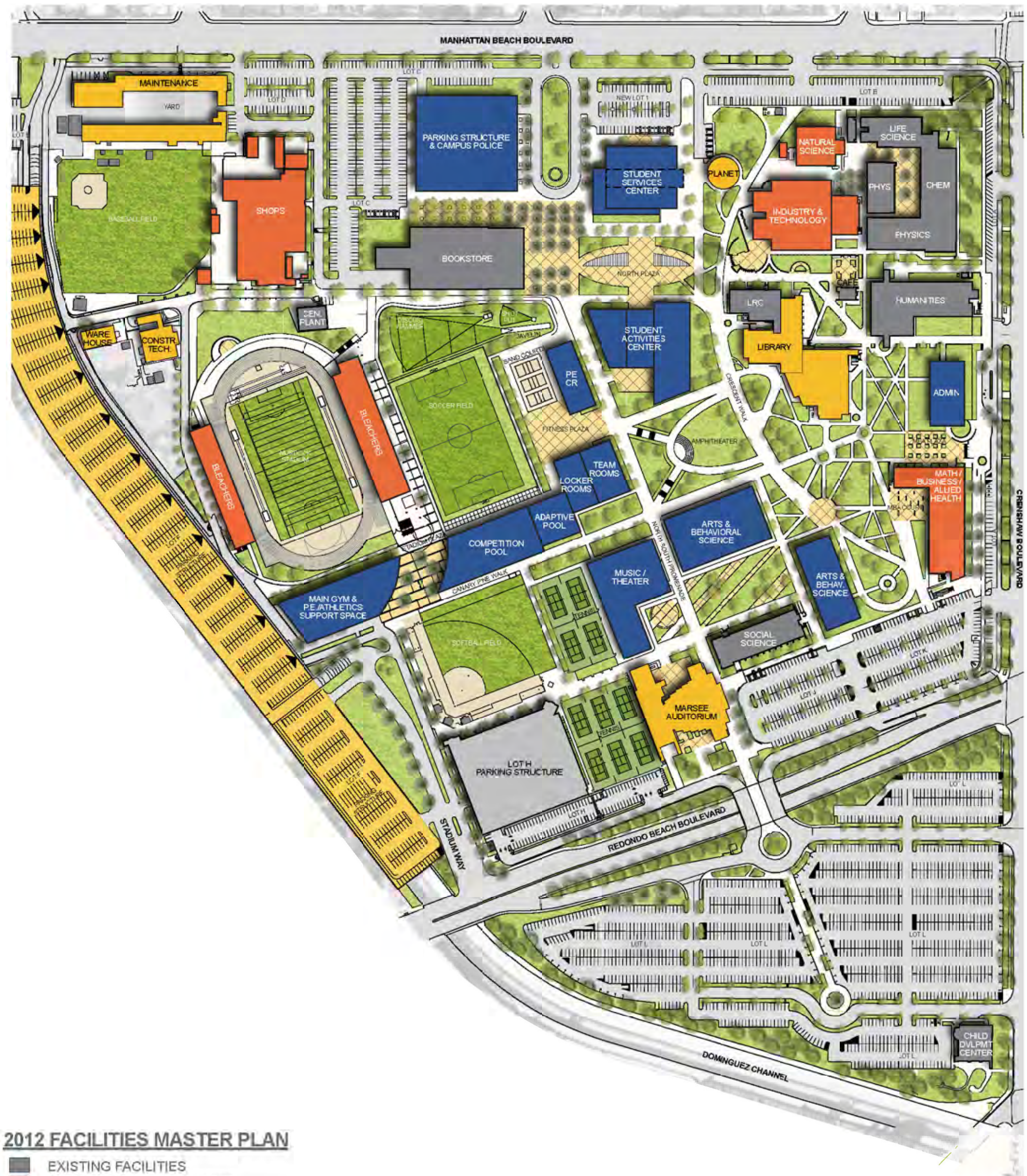
Figure 2
Existing Campus Facilities Map



2012 FACILITIES MASTER PLAN

- EXISTING FACILITIES
- IN DESIGN / CONSTRUCTION
- PROPOSED NEW CONSTRUCTION
- PROPOSED RENOVATIONS

N

0' 175' 350'

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Figure 3
Proposed Master Plan Buildout

2.0 EXISTING SETTING

2.1 Local, State, and Federal Air Quality Agencies

The proposed project is located in the South Coast Air Basin (SCAB). The SCAB is comprised of parts of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The basin is bounded on the west by the Pacific Ocean and surrounded on the other sides by mountains. To the north lie the San Gabriel Mountains, to the north and east the San Bernardino Mountains, to the southeast the San Jacinto Mountains and to the south the Santa Ana Mountains. The basin forms a low plain and the mountains channel and confine airflow, which trap air pollutants.

The primary agencies responsible for regulations to improve air quality in the SCAB are the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The Southern California Association of Governments (SCAG) is an important partner to the SCAQMD, as it is the designated metropolitan planning authority for the area and produces estimates of anticipated future growth and vehicular travel in the basin, which are used for air quality planning. The SCAQMD sets and enforces regulations for non-vehicular sources of air pollution in the basin and works with SCAG to develop and implement Transportation Control Measures (TCM). TCM measures are intended to reduce and improve vehicular travel and associated pollutant emissions.

CARB was established in 1967 by the California Legislature to attain and maintain healthy air quality, conduct research into the causes and solutions to air pollution, and systematically attack the serious problem caused by motor vehicles, which are the major causes of air pollution in the State. CARB sets and enforces emission standards for motor vehicles, fuels, and consumer products. It sets the health based California Ambient Air Quality Standards (CAAQS) and monitors air quality levels throughout the state. The board identifies and sets control measures for toxic air contaminants. The board also performs air quality related research, provides compliance assistance for businesses, and produces education and outreach programs and materials. CARB provides assistance for local air quality districts, such as SCAQMD.

The U.S. Environmental Protection Agency (U.S. EPA) is the primary federal agency for regulating air quality. The EPA implements the provisions of the Federal Clean Air Act (FCAA). This Act establishes national ambient air quality standards (NAAQS) that are applicable nationwide. The EPA designates areas with pollutant concentrations that do not meet the NAAQS as non-attainment areas for each criteria pollutant. States are required by the FCAA to prepare State Implementation Plans (SIP) for designated non-attainment areas. The SIP is required to demonstrate how the areas will attain the NAAQS by the prescribed deadlines and what measures will be required to attain the standards. The EPA also oversees implementation of the prescribed measures. Areas that achieve the NAAQS after a non-attainment designation are redesignated as maintenance areas and must have approved Maintenance Plans to ensure continued attainment of the NAAQS.

The CCAA required all air pollution control districts in the state to prepare a plan prior to December 31, 1994 to reduce pollutant concentrations exceeding the CAAQS and ultimately achieve the CAAQS. The districts are required to review and revise these plans every three years. The SCAQMD satisfies this requirement through the publication of an Air Quality Management Plan (AQMP). The AQMP is developed by SCAQMD and SCAG in coordination with local governments and the private sector. The AQMP is incorporated into the SIP by CARB to satisfy the FCAA requirements discussed above. The AQMP is discussed further in Section 2.4.

2.2 Criteria Pollutants, Health Effects, and Standards

Under the Federal Clean Air Act (FCAA), the U.S. EPA has established National Ambient Air Quality Standards (NAAQS) for six major pollutants; ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead. These six air pollutants are often referred to as the criteria pollutants. The NAAQS are two tiered: primary, to protect public health, and secondary, to prevent degradation to the environment (i.e., impairment of visibility, damage to vegetation and property).

Under the California Clean Air Act (CCAA), the California Air Resources Board has established California Ambient Air Quality Standards (CAAQS) to protect the health and welfare of Californians. State standards have been established for the six criteria pollutants as well as four additional pollutants; visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Table 1 presents the state and national ambient air quality standards. A brief explanation of each pollutant and their health effects is presented follows.

2.2.1 Ozone (O_3)

Ozone is a secondary pollutant; it is not directly emitted. Ozone is the result of chemical reactions between volatile organic compounds (VOC) (also referred to as reactive organic gasses (ROG)) and nitrogen oxides (NO_x), which occur only in the presence of bright sunlight. Sunlight and hot weather cause ground-level ozone to form in the air. As a result, it is known as a summertime air pollutant. Ground-level ozone is the primary constituent of smog. Because ozone is formed in the atmosphere, high concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when ozone levels are unhealthy. Numerous scientific studies have linked ground-level ozone exposure to a variety of problems, including:

- Lung irritation that can cause inflammation much like sunburn;
- Wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities;
- Permanent lung damage to those with repeated exposure to ozone pollution; and
- Aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.

Ground-level ozone can have detrimental effects on plants and ecosystems. These effects include:

- Interfering with the ability of sensitive plants to produce and store food, making them more susceptible to certain diseases, insects, other pollutants, competition and harsh weather;
- Damaging the leaves of trees and other plants, negatively impacting the appearance of urban vegetation, national parks, and recreation areas; and
- Reducing crop yields and forest growth, potentially impacting species diversity in ecosystems.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1,3]	Federal Standards[2]	
			Primary[3,4]	Secondary[3,5]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	--	--
	8 Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as Primary
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM[6]	20 µg/m^3	--	Same as Primary
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	--	35 µg/m^3	Same as Primary
	AAM[6]	12 µg/m^3	15.0 µg/m^3	Same as Primary
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	None
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	--	--
Nitrogen Dioxide (NO_2)[7]	1 Hour	0.18 ppm (438 µg/m^3)	100 ppb (188 µg/m^3)	--
	AAM[6]	0.030 ppm (56 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
Sulfur Dioxide (SO_2)[8]	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	--
	3 Hour	--	--	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3) (for certain areas)[8]	--
	AAM[6]	--	0.030 ppm (80 µg/m^3) (for certain areas)[8]	--
Lead[10]	30 day Avg.	1.5 µg/m^3	--	--
	Calendar Quarter	--	1.5 µg/m^3 (for certain areas)[10]	Same as Primary
	Rolling 3 Month Avg.	--	0.15 µg/m^3	
Visibility Reducing Particles[11]	8 hour	Extinction coefficient of 0.23 per km -- visibility ≥ 10 miles (0.07 per km -- ≥30 miles for Lake Tahoe)	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride[9]	24 Hour	0.01 ppm (26 µg/m^3)		

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded.
2. National standards (other than ozone, $PM_{10,}$ $PM_{2.5}$, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured each site each year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25° C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25° C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

(Footnotes continued on next page)

4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
5. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. Annual Arithmetic Mean
7. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.
8. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
9. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
10. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
11. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

-- No Standard

2.2.2 Particulate Matter (PM_{10} & $PM_{2.5}$)

Particulate matter includes both aerosols and solid particles of a wide range of size and composition. Of particular concern are those particles smaller than 10 microns in size (PM_{10}) and smaller than or equal to 2.5 microns ($PM_{2.5}$). The size of the particulate matter is referenced to the aerodynamic diameter of the particulate. Smaller particulates are of greater concern because they can penetrate deeper into the lungs than large particles.

The principal health effect of airborne particulate matter is on the respiratory system. Short-term exposures to high $PM_{2.5}$ levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposures to high $PM_{2.5}$ levels are associated with premature mortality and development of chronic respiratory disease. Short-term exposures to high PM10 levels are associated with hospital admissions for cardiopulmonary diseases, increased respiratory symptoms and possible premature mortality. The EPA has concluded that available evidence does not suggest an association between long-term exposure to PM_{10} at current ambient levels and health effects.

$PM_{2.5}$ is directly emitted in combustion exhaust and formed from atmospheric reactions between various gaseous pollutants including nitrogen oxides (NO_x) sulfur oxides (SO_x) and volatile organic compounds (VOC). PM_{10} is generally emitted directly as a result of mechanical processes that crush or grind larger particles or the re suspension of dusts most typically through construction activities and vehicular travels. $PM_{2.5}$ can remain suspended in the atmosphere for days and weeks and can be transported long distances. PM_{10} generally settles out of the atmosphere rapidly and are not readily transported over large distances.

2.2.3 Carbon Monoxide (CO)

Carbon monoxide is a colorless and odorless gas, which in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. Carbon monoxide combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High carbon monoxide concentrations can lead to headaches, aggravation of cardiovascular disease, and impairment of central nervous system functions. Carbon monoxide concentrations can vary greatly over comparatively short distances. Relatively high concentrations are typically found near crowded intersections, along heavily used roadways carrying slow-moving traffic, and at or near ground level. Even under the most severe meteorological and traffic conditions, high concentrations of carbon monoxide are limited to locations within a relatively short distance (i.e., up to 600 feet or 185 meters) of heavily traveled roadways. Overall carbon monoxide emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973.

2.2.4 Nitrogen Dioxide (NO_2)

Nitrogen gas, normally relatively inert (unreactive), comprises about 80% of the air. At high temperatures (i.e., in the combustion process) and under certain other conditions it can combine with oxygen, forming several different gaseous compounds collectively called nitrogen oxides (NO_x). Nitric oxide (NO) and nitrogen dioxide (NO_2) are the two most important compounds. Nitric oxide is converted to nitrogen dioxide in the atmosphere. Nitrogen dioxide (NO_2) is a red-brown pungent gas. Motor vehicle emissions are the main source of NO_x in urban areas.

Nitrogen dioxide is toxic to various animals as well as to humans. Its toxicity relates to its ability to form nitric acid with water in the eye, lung, mucus membrane and skin. In animals, long-term exposure to nitrogen oxides increases susceptibility to respiratory infections lowering their resistance to such diseases as pneumonia and influenza. Laboratory studies show susceptible humans, such as asthmatics, exposed to high concentrations of NO_2 can suffer lung irritation and potentially, lung damage. Epidemiological studies have also shown associations between NO_2 concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

NO_x is a combination of primarily NO and NO_2. While the NAAQS only addresses NO_2, NO and the total group of nitrogen oxides is of concern. NO and NO_2 are both precursors in the formation of ozone and secondary particulate matter as discussed in Sections 2.2.1 and 0. Because of this and that NO emissions largely convert to NO_2; NO_x emissions are typically examined when assessing potential air quality impacts.

2.2.5 Sulfur Dioxide (SO_2)

Sulfur oxides (SO_x) constitute a class of compounds of which sulfur dioxide (SO_2) and sulfur trioxide (SO_3) are of greatest importance. Ninety-five percent of pollution related SO_x emissions are in the form of SO_2. SO_x emissions are typically examined when assessing potential air quality impacts of SO_2. Combustion of fossil fuels for generation of electric power is the primary contributor of SO_x emissions. Industrial processes, such as nonferrous metal smelting, also contribute to SO_x emissions. SO_x is also formed during combustion of motor fuels. However, most of the sulfur has been removed from fuels greatly reducing SO_x emissions from vehicles.

SO_2 combines easily with water vapor, forming aerosols of sulfurous acid (H_2SO_3), a colorless, mildly corrosive liquid. This liquid may then combine with oxygen in the air, forming the even more irritating and corrosive sulfuric acid (H_2SO_4). Peak levels of SO_2 in the air can cause temporary breathing difficulty for people with asthma who are active outdoors. Longer-term exposures to high levels of SO_2 gas and particles cause respiratory illness and aggravate existing heart disease. SO_2 reacts with other chemicals in the air to form tiny sulfate particles which are measured as $PM_{2.5}$. The heath effects of $PM_{2.5}$ are discussed in Section 2.2.2.

2.2.6 Lead (Pb)

Lead is a stable compound, which persists and accumulates both in the environment and in animals. In humans, it affects the blood-forming or hematopoietic, the nervous, and the renal systems. In addition, lead has been shown to affect the normal functions of the reproductive, endocrine, hepatic, cardiovascular, immunological, and gastrointestinal systems, although there is significant individual variability in response to lead exposure. Since 1975, lead emissions have been in decline due in part to the introduction of catalyst-equipped vehicles, and decline in production of leaded gasoline. In general, an analysis of lead is limited to projects that emit significant quantities of the pollutant (i.e. lead smelters) and are not applied to transportation projects.

2.2.7 Visibility Reducing Particulates

Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. A separate standard for visibility-reducing particles that is applicable only in the Lake Tahoe Air Basin is based on reduction in scenic quality.

2.2.8 Sulfates (SO_4^{2-})

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO_2) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

2.2.9 Hydrogen Sulfide (H_2S)

Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. It can also be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard will result in exposure to a very disagreeable odor. In 1984, an ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

2.2.10 Vinyl Chloride (Chloroethene)

Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes in liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

2.3 South Coast Air Basin Air Quality Attainment Designations

Based on monitored air pollutant concentrations, the U.S. EPA and CARB designate areas relative to their status in attaining the NAAQS and CAAQS respectively. Table 2 lists the current attainment designations for the SCAB. For the Federal standards, the required attainment date is also shown. The Unclassified designation indicates that the air quality data for the area does not support a designation of attainment or nonattainment.

Table 2
Designations of Criteria Pollutants for the SCAB

Pollutant	Federal	State
Ozone (O_3)	Extreme (2024)	Nonattainment
Respirable Particulate Matter (PM_{10})	Serious Nonattainment (2006)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment (2015)	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance (2000)	Attainment
Nitrogen Dioxide (NO_2)	Attainment/Maintenance (1995)	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment
Visibility Reducing Particles	n/a	Unclassified
Sulfates	n/a	Unclassified
Hydrogen Sulfide	n/a	Attainment
Vinyl Chloride	n/a	Attainment

Table 2 shows that the U.S. EPA has designated SCAB as extreme non-attainment for ozone, serious non-attainment for PM_{10}, non-attainment for $PM_{2.5}$, and attainment/maintenance for CO and NO_2. The basin has been designated by the state as non-attainment for ozone, PM_{10}, and $PM_{2.5}$. For the federal designations, the qualifiers, extreme and serious, affect the required attainment dates as the federal regulations have different requirements for areas that exceed the standards by greater amounts at the time of attainment/non-attainment designation. The SCAB is designated as in attainment of the Federal SO_2 and lead NAAQS as well as the state CO, NO_2, SO_2, lead, hydrogen sulfide, and vinyl chloride CAAQS.

In 1997, U.S. EPA issued a new ozone NAAQS of 0.08 ppm using an 8-hour averaging time. Implementation of this standard was delayed by several lawsuits. Attainment/non-attainment designations were issued on April 15, 2004 and became effective on June 15, 2005. The SCAB was originally designated severe-17 non-attainment, which required attainment of the Federal Standard by June 15, 2021. In 2007, the SCAQMD and CARB requested that U.S. EPA change the nonattainment status of the 8-hour ozone standard to extreme and this request was granted in August 2009. This change of classifications extends the attainment date by three years to 2024 but also requires the SCAQMD to incorporate more stringent air quality regulations such as lower permitting thresholds and implementing reasonably available control technologies at more sources. This change also allows for the use of undefined reductions (i.e. "black box") based on the anticipated development of new control technologies or improvement of existing technologies in the attainment plan. In 2008 EPA announced that it was lowering the 8-hour Ozone standard. This revision to the Ozone standard has been delayed due to legal challenges, further reviews of scientific evidence and interagency consultation. In 2011, EPA recommended lowering the 8-hour ozone standard to 0.070 ppm. However, the previously adopted standard of 0.080 ppm will remain in effect while the agency continues the on-going 5 year review of the updated science which is scheduled to be completed in 2013.

On April 28, 2005, CARB adopted an 8-hour ozone standard of 0.070 ppm. The California Office of Administrative Law approved the rulemaking and filed it with the Secretary of State on April 17, 2006. The standard became effective on May 17, 2006. California has retained the 1-hour concentration standard of 0.09 ppm. To be redesignated as attainment by the state the basin will need to achieve both the 1-hour and 8-hour ozone standards.

The SCAB was designated as moderate non-attainment of the PM_{10} standards when the designations were initially made in 1990 with a required attainment date of 1994. In 1993, the basin was redesignated as serious non-attainment with a required attainment date of 2006 because it was apparent that the basin could not meet the PM_{10} standard by the 1994 deadline. At this time, the Basin has met the PM_{10} standards at all monitoring stations except the western Riverside where the annual PM_{10} standard has not been met. However, on September 21, 2006, the U.S. EPA announced that it was revoking the annual PM_{10} standard as research had indicated that there were no considerable health effects associated with long-term exposure to PM_{10}. With this change, the basin is technically in attainment of the federal PM_{10} standards although the redesignation process has not yet begun.

In July 1997, U.S. EPA issued NAAQS for fine particulate matter ($PM_{2.5}$). The $PM_{2.5}$ standards include an annual standard set at 15 micrograms per cubic meter ($\mu g/m^3$), based on the three-year average of annual mean $PM_{2.5}$ concentrations and a 24-hour standard of 65 $\mu g/m^3$, based on the three-year average of the 98th percentile of 24-hour concentrations. Implementation of these standards was delayed by several lawsuits. On January 5, 2005, EPA took final action to designate attainment and nonattainment areas under the NAAQS for $PM_{2.5}$ effective April 5, 2005. The SCAB was designated as non-attainment with an attainment required as soon as possible but no later than 2010. EPA may grant attainment date extensions of up to five years in areas with more severe $PM_{2.5}$ problems and where emissions control measures are not available or feasible. It is likely that the SCAB will need this additional time to attain the standard

On September 21, 2006, the U.S. EPA announced that the 24-hour $PM_{2.5}$ standard was lowered to 35 $\mu g/m^3$. The EPA announced attainment/non-attainment designations for the revised $PM_{2.5}$ standard on November 13, 2009 with an effective date of December 14, 2009. The SCAB was found to be in non-attainment of the standard. The SCAQMD has three years from the effective date to submit a plan demonstrating attainment of the standard by April 2015, although the U.S. EPA could grant an extension of up to five years.

The Federal attainment deadline for CO was to be December 31, 2000 but at that time the basin still had measured exceedances of the CO NAAQS. The basin was granted an extension to attain the standard and has not had any violations of the federal CO standards since 2002. In March 2005, the South Coast AQMD adopted a CO Redesignation Request and Maintenance Plan. On May 11, 2007, the U.S. EPA announced approval of the Redesignation Request and Maintenance Plan and that, effective June 11, 2007, the SCAB would be re-designated as attainment/maintenance for the federal CO NAAQS. The plan provides for maintenance of the federal CO air quality standard until at least 2015 and commits to revising the Plan in 2013 to ensure maintenance through 2025.

The federal annual NO_2 standard was met for the first time in 1992 and has not been exceeded since. The SCAB was redesignated as attainment for NO_2 in 1998. The basin will remain a maintenance/attainment area until 2018, assuming the NO_2 standard is not exceeded.

Table 2 shows that SCAB is designated as in attainment of the SO_2 and lead NAAQS as well as the state CO, NO_2, SO_2, lead, hydrogen sulfide, and vinyl chloride CAAQS. Generally, these pollutants are not considered a concern in the SCAB.

2.4 Air Quality Management Plan (AQMP)

As, discussed above, the CAA requires plans to demonstrate attainment of the NAAQS for which an area is designated as nonattainment. Further, the CCAA requires SCAQMD to revise its plan to reduce pollutant concentrations exceeding the CAAQS every three years. In the SCAB, SCAQMD and SCAG, in coordination with local governments and the private sector, develop the Air Quality Management Plan (AQMP) for the air basin to satisfy these requirements. The AQMP is the most important air management document for the basin because it provides the blueprint for meeting state and federal ambient air quality standards.

The 2003 AQMP is the current Federally approved applicable air plan for ozone. The 2003 AQMP was adopted locally on August 1, 2003, by the governing board of the SCAQMD. CARB adopted the plan as part of the California State Implementation Plan on October 23, 2003. The PM_{10} attainment plan from the 2003 AQMP received final approval from the U.S. EPA on November 14, 2005 with an effective date of December 14, 2005. As of February 14, 2007 the U.S. EPA had not acted on the ozone attainment plan of the 2003 AQMP. On this date, CARB announced that it was rescinding the ozone attainment plan from the 2003 AQMP with the intention to expedite approval of the 2007 AQMP. However, on March 10, 2009 the U.S. EPA announced partial approval and partial disapproval of the ozone attainment plan of the 2003 AQMP effective April 9, 2009. The portions disapproved by the U.S. EPA were determined to not be required by the FCAA because they represented revisions to previously approved AQMP elements. Even with the disapproved elements the 2003 AQMP satisfied the requirements of the EPA and did not trigger sanction clocks. The 2007 AQMP was adopted by the SCAQMD on June 1, 2007. CARB adopted the plan as a part of the California State Implementation Plan on September 27, 2007. The State Implementation Plan was submitted to the U.S. EPA on November 16, 2007. The U.S. EPA has not taken action on the 2007 AQMP at this time.

The 2007 AQMP was prepared in response to the implementation of the federal $PM_{2.5}$ and 8-hour ozone NAAQS. The implementation of the new standards required completion of plan addressing attainment of the 8-hour ozone standard by June of 2007 and completion of a plan addressing the $PM_{2.5}$ standard one year later, in April of 2008. SCAQMD determined that it was most prudent to prepare an integrated plan to address both pollutants. The attainment date for the $PM_{2.5}$ NAAQS is earlier (i.e., 2015) than the attainment date for the ozone NAAQS (i.e.,

2021) and the district felt that delaying a plan for $PM_{2.5}$ by a year could jeopardize the basin's ability to attain the standard. Further, development of a plan for ozone would have likely focused on lowering VOC emissions, which would have no effect on $PM_{2.5}$ levels. Reductions in NO_x emissions result in reductions in both ozone and $PM_{2.5}$ levels.

The 2007 AQMP demonstrates attainment of the 65 $\mu g/m^3$ 24-hour average and $15 \mu g/m^3$ annual average $PM_{2.5}$ standards by the 2015 deadline. However, it should be noted that in September of 2006, the U.S. EPA lowered the 24-hour $PM_{2.5}$ NAAQS to 35 $\mu g/m^3$. An attainment plan for the revised standard will need to be completed by December 14, 2013. The deadline for meeting the revised standard will not change (i.e., April 2015) but five-year extensions to attain the standard may be granted by the U.S. EPA.

The 2007 AQMP determined that the basin would not be able to achieve the 0.08-ppm 8-hour ozone standard by the 2021 deadline without the use of "black box" measures. "Black box" measures anticipate the development of new technologies or improving existing control technologies that are not well defined at the time the plan is prepared. However, the use of "black box" measures is not allowed for areas with a severe-17 non-attainment designation. Because of this the SCAQMD and CARB requested to the U.S. EPA to "bump up" the basin's classification to extreme with the submittal of the 2007 AQMP. This request was granted in August 2009 and will extend the required attainment date to 2024 and allow the use of "black box" measures. The "black box:" reductions needed for ozone attainment are estimated to be 190 tons per day (tpd) of NO_x and 27 tpd of VOC. These reductions represent a 17% reduction in 2002 average daily NO_x emissions and a 3% reduction in 2002 average daily VOC emissions.

It should be noted that on March 12, 2008, the U.S. EPA lowered the 8-hour ozone standard to 0.075 ppm. This effectively lowers the standard 0.009 ppm as 0.084 ppm is considered meeting the 0.08 ppm standard. A plan to attain the revised standard will need to be completed by 2013. Attainment deadlines for the revised standard have not been established and may vary depending on the severity of the exceedances.

Implementation of the 2007 AQMP is based on a series of control measures and strategies that vary by source type (i.e., stationary or mobile) as well as by the pollutant that is being targeted. Short-term and mid-term control measures are defined to achieve the $PM_{2.5}$ standard by 2015. These measures are designed to also contribute to reductions in ozone levels. Additional, long-term measures are defined to attain the 8-hour ozone standard by 2024. The measures rely on actions to be taken by several agencies that have statutory authority to implement such measures. Each control measure will be brought for regulatory consideration in a specified time frame. Control measures deemed infeasible will be substituted by other measures to achieve the total emission reduction target for each agency.

The plan focuses on control of sulfur oxides (SO_x), directly emitted $PM_{2.5}$, and nitrogen oxides (NO_x) to achieve the $PM_{2.5}$ standard. Achieving the 8-hour ozone standard builds upon the $PM_{2.5}$ attainment strategy with additional NO_x and VOC reductions. The control measures in the 2007 AQMP are based on facility modernization, energy efficiency and conservation, good management practices, market incentives/compliance flexibility, area source programs, emission growth management and mobile source programs. In addition, CARB has developed a plan of control strategies for sources controlled by CARB (i.e. on-road and off-road motor vehicles and consumer products). Further, Transportation Control Measures (TCM) defined in SCAG's Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) are needed to attain the standards.

The 2007 AQMP includes 30 short-term and mid-term stationary and 7 mobile source control measures proposed for implementation by the district that are applicable to sources under their jurisdiction. Nine of these measures were included in the 2003 AQMP and have been updated or revised. Twenty-eight new measures are proposed based on replacement of the District's long-term reduction measures from the 2003 AQMP with more defined control measures or development of new control measures. Measures include; regulations to reduce VOC emissions from coatings, solvents, petroleum operations, and cutback asphalt; measures to reduce emissions from industrial combustion sources as well as residential and commercial space heaters; a measure to offset potential emission increases due to changes in natural gas specifications; localized control of PM emission hot spots; regulation of wood burning fireplaces and wood stoves; reductions from under-fired char broilers; reducing urban heat island through lighter colored roofing, and paving materials and tree planting programs; energy efficiency and conservation programs; and emission reduction from new or redevelopment projects through regulations that will establish mitigation options to be implemented in such project. The specific measures are discussed in Chapter 4 and presented in detail in Appendix IV-A of the 2007 AQMP.

The TCMs defined in the RTP and RTIP fall into three categories, High Occupancy Vehicle measures, Transit and System Management Measures and Information-based Transportation Strategies. The High Occupancy Vehicle (HOV) Strategy attempts to reduce the proportion of commute trips made by single occupancy vehicles which constitute 72% of all home work trips according to the 200 U.S. Census. Specific measures include new HOV lanes on existing and new facilities, HOV to HOV bypasses and High Occupancy Toll (HOT) lanes. The Transit and Systems Management Strategy incentivize the use of transit, alternative transportation modes (e.g., pedestrian and bicycles), and increases in average vehicle occupancy by facilitating vanpools, smart shuttles and similar strategies. Systems management measures include grade separation and traffic signal synchronization projects. The information-based Transportation Strategy relies primarily on the innovative provision of information in a manner that successfully influences the ways in which individuals use the regional transportation system. Providing ride matching to increase ride sharing and carpool trips and providing near real-time estimates of congestion in an effort to influence persons to defer traveling to a less congested period are examples of the strategy.

In addition to District's measures and SCAG's TCMs, the Final 2007 AQMP includes additional short- and mid-term control measures aimed at reducing emissions from sources that are primarily under state and federal jurisdiction including on-road and off-road mobile sources, and consumer products. Measures committed to be enacted by CARB include (1) improvements to the smog check program, (2) cleaner in-use heavy duty truck emission regulations, (3) increased regulations on goods movement sources including ships, harbor craft, and port trucks, (4) regulations for cleaner in-use off-road equipment including agricultural equipment, (5) various measures to reduce evaporative VOC emissions from fuel storage and dispensing, (6) tightened emission standards and product reformulation for consumer products that emit VOC's, and (7) reductions in emissions from pesticide applications.

Four long-term "black box" control approaches are presented in the 2007 AQMP. These measures include (1) further reductions from on-road sources by retiring or retrofitting older high-emitting vehicles and accelerated penetration of very low and zero emission vehicles, (2) increased inspection and maintenance (I/M) programs for heavy-duty diesel trucks, (3) further reductions from off-road mobile sources through accelerated turn-over of existing equipment, retrofitting existing equipment and new engine emission standards, and (4) further reductions from consumer product VOC emissions.

The 2007 AQMP identifies four contingency measures that would need to be implemented if milestone emission targets are not met or if the standards are not attained by the required date. While implementation of these measures is expected to reduce emissions, there are issues that limit the viability of these measures as AQMP control measures. These issues include the availability of District resources to implement and enforce the measure, cost-effectiveness of the measure, potential adverse environmental impacts, effectiveness of emission reductions, and availability of methods to quantify emission reductions.

On December 7, 2012 the SCAQMD Board adopted the 2012 AQMP. The Final 2012 AQMP outlines a comprehensive control strategy that meets the requirement for expeditious progress towards attainment with the 24-hour $PM_{2.5}$ NAAQS in 2014 with all feasible control measures. The Plan also includes specific measures to further implement the ozone strategy in the 2007 AQMP to assist attaining the 8-hour ozone standard by 2023. The plan must be approved by CARB and the U.S. EPA before it becomes binding.

2.5 Climate

The climate in and around the project area, as with all of Southern California, is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. It maintains moderate temperatures and comfortable humidity, and limits precipitation to a few storms during the winter "wet" season. Temperatures are normally mild, excepting the summer months, which commonly bring substantially higher temperatures. In all portions of the basin, temperatures well above 100 degrees F. have been recorded in recent years. The annual average temperature in the basin is approximately 62 degrees Fahrenheit.

Winds in the project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling towards the sea. Wind direction will be altered by local canyons, with wind tending to flow parallel to the canyons. During the transition period from one wind pattern to the other, the dominant wind direction rotates into the south and causes a minor wind direction maximum from the south. The frequency of calm winds (less than 2 miles per hour) is less than 10 percent. Therefore, there is little stagnation in the project vicinity, especially during busy daytime traffic hours.

Southern California frequently has temperature inversions, which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur local to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. Elevated inversions act as a lid or upper boundary and restrict vertical mixing. Below the elevated inversion, dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the South Coast Air Basin (SCAB) and is responsible for the high levels of ozone observed during summer months in the air basin.

2.6 Monitored Air Quality

Air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates for the SCAB have been made for existing emissions ("2007 Air Quality Management Plan", June 2007). The data indicate that on-road (e.g.; automobiles, busses and trucks) and off-road (e.g.; trains, ships, and construction equipment) mobile sources are the major source of current emissions in the SCAB. Mobile sources account for approximately 64% of VOC emissions, 92% of NO_X emissions, 39% of direct $PM_{2.5}$ emissions, 59% of SO_X emissions and 98% of CO emissions. Area sources (e.g., architectural coatings, residential water heaters, and consumer products) account for approximately 30% of VOC emissions and 32% of direct $PM_{2.5}$ emissions. Point sources (e.g., chemical manufacturing, petroleum production, and electric utilities) account for approximately 38% of SO_X emissions. Entrained road dust account for approximately 20% of direct $PM_{2.5}$ emissions.

The SCAQMD has divided its jurisdiction into 38 source receptor areas (SRA) with a designated ambient air monitoring station in most areas. The project is located in the Southwest Los Angeles County Coastal SRA (SRA 3). The designated monitoring station representative of this area is the Los Angeles-Westchester Parkway station, which is located just north of LAX approximately 7.2 miles northeast of the project site. The air pollutants measured at the Los Angeles-Westchester Parkway station, include ozone, carbon monoxide (CO), fine particulates ($PM_{2.5}$), nitrogen dioxide (NO_2) and sulfur dioxide (SO_2). The air quality data monitored at the Los Angeles-Westchester Parkway station, from 2008 to 20011 are presented in Table 3. Note that data for 2012 is not available at this time. The monitored air quality data were obtained from the CARB air quality data website (www.arb.ca.gov/adam/).

Table 3
Air Quality Levels Measured at the Los Angeles-Westchester Parkway Monitoring Station

Pollutant	California Standard	National Standard	Year	% Msrd.[1]	Max. Level	Days State Standard Exceeded[2]	Days National Standard Exceeded[2]
Ozone	0.09 ppm	None	2011	79	0.078	0	n/a
1 Hour			2010	93	0.089	0	n/a
Average			2009	94	0.077	0	n/a
			2008	93	0.086	0	n/a
Ozone	0.070 ppm	0.075 ppm	2011	72	0.067	0	0
8 Hour			2010	93	0.070	0	0
Average			2009	91	0.070	0	0
			2008	91	0.075	1	0

Table Continued on Next Page

Table 3 (Continued)
Air Quality Levels Measured at the Los Angeles-Westchester Parkway Monitoring Station

Pollutant	California Standard	National Standard	Year	% Msrd.[1]	Max. Level	Days State Standard Exceeded[2]	Days National Standard Exceeded[2]
CO	20 ppm	35 ppm	2011	--	--	--	--
1 Hour			2010	94	2	0	0
Average			2009	96	2	0	0
			2008	95	4	0	0
CO	9.0 ppm	9 ppm	2011	96	1.8	0	0
8 Hour			2010	94	2.2	0	0
Average			2009	96	2.0	0	0
			2008	95	2.5	0	0
NO_2	0.18 ppm	0.100 ppm	2011	98	0.098	0	0
1 Hour			2010	95	0.076	0	0
Average			2009	69	0.077	0	0
			2008	92	0.094	0	0
NO_2	0.030 ppm	0.053 ppm	2011	98	0.013	No	No
AAM[3]			2010	95	0.012	No	No
			2009	69	--	No	No
			2008		0.014	No	No
SO_2	0.04 ppm	None	2011	94	0.002	0	n/a
24 Hour			2010	94	0.004	0	n/a
Average			2009	59	0.006	0	n/a
			2008	93	0.004	0	n/a
Respirable	50 $\mu g/m^3$	150 $\mu g/m^3$	2011	98	41	0/0	0/0
Particulates			2010	94	37	0/--	0/0
PM_{10}			2009	97	52	1/6.5	0/0
24 Hour Average			2008	100	50	0/0	0/0
Respirable	20 $\mu g/m^3$	None	2011	98	21.4	Yes	n/a
Particulates			2010	94	20.6	Yes	n/a
PM_{10}			2009	97	25.5	Yes	n/a
AAM[3]			2008	100	25.5	Yes	n/a

1. Percent of year where high pollutant levels were expected that measurements were made.
2. For annual averaging times a yes or no response is given if the annual average concentration exceeded the applicable standard. For the PM_{10} and $PM_{2.5}$ 24-hour standards, daily monitoring is not performed. The first number shown in Days State Standard Exceeded column is the actual number of days measured that State standard was exceeded. The second number shows the number of days the standard would be expected to be exceeded if measurements were taken every day.
3. Annual Arithmetic Mean

-- Data Not Reported
n/a – no applicable standard
Source: CARB Air Quality Data Statistics web site www.arb.ca.gov/adam/ accessed 1/31/2013

Table 4
Air Quality Levels Measured at the Compton Monitoring Station

Pollutant	California Standard	National Standard	Year	% Msrd.[1]	Max. Level	Days State Standard Exceeded[2]	Days National Standard Exceeded[2]
Ozone	0.09 ppm	None	2011	98	0.082	0	n/a
1 Hour			2010	87	0.081	0	n/a
Average			2009	98	0.104	2	n/a
			2008	0	0.056	0	n/a
Ozone	0.070 ppm	0.075 ppm	2011	92	0.065	0	0
8 Hour			2010	87	0.062	0	0
Average			2009	98	0.087	1	1
			2008	0	0.033	0	0
CO	20 ppm	35 ppm	2011	97	--	--	--
1 Hour			2010	98	6	0	0
Average			2009	95	7	0	0
			2008	34	6	0	0
CO	9.0 ppm	9 ppm	2011	97	4.7	0	0
8 Hour			2010	98	3.6	0	0
Average			2009	95	4.6	0	0
			2008	34	4.3	0	0
NO_2	0.18 ppm	0.100 ppm	2011	96	0.075	0	0
1 Hour			2010	93	0.077	0	0
Average			2009	88	0.092	0	0
			2008	17	0.097	0	0
NO_2	0.030 ppm	0.053 ppm	2011	96	0.019	No	No
AAM[3]			2010	93	0.018	No	No
			2009	88	0.021	No	No
			2008	17	--	No	No
Fine	None	35 $\mu g/m^3$	2011	88	35.3	n/a	0/0
Particulates			2010	89	38.2	n/a	1/3.4
$PM_{2.5}$			2009	94	69.2	n/a	3/9.6
24 Hour Average			2008	3	13.2	n/a	--
Fine	12 $\mu g/m^3$	15 $\mu g/m^3$	2011	88	13.0	Yes	No
Particulates			2010	89	12.5	Yes	No
$PM_{2.5}$			2009	94	14.7	Yes	No
AAM[3]			2008	3	--	--	--

1. Percent of year where high pollutant levels were expected that measurements were made.
2. For annual averaging times a yes or no response is given if the annual average concentration exceeded the applicable standard. For the PM_{10} and $PM_{2.5}$ 24-hour standards, daily monitoring is not performed. The first number shown in Days State Standard Exceeded column is the actual number of days measured that State standard was exceeded. The second number shows the number of days the standard would be expected to be exceeded if measurements were taken every day.
3. Annual Arithmetic Mean

-- Data Not Reported, n/a – no applicable standard

Source: CARB Air Quality Data Statistics web site www.arb.ca.gov/adam/ accessed 1/31/2013

The monitoring data presented in Tables 3 and 4 shows that the only AAQS exceeded in the past four years in the vicinity of the project site were particulates and ozone. The data shows that there were no exceedances of the ozone AAQS in the past two years at either the Los Angeles-Westchester Parkway or Compton monitoring stations. There has only been one exceedance of the state 8-hour ozone standard at the Los Angeles-Westchester Parkway station in the past four years. The state one-hour ozone standard was exceeded 2 days in 2009 and both the state and federal 8-hour ozone standards were exceeded one day at the Compton station. There was not enough monitoring performed at this station in 2008 to determine the number of days of exceedances.

Table 3 shows that the state 24-hour average PM_{10} standard was measured to be exceeded once in 2009 with an estimate 6.5 total days exceeding the standard at the Los Angeles-Westchester Parkway station. The standard was no exceeded in 2008, 2010, or 2011. The table shows that the state annual average PM_{10} standard has been exceeded each of the last four years but a downward trend in the concentration is indicated.

Table 4 shows that the national 24-hour average $PM_{2.5}$ standard was measured to be exceeded once in 2010 and 3 times in 2009 at the Compton station. The state $PM_{2.5}$ annual average standard has been exceeded each of the past three years. This standard was likely exceeded in 2008 at the station but not enough measurements were performed.

Compared to the rest of the South Coast Basin, air pollutant concentrations are relatively low in the project area with annual average PM_{10} and $PM_{2.5}$ concentrations generating the greatest impacts.

2.7 Existing Operational Emissions

Using the methodology described below in Section 3.3.1 the existing daily air pollutant emissions from El Camino College were calculated and are presented in Table 5. The emissions estimate is based on the existing 16,400 full time equivalent students (FTES) and existing buildings with an overall gross floor area of 1,277,546 square feet. The total daily emissions associated with the operation of the campus are presented along emissions from each major emissions source. Worksheets showing the CalEEMod input parameters used to model the emissions are presented in the appendix and the CalEEMod input files are available upon request.

Table 5
Existing Operational Daily Emissions

	Daily Emissions (lbs/day)					
Source	**CO**	**VOC**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Vehicular Emissions	2,137.9	215.4	570.1	370.9	33.7	3.28
Natural Gas Combustion	4.7	0.6	5.6	0.4	0.4	0.03
Landscaping	0.0	0.0	0.0	0.0	0.0	0.00
Consumer Products	0.0	26.0	0.0	0.0	0.0	0.00
Architectural Coatings	0.0	8.3	0.0	0.0	0.0	0.00
Total Emissions	**2,142.6**	**250.4**	**575.7**	**371.3**	**34.1**	**3.31**

3.0 POTENTIAL AIR QUALITY IMPACTS

Air quality impacts are usually divided into short term and long term. Short-term impacts are usually the result of construction or grading operations. Long-term impacts are associated with the built out condition of the proposed project.

3.1 Thresholds of Significance

3.1.1 Regional Air Quality

In their "1993 CEQA Air Quality Handbook", the SCAQMD has established significance thresholds to assess the impact of project related air pollutant emissions. Table 6 presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds are considered to have a less than significant effect on regional air quality. It should be noted the thresholds recommended by the SCAQMD are very low and subject to controversy. It is up to the individual lead agencies to determine if the SCAQMD thresholds are appropriate for their projects.

Table 6
SCAQMD Regional Pollutant Emission Thresholds of Significance

	Regional Significance Threshold (lbs/day)					
	CO	VOC	NO_x	PM_{10}	$PM_{2.5}$	SO_x
Construction	550	75	100	150	55	150
Operation	550	55	55	150	55	150

3.1.2 Local Air Quality

As part of the SCAQMD's environmental justice program, attention was focused on localized effects of air quality. In accordance with Governing Board direction, SCAQMD staff developed localized significance threshold (LST) methodology and mass rate look-up tables by source receptor area (SRA) that can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The LST's represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area. The LST methodology is described in "Final Localized Significance Threshold Methodology" dated June 2003 by the SCAQMD and is available at the SCAQMD website (http://aqmd.gov/ceqa/handbook/LST/LST.html).

The LST mass rate look-up tables provided by the SCAQMD allow one to determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts. If the calculated on-site emissions for the proposed construction or operational activities are below the LST emission levels found on the LST mass rate look-up table, then the proposed construction or operation activity will not result in a significant impact on local air quality.

The LST mass rate look-up tables are applicable to the following pollutants only: oxides of nitrogen (NO_X), carbon monoxide (CO), respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$). LST's are derived based on the location of the activity (i.e., the source/receptor area); the emission rates of NO_X, CO, PM_{10}, and $PM_{2.5}$; and the distance to the nearest exposed individual. This distance is based upon the uses around the project and the Ambient Air Quality Standard (AAQS) averaging times for the pollutants of concern. The shortest AAQS averaging time for CO and NO_2 are for one-hour and the nearest exposed individual is the location where a person could be expected to remain for 1-hour. The shortest averaging time for the PM_{10} and $PM_{2.5}$ AAQS is 24 hours and the nearest exposed individual is the location where a person could be expected to remain for 24-hours. Typically, this is the nearest residential use.

The LST methodology presents mass emission rates for each SRA, project sizes of 1, 2, and 5 acres, and nearest receptor distances of 25, 50, 100, 200, and 500 meters. For project sizes between the values given, or with receptors at distances between the given distances, the methodology uses linear interpolation to determine the thresholds. If receptors are within 25 meters of the site, the methodology document says that the threshold for the 25-meter distance should be used. SCAQMD has stated that the 1-acre thresholds should be used for projects that are smaller than 1 acre.

The project is located in SRA 3. The total project area is approximately 117 acres. This is well above the smallest project area for which LST are provided and applicable. Because of the project size and the fact that there are no substantial generators of pollutant emissions within the project boundaries the project would not be expected to cause an exceedance or considerably worsen an existing exceedance of the AAQS and cause a significant local impact. Vehicles traveling in the parking lots are the most significant source of on site pollutants. Typical parking lots are not typically identified as potential causes of an exceedance of the AAQS or considerably worsen an existing exceedance. The only other source of on site emissions is from natural gas combustion for space and water heating. Again these sources are not typically identified as potential causes of an exceedance of the AAQS or considerably worsen an existing exceedance.

The individual construction projects proposed by the 2012 FMP will occur over areas smaller than 5 acres and have the potential to result in a localized significant impact. Table 7 presents the on-site emission Localized Significance Thresholds for the eight construction phases for which emissions were modeled (See Section 3.2.1 for a further discussion on the construction emissions analysis methodology). The size of each construction phase and distance to the nearest 1-hour observer used to determine the CO and NO_X LST and the nearest 24 hour observer (i.e., residence) is presented in the appendix. If the on-site emissions from each of these construction phases are less than the daily emissions presented in Table 7 then the emissions will not result in a significant local air quality impact.

Table 7
Localized Significance Thresholds

Phase	Localized Significance Threshold (lbs/day)			
	CO	NO_x	PM_{10}	$PM_{2.5}$
1a	1796	197	88	35
1b	846	115	37	13
1c	846	115	10	5
2a	1658	186	20	8
2b	1796	197	22	9
2c	1796	197	45	11
2c	967	131	94	45
3a	816	111	37	12

3.2 Short-Term Impacts

Temporary impacts will result from project construction activities. Air pollutants will be emitted by construction equipment and fugitive dust will be generated during grading of the basin site and installation of the proposed recycled water pipeline and storm drains.

3.2.1 Construction Emission Calculation Methodology

Construction related pollutant emissions resulting from the primary construction activities of the project were calculated using the CalEEMod (California Emissions Estimator Model) program (version 2011.1.1) published by SCAQMD. Construction schedule, activities and equipment utilization assumptions used to estimate emissions were developed in consultation with the project proponent and a review of construction activities for similar projects.

The 2012 FMP proposes 10 demolition projects, 14 new building construction projects, and 8 renovation projects. Most of these projects involve the demolition of an existing building and then construction of a new building and will have similar constructions activities and equipment utilization. The demolition of Murdoch Stadium is unique because the stadium is essentially a large berm around a football field that will be removed with the project. This will result in significant amount of material to be removed from the site. The parameters used for modeling are discussed below in Section 3.2.2 and the specific parameters used are presented in the appendix.

Modeling was performed for the first six demolition projects and eight construction projects that represent all construction projects commencing before the end of 2015. This is the period with the greatest concurrent activity including the stadium demolition. A review of the modeling results shows that towards the peak daily construction emissions are anticipated to occur in the spring of 2015 by the middle of 2015 maximum daily emission rates are less the significance thresholds. After this time there are fewer concurrent construction activities and emission rates for vehicles are anticipated to be lower in the CalEEMod model because of newer cleaner vehicles replacing older dirtier vehicles.

As discussed below, the expected construction schedule used to model emissions is preliminary and subject to change. Construction delays or lengthening of the projected schedule from what was assumed would also result in the same or lower estimate of air pollutant emissions. This is because the daily activity rates (which determine the daily emission rates) would be the same or lower with an extended schedule. A shortening of the construction schedule from what was assumed could result in an increase of daily emissions over the levels presented below if emission producing activities are greater than described below.

There is a bug in CalEEMod that miscalculates re-entrained dust (PM_{10}) emissions from hauling truck trips. The correct value was calculated per the methodology presented in the U.S. EPA's AP-42 Compilation of Emission Factors (Section 13.2.1) and is reported below. A worksheet showing the calculation is presented in the appendix.

The CalEEMod model calculates total emissions, on-site and off-site, resulting from each construction activity. The total emissions are compared to the SCAQMD Regional Thresholds presented in Table 6. On-site project emissions, which are compared to the SCAQMD Local Significance Thresholds presented in Table 7, were calculated by scaling the emissions from on-road sources so that only the emissions from on-site portion of the trip are included. Each worker, material removal or delivery trip was assumed to have a 0.5-mile component within the project site.

Note that the calculations assumed watering of the site twice a day during grading activities as required by SCAQMD Rule 403. All applicable provisions of SCAQMD Rule 403 shall be implemented.

3.2.2 Construction Activities and Modeling Parameters

The El Camino College 2012 Faculties Master Plan includes approximately 36 different demolition, construction, or renovation projects to implement the plan. In some cases, the construction required to implement the plan have already begun. Buildout of the plan is anticipated in early 2022. Table 8 presents a listing of the individual demolition, construction and renovation projects that are proposed by the project along with the expected starting date and duration of each activity. Note that schedule presented in Table 8 is based on planning expectations but changes will likely occur. As discussed above, changes to the schedule would not be expected to increase emissions considerably from the modeling performed for this analysis. Figure 4 presents the locations of the demolition activities. Figure 5 presents the locations of the construction activities. Buildings that will be renovated are shown in Figure 3. Building renovations will primarily consist of interior renovations and are not expected to generate considerable air pollutant emissions and were not modeled.

The general path of construction schedule will be to demolish an existing building and then construct a new building in the same location. Generally, building a replacement building before demolishing the existing building serving the same function. The project proposes the demolition of 15 existing buildings with a total floor area of 645,672 square feet. The existing buildings to be demolished are: Stadium, Field House, Community Advancement, Shops, Technical Arts, Campus Police, Physical Education South/South Gym, Administration, North Gym/Physical Education North, Art/North B/Gallery, Music/Campus Theater, Student Services, and Activities Center. It is anticipated that the total duration of each demolition phase will be approximately six months. However, the majority of this time will be spent preparing the buildings for the primary demolition as they will all likely require asbestos removal prior to physically demolishing the building with heavy equipment which will result in the peak emissions from demolition. This peak emissions activity period is expected to take between two and four weeks.

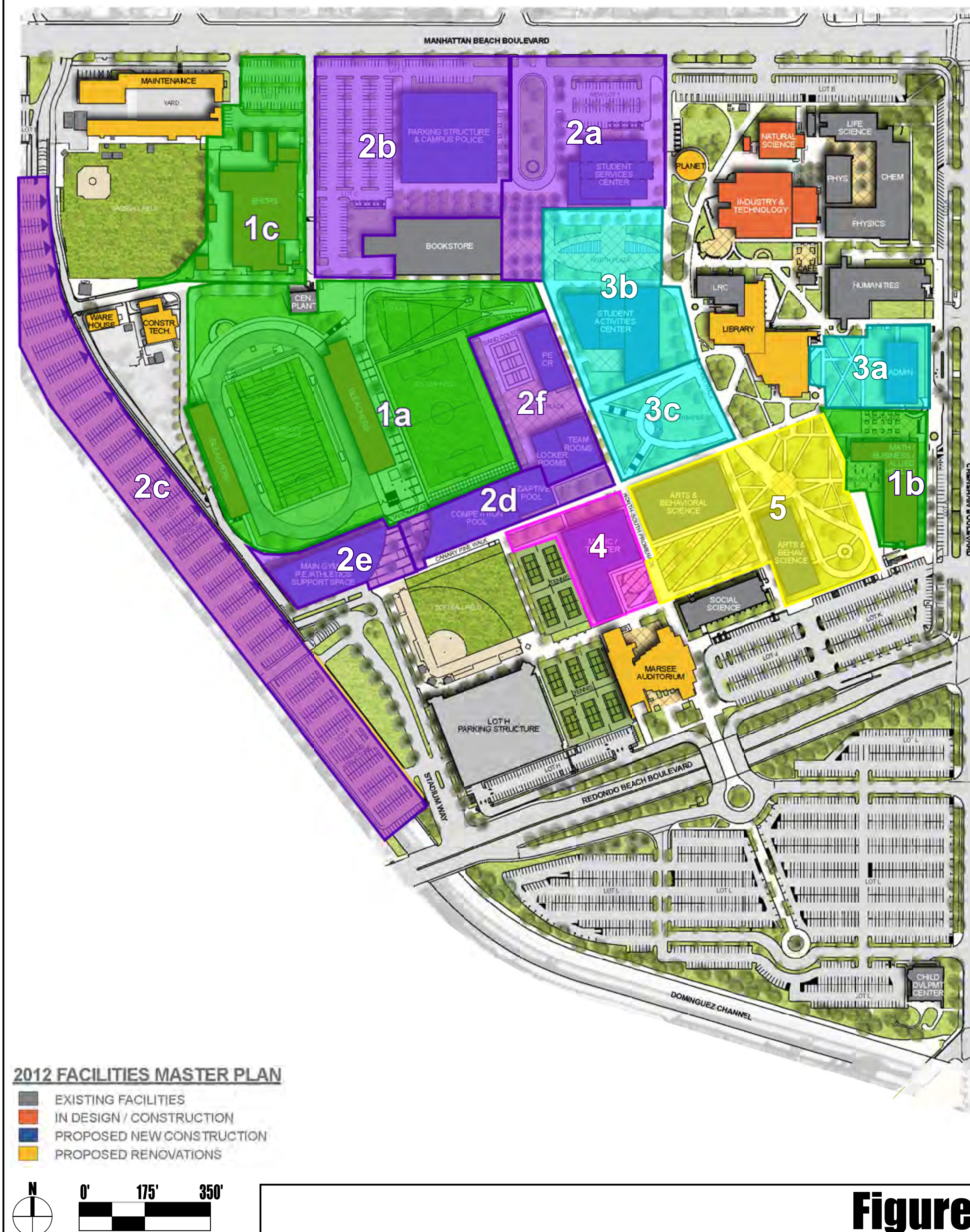
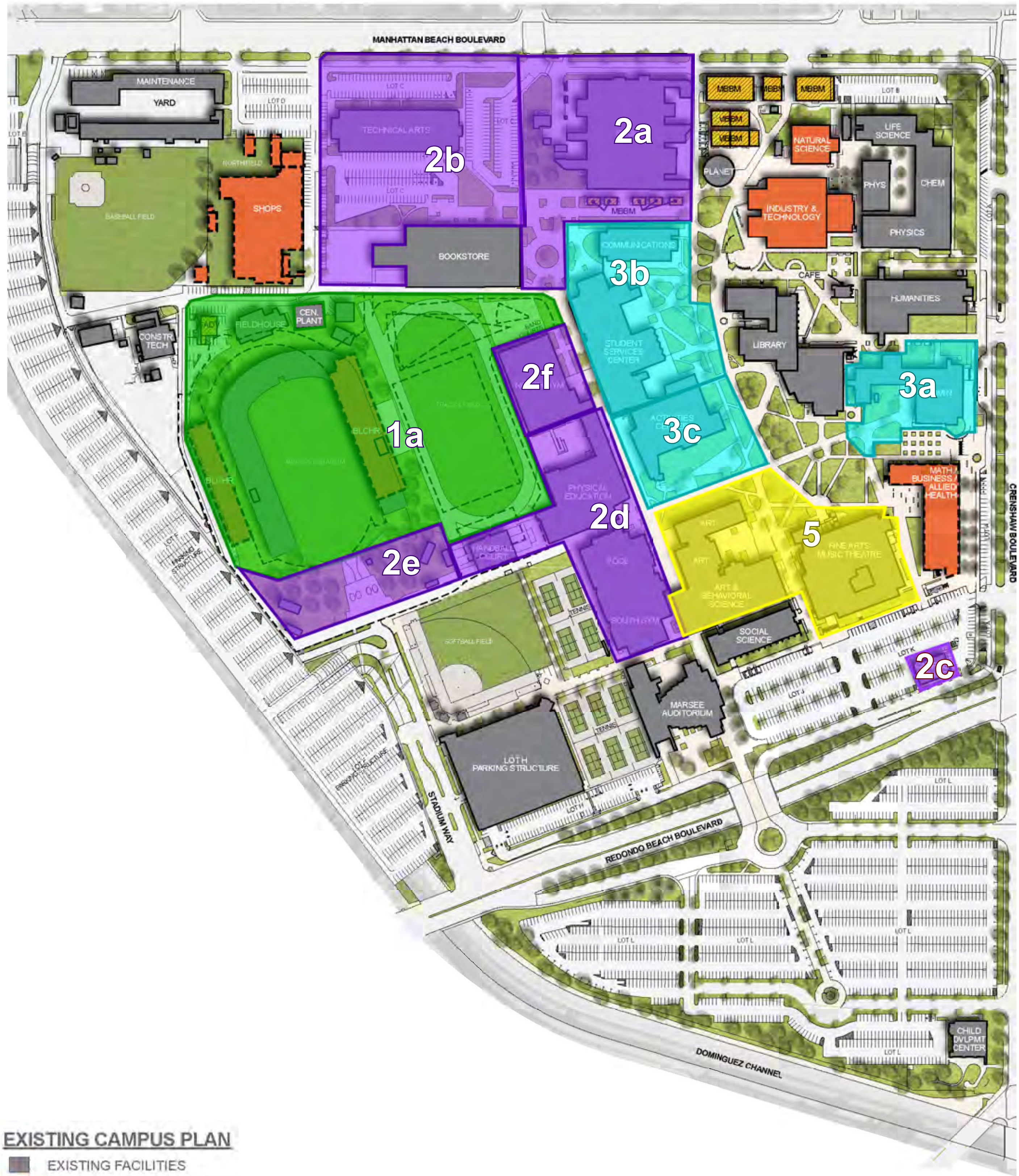


Figure 5
Construction Activity Locations

Mestre Greve Associates



EXISTING CAMPUS PLAN

- EXISTING FACILITIES
- TEMPORARY FACILITIES
- IN DESIGN / CONSTRUCTION

N

0' 175' 350'

Figure 4
Demolition Activity Locations

Mestre Greve Associates

Table 8
Anticipated Construction Activities and Schedule

Phase	What	Project	Start	Duration (Months)
1a	Demolish	Stadium, Field House, Community Advancement	5/2012	10.5
1a	Construct	Stadium Complex/Field House	6/2013	12
1b	Construct	Math Business & Health Science	2/2012	12
1c	Construct	Shops	11/2012	12
	Renovate	Natural Science/STEM	1/2013	6
2a	Demolish	Shops	3/2016	6
2a	Construct	Student Services Center	11/2013	12
	Renovate	Industry and Technology	3/2014	6
	Renovate	Warehouse	4/2014	6
	Renovate	Construction Technology	4/2014	6
2b	Demolish	Technical Arts	10/2013	6
2b	Construct	Parking Structure & Campus Police	6/2014	12
2c	Demolish	Campus Police	7/2015	6
	Renovate	Maintenance	6/2014	6
2c	Construct	Lot F Parking Structure Expansion	6/2013	33
2d	Demolish	Physical Education South/South Gym & Handball Courts	2/2015	6
2d	Construct	Adaptive Pool	9/2015	12
3a	Demolish	Administration	4/2015	6
3a	Construct	Administration	11/2015	12
2e	Demolish	North Gym/Physical Education North	2/2016	6
2e	Construct	Main Gym/Athletic Support Space	12/2016	12
4	Construct	Music/Theater	5/2017	12
	Renovate	Library	6/2017	6
	Renovate	Planetarium	4/2014	6
2f	Construct	Locker Rooms	7/2017	12
2f	Construct	Team Rooms	7/2017	12
2f	Construct	PE CR	7/2017	12

Table Continued on Next Page

Table 8(Continued)
Anticipated Construction Activities and Schedule

Phase	What	Project	Start	Duration (Months)
5	Demolish	Art/North B/Gallery & Music/Campus Theatre	12/2017	6
	Renovate	Marsee Auditorium	6/2018	6
5	Construct	Art & Behavioral Science I	7/2018	12
5	Construct	Art & Behavioral Science II	7/2018	12
3b	Demolish	Student Services & Communications	10/2018	6
3b	Construct	Student Activities Center	4/2019	12
3c	Demolish	Activities Center	10/2020	6
3c	Construct	Amphitheater area	8/2021	6

As a worst-case assumption, the modeling assumes that the total duration of each demolition phase will take six months and the peak emissions activity periods will last for one month. The construction durations shown in Table 8 were used for modeling construction related emissions.

Demolition of Murdoch Stadium represents a special case. There is a berm that surrounds the stadium field and provides the structure for bleachers. Under the proposed project most of the berm will be removed which will require considerable export of materials. Approximately 128,500 cubic yards of soil and debris are expected to be removed in 8,600 truck trips occurring over approximately 17 weeks. In addition there will be approximately 4,500 cubic yards of material imported for the renovated field.

After demolition, the individual project area will be graded. The site is essentially flat and only fine grading will be required to prepare each site for construction. Grading is not expected to last for more than one week for each construction phase. Site preparation is expected to take approximately one month per construction project. Building construction is anticipated to take approximately one year for each construction phase. The project includes 15 separate building construction projects that include the construction of 695,356 square feet of new buildings. The only asphalt paving for the project will occur during construction Phases 2a and 2b with a total area of 5 acres of asphalt paving.

Eight CalEEMod models were developed to estimate emissions for all phases expected to commence before 2015, including demolition phases 1a, 2a, 2b, 2c, 2d, and 3 and construction phases 1a, 1b, 1c, 2a, 2b, 2c, 2d, and 3. Worksheets showing the specific parameters used for modeling are presented in the Appendix. Peak emissions are projected to occur in the spring of 2015. After this time the number of concurrent projects decreases and the demolition and construction of Murdoch Stadium is anticipated to be completed. After the middle of 2015, concurrent unmitigated emissions are projected to be less than the significance thresholds and emissions after 2015 are anticipated to be less than in 2015 as there will be only one demolition and construction phase commencing each year. A summary of the emissions calculations is presented below. The daily emission rates for each construction activity are presented in the appendix along with daily concurrent construction activities for all phases modeled.

3.2.3 Regional Construction Emissions Impacts

The daily unmitigated emission estimates from the CalEEMod model for each of the individual construction and demolition projects is presented in the Appendix along with the combined emissions from concurrent construction activities. Table 9 presents the maximum concurrent construction emissions anticipated with the project. This represents the period from January 2015 to March 2015 and includes emissions from construction phases 2a, 2b, and 2d and from demolition phases 2d and 3a.

Table 9
Maximum Concurrent Unmitigated Construction Emissions

	Unmitigated Total Daily Emissions (lbs/day)					
Activity	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
2a Construction	25.1	30.4	4.6	2.2	1.9	0.0
2a Painting	2.2	2.6	8.5	0.3	0.2	0.0
2b Construction	36.5	37.2	5.8	4.7	2.2	0.1
2b Painting	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction	30.5	29.6	4.9	4.2	2.1	0.1
2d Peak Demolition	21.2	34.4	4.3	13.1	1.8	0.0
3a Remedial Demo & Site Prep	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined Emissions	**130.9**	**156.7**	**84.1**	**31.4**	**12.2**	**0.2**
Significance Threshold	**550**	**100**	**75**	**150**	**55**	**150**
Exceed Threshold?	**No**	**Yes**	**Yes**	**No**	**No**	**No**

Table 9 shows that the maximum concurrent NO_X and VOC emissions will be greater than the SCAQMD Regional Significance Threshold. The tables in the appendix show that construction is anticipated to exceed the NO_X threshold from the commencement of construction until approximately August 2015. VOC emissions are shown to exceed the threshold from the beginning of 2015 to approximately the middle of July 2015. As discussed above, the number of concurrent construction activities will peak near the middle of 2015 and then start decreasing. Concurrent construction emissions after 2015 are not expected to be greater than those at the end of 2015. Therefore, construction of the project phases that commence prior to 2016 is anticipated to result in a significant air quality impact without mitigation. Mitigation for short-term impacts is discussed in Section 4.1.

3.2.4 Local Construction Emissions Impacts

On-site construction emission were calculated for each activity in each phase and compared to the localized significance thresholds presented above in Table 7. None of the emissions are projected to exceed the significance thresholds. In fact, emissions from all phases were less than 60% of the applicable significance thresholds except for Phase 1c. The on-site emissions from each construction activity for Phase 1c is presented in Table 10 along with the applicable significance threshold. On-site emissions for all phases are presented in Table 20 in the appendix. The appendix shows that no construction activity is anticipated to exceed the applicable localized significance thresholds. Therefore, construction is not anticipated to result in a significant local air quality impact.

Table 10
On-Site Phase 1c Unmitigated Construction Emissions

Activity	On-Site Unmitigated Daily Emissions (lbs/day)			
	CO	NO_X	PM_{10}	$PM_{2.5}$
Site Prep (2013)	14.2	25.5	7.2	4.5
Grading (2013)	14.2	25.5	7.2	4.5
Construction (2013)	23.5	34.7	2.3	2.3
Construction (2014)	23.3	32.1	2.0	2.0
Painting (2014)	1.9	2.8	0.2	0.2
Significance Threshold	**845.8**	**115.0**	**9.6**	**4.6**
Exceed Threshold?	**No**	**No**	**No**	**No**

3.2.5 Diesel Particulate Matter Emissions During Construction

In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines (Diesel Particulate Matter or DPM) as a Toxic Air Contaminant (TAC). It is assumed that the majority of the heavy construction equipment utilized during construction would be diesel fueled and emit DPM. Impacts from toxic substances are related to cumulative exposure and are assessed over a 70-year period. Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 70-year lifetime (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Guide to Health Risk Assessment.) Buildout of the project is anticipated to take 10 years. Further, most of the construction projects are well removed from residential areas (where cancer risk impact is measured) and will not cause substantial DPM concentrations in these areas. Because of the relatively short duration of construction compared to a 70-year lifespan and considerable distance to sensitive receptors, diesel emissions resulting from the construction of the project are not expected to result in a significant impact.

3.3 Long Term Impacts

3.3.1 Operational Emissions Calculation Methodology

Operational emission increases due to the project were calculated using CalEEMod. Operational emissions estimates were based on the number of enrolled students (16,400 under the no project scenario and 20,250 with the project) and the total gross floor area of the buildings (1,264,916 square feet under the no project scenario and 1,314,600 square feet with the project. CalEEMod default settings were used for all other modeling parameters.

Emissions from natural gas combustion with the project were calculated based on the modeled without project emissions. This was done to account for the new buildings being constructed under more energy efficient building standards while older buildings have higher energy consumption requirements. CalEEMod only calculates emission for buildings with the same energy requirements.

The total emissions from the model for the existing facility were divided by the total existing building area to determine the emissions per square foot for each pollutant. The emissions per square foot were used with the area of the buildings proposed for demolition to calculate the emissions removed by the project. The new buildings in the project will be constructed under the recently adopted CalGreen building code adopted by the state in 2010, which was developed so that new buildings constructed in the state are as energy efficient as reasonably feasible. Typically, a building constructed under the new code is approximately 25% more energy efficient than the previous code which is what the emissions estimate from CalEEMod is based upon. The proposed additional building area was multiplied by the emissions per square foot determined above reduced by 20% to estimate the natural gas combustion emissions from the new buildings proposed by the project.

3.3.2 Regional Operational Emissions Impacts

The impact of the project's operational emissions is measured against the net increase in emissions that will result from the implementation of the project. Using the methodologies presented in 3.3.1 air pollutant emissions associated with the operation of El Camino College with and without the proposed project were estimated. Table 11 presents the emissions estimate without the proposed project and Table 12 presents the emissions estimate with the proposed project.

Table 11
Operational Daily Emissions in 2020 Without Project

Source	Daily Emissions (lbs/day)					
	CO	VOC	NO_x	PM_{10}	$PM_{2.5}$	SO_x
Vehicular Emissions	986.3	110.1	261.0	296.7	17.3	2.7
Natural Gas Combustion	4.5	0.6	5.4	0.4	0.4	0.0
Landscaping	0.0	0.0	0.0	0.0	0.0	0.0
Consumer Products	0.0	25.1	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	8.0	0.0	0.0	0.0	0.0
Total Emissions	**990.8**	**143.7**	**266.4**	**297.2**	**17.7**	**2.7**

Table 12
Operational Daily Emissions in 2020 With Project

Source	Daily Emissions (lbs/day)					
	CO	VOC	NO_x	PM_{10}	$PM_{2.5}$	SO_x
Vehicular Emissions	1,204.3	134.4	318.7	362.3	21.1	3.25
Natural Gas Combustion	4.1	0.6	5.0	0.4	0.4	0.03
Landscaping	0.0	0.0	0.0	0.0	0.0	0.00
Consumer Products	0.0	26.0	0.0	0.0	0.0	0.00
Architectural Coatings	0.0	8.3	0.0	0.0	0.0	0.00
Total Emissions	**1,209.0**	**169.4**	**324.3**	**362.8**	**21.5**	**3.28**

Table 13 presents the projected increase in GHG emissions due to the project which is the difference between the with project emissions presented in Table 11 and the no project emissions presented in Table 12. The project's impact is measured against the increase in emissions due to the project. The increase in emissions is measured against the SCAQMD Regional Significance Thresholds.

Table 13
Increase in Operational Emissions Due to Project

	Daily Emissions (lbs/day)					
Activity	**CO**	**VOC**	**NO_x**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Vehicular Emissions	218.0	24.3	57.7	65.6	3.8	0.6
Natural Gas Combustion	-0.4	0.0	-0.4	0.0	0.0	0.0
Landscaping	0.0	0.0	0.0	0.0	0.0	0.0
Consumer Products	0.0	1.0	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.3	0.0	0.0	0.0	0.0
Total Emissions	**218.2**	**25.7**	**57.9**	**65.6**	**3.8**	**0.6**
Significance Threshold	**550**	**55**	**55**	**150**	**55**	**150**
Threshold Exceeded?	**No**	**No**	**Yes**	**No**	**No**	**No**

Table 13 shows that NO_X emissions are projected to exceed the SCAQMD Regional Significance Threshold but all other emissions are anticipated to be less than the threshold. The table also shows that the almost the entire increase in NO_X emissions are due to students and staff traveling to and from the school. The 2012 FMP will result in a significant regional air quality impact. Mitigation is discussed in Section 4.2.

3.3.3 Local Operational Emissions Impacts

The total project area is approximately 117 acres. This is well above the smallest project area for which Localized Significance Thresholds are provided and applicable. Because of the project size and the fact that there are no substantial generators of pollutant emissions within the project boundaries the project would not be expected to cause an exceedance or considerably worsen an existing exceedance of the AAQS and cause a significant local impact. Vehicles traveling in the parking lots are the most significant source of on site pollutants. Typical parking lots are not typically identified as potential causes of an exceedance of the AAQS or considerably worsen an existing exceedance. The only other source of on site emissions is from natural gas combustion for space and water heating. Again these sources are not typically identified as potential causes of an exceedance of the AAQS or considerably worsen an existing exceedance. Therefore, the operational emissions associated with the project are not anticipated to result in a significant air quality impact.

3.3.4 Local Air Quality Impacts Near Intersections Affected by Traffic Generated by The Project

Increased traffic volumes due to the project result in increased pollutant emissions in the vicinity of the roads utilized by this traffic, which can cause pollutant levels to exceed the ambient air quality standards. Carbon monoxide (CO) and particulates (PM_{10} and $PM_{2.5}$) are the pollutants of major concern along roadways.

The most notable source of CO is motor vehicles. For this reason, carbon monoxide concentrations are usually indicative of the local air quality generated by a roadway network, and are used as an indicator of its impacts on local air quality. CO concentrations are highest near intersections where queuing increases emissions. Local air quality impacts can be assessed by comparing future carbon monoxide levels with State and Federal carbon monoxide standards moreover by comparing future CO concentrations with and without the project. The Federal and State standards for carbon monoxide were presented earlier in Table 1.

CO modeling was performed for the 2003 AQMP to demonstrate attainment of the federal CO standards in the South Coast Air Basin (SCAB). Modeling was performed for four intersections considered the worst-case intersections in the SCAB. These intersections included; Wilshire at Veteran, Sunset at Highland, La Cienega at Century, and Long Beach at Imperial. Table 4-10 of Appendix V of the AQMP shows that modeled 1-hour average concentrations at these four intersections for 2002 conditions are actually below the 8-hour standard of 9 ppm. The highest modeled 1-hour average concentration of 4.6 ppm occurred at the Wilshire and Veteran intersection. None of the intersections in the project area have peak hour traffic volumes that exceed those at the intersections modeled in the AQMP nor do they have any geometric qualities that would result in higher concentrations than for the intersections modeled for the AQMP. Generally, only intersections operating at LOS of E or worse are considered to have the potential to cause CO concentrations to exceed the state ambient air quality standards of 20 ppm for a 1-hour averaging time and 9 ppm for an 8-hour averaging time.

The traffic study prepared for the project by Kunaman Associates, Inc. shows that with the project five intersections are projected to have will have a LOS of E or worse in 2020 with the project. These intersections are; (1) Prairie Avenue at Redondo Beach Boulevard, (2) Crenshaw Boulevard at Redondo Beach Boulevard, (3) Crenshaw Boulevard at Artesia Boulevard, (4) Crenshaw Boulevard at 182nd Street, and (5) Crenshaw Boulevard at I-405 Southbound Ramps.

Peak hour traffic volume increases due to the project are projected to be less than 2% at three of these intersections; (1) Prairie Avenue at Redondo Beach Boulevard, (2) Crenshaw Boulevard at 182nd Street, and (3) Crenshaw Boulevard at I-405 Southbound Ramps. The Caltrans CO Protocol states that traffic volume increases of less than 2% will not substantially affect CO concentrations. Therefore, CO concentrations near these seven intersections will not be significantly impacted by the project.

The project is projected to increase peak hour traffic volumes by more than two percent at the remaining two intersections; (1) Crenshaw Boulevard at Redondo Beach Boulevard, and (2) Crenshaw Boulevard at Artesia Boulevard. Traffic volumes at these intersections (as well as the three other intersections) are not projected to exceed the traffic volumes for worst of the four worst-case intersections in the SCAB either on a per lane basis or total traffic. Further, these intersections do not have any characteristics that would result in higher CO concentrations than the worst-case intersections. Therefore, an exceedance of the CO air quality standard would not be expected at all of these intersections and the project will not result in a significant air quality impact around intersections affected by the project.

3.4 Compliance with Air Quality Planning

The following sections deal with the major air planning requirements for this project. Specifically, consistency of the project with the AQMP is addressed. As discussed below, consistency with the AQMP is a requirement of the California Environmental Quality Act (CEQA).

3.4.1 Consistency with AQMP

An EIR must discuss any inconsistencies between the proposed project and applicable GPs and regional plans (California Environmental Quality Act (CEQA) guidelines (Section 15125)). Regional plans that apply to the proposed project include the South Coast Air Quality Management Plan (AQMP). In this regard, this section will discuss any inconsistencies between the proposed project with the AQMP.

The purpose of the consistency discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-maker determines that the project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD's CEQA Handbook states "New or amended GP Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the plan if it furthers one or more policies and does not obstruct other policies. The Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (except as provided for CO in Section 9.4 for relocating CO hot spots).

(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this report, construction emissions will be less than the SCAQMD thresholds of significance with mitigation. While the projected increase in NO_X emissions due to the project is greater than the significance threshold it is less than 3 lbs/day (5.4%) over the threshold and compared to total regional emissions the increase is insignificant and would not be expected to considerably affect regional NO_2 or ozone concentrations. Further, as discussed below, the project does not induce growth over what has been assumed in the AQMP. The analysis shows that operational emissions are not projected to result in a local significant impact around the site or at intersections affected by the project.

Therefore, it is unlikely that development of the project will increase the frequency or severity of existing air quality violations in the immediate vicinity of the project. The proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards, thus the project is found to be consistent with the AQMP for the first criterion.

Criterion 2 - Exceed Assumptions in the AQMP?

Emission estimates in the AQMP include construction activities throughout the South Coast Air Basin based on historical activity rates and anticipated growth. Compared to basin wide construction emissions, the emissions associated with this project are minimal. Therefore, even if the project construction emissions considered not anticipated in the AQMP, the additional emissions associated with this project would not considerably increase the basin wide emission estimates. The project does not induce growth that is not anticipated by the AQMP and therefore is effectively included in the AQMP. Therefore, the project is found to be consistent with the AQMP for the second criterion.

4.0 MITIGATION MEASURES

4.1 Short-Term Impacts

The analysis presented in Section 3.2 concluded that concurrent NO_X and VOC emissions during construction of phases 1a, 1b, 1c, 2a, 2b, 2c, 2d, and 3a are projected to be in excess of the SCAQMD Regional Emissions Significance Threshold.

The primary source of NO_X emissions associated with construction of the project is the off-road construction equipment. Off-road construction equipment is the second largest source of construction related VOC emissions. New off-road construction equipment is required to comply with emission standards established by CARB and the U.S. EPA. As time has passed more stringent emission standards have been established and are referred to as tiers. The primary pollutants addressed by these standards are NO_X and particulates. Tier 1 was required for all equipment sold after 1996. The emissions requirements for new equipment were reduced to Tier 2 levels between 2001 and 2003, and reduced further to Tier 3 levels between 2005 and 2006. Tier 4 is being implemented in two phases with new equipment sold after 2011 being required to meet the Tier 4 Interim Standards and new equipment sold after 2014 to be required to meet the Tier 4 Final Standards. Equipment meeting the Tier 4 Final Standards is available at this time.

Table 14 presents the maximum concurrent mitigated construction emissions with all off-road construction equipment meeting the CARB/EPA Tier 4 Interim emissions standard. The table shows that the total combined emissions will be less than the SCAQMD significance threshold. Tables showing mitigated emissions for each individual construction phase and concurrent phases is presented in the appendix and show that with this requirement for the off-road equipment the construction activities will not exceed the significance thresholds. Therefore, requiring all off-road equipment for active phases with exceedances of the significance threshold (i.e. those expected to occur before the middle of 2015) to meet the CARB/EPA Tier 4 Interim emissions standard will mitigate all construction emission impacts to an insignificant level

Table 14
Maximum Concurrent Mitigated Construction Emissions

	Unmitigated Total Daily Emissions (lbs/day)					
Activity	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
2a Construction	25.1	18.5	1.4	0.6	0.2	0.0
2a Painting	2.1	1.3	8.2	0.1	0.0	0.0
2b Construction	36.5	25.3	2.7	3.1	0.6	0.1
2b Painting	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction	30.5	20.4	2.2	2.7	0.5	0.1
2d Peak Demolition	20.9	22.2	3.2	10.6	1.5	0.0
3a Remedial Demo & Site Prep	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined Emissions	**130.2**	**99.6**	**72.5**	**20.3**	**4.8**	**0.2**
Significance Threshold	**550**	**100**	**75**	**150**	**55**	**150**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Mitigation Measure AQ-1: All off-road equipment used for construction phases 1a, 1b, 1c, 2a, 2b, 2c, 2d, and 3a and demolition phases 1a, 2b, 2c, 2d, and 3a must comply with CARB and U.S. EPA Tier 4 Interim emission standards. Documentation demonstrating compliance with the Tier 4 Interim Standards for each piece of off-road equipment used for the construction of the project shall be submitted to the college prior to that equipment being used to construct the project.

Note that the calculations assumed watering of the site twice a day during grading and demolition activities as required by SCAQMD Rule 403. All applicable provisions of SCAQMD Rule 403 shall be implemented.

4.2 Long Term Impacts

The analysis presented in Section 3.3 shows that the projected increase in NO_X emissions is greater than the SCAQMD Regional Significance Threshold and will result in a significant regional air quality impact without mitigation.

Vehicular emissions represent 99.7% of the overall NO_X emissions increase due to the project. These emissions are due to students and employees driving to and from campus. The campus is already required to implement a trip reduction plan per existing SCAQMD regulations. However, this plan only provides accommodations to enable students and employees to reduce vehicular trips. The college has no direct control of how the students and staff travel to and from the school. The increase in vehicular emissions is greater than the NO_X significance threshold by itself and the project is projected to result in a slight reduction from the only other source of NO_X emissions from natural gas combustion. This decrease is due to the new buildings proposed by the project being more energy efficient due to the CalGreen Building Code adopted in 2010, which results greatest reasonably achievable feasible energy efficiency and the minimum feasible emissions from these sources.

Therefore, there are no feasible mitigation measures that El Camino College could implement with the proposed project that would reduce NO_X emissions to less than the significance threshold. It should be noted that vehicular emissions are projected to decrease in the future due to newer cleaner vehicles replacing older more polluting vehicles. This will result in a decrease in vehicular emission with or without the project as well as decreasing the difference between the emissions for the two conditions. As the project only exceeds the NOx threshold by 3 lbs/day it would only take a 4% reduction in vehicular emission rates to reduce the project increase to less than the significance threshold. CARB's EMFAC2011 vehicular emissions model projects that average vehicular emission rates will be 8% less in 2021 than in 2020. Therefore, the projected significant impact would only occur for one year.

5.0 UNAVOIDABLE SIGNIFICANT IMPACTS

With the mitigation measure AQ-1 described in Section 3.0, all short-term construction related significant impacts would be reduced to a level of insignificance.

In 2020 the projected increase in NO_X emissions due to the project is projected to be greater than the SCAQMD Regional Significance Thresholds and therefore, operation of the project will result in a significant air quality impact. Further, there are no feasible mitigation measures to reduce this impact. However, as discussed above, a 4% reduction in average vehicular emission rates would reduce the NO_X emissions increase to less than the significance threshold. Average vehicular emission rates are projected to be 8% lower in 2021 than they will be in 2020 and be further reduced in the future. Therefore, the significant impact from the project would only occur for one year. However, this impact is significant and unavoidable.

APPENDIX

Table 15
Localized Significance Threshold Parameters

Phase	Observer Dist. (ft) 1 Hr	Observer Dist. (ft) 8 Hr.	Area (acres)
1a	82	650	12
1b	82	375	2
1c	82	100	2
2a	82	100	5
2b	82	100	6
2c	82	160	6
2d	82	1000	2
3a	82	375	2

Table 16
Unmitigated Construction Emissions Estimates by Phase

Activity	Unmitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Phase 1a						
Demo Field House (2012)	22.6	37.7	4.8	3.1	2.0	0.0
Demo/Export Stadium (2012)	60.8	99.1	11.6	12.4	8.5	0.1
Demo/Export Stadium (2013)	56.0	90.9	10.7	11.9	8.0	0.1
Import/Grade Stadium (2013)	39.6	67.3	7.8	24.0	6.7	0.1
Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
Construct Stadium (2014)	23.6	32.4	4.8	2.1	2.0	0.0
Phase 1b						
Site Prep (2012)	13.9	24.1	3.0	6.6	4.1	0.0
Grading (2012)	12.0	20.7	2.6	5.9	3.5	0.0
Construction (2012)	22.2	28.1	5.6	2.7	1.9	0.0
Painting (2012)	2.6	3.2	46.9	0.4	0.3	0.0
Painting (2013)	2.6	3.0	46.9	0.4	0.3	0.0
Phase 1c						
Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
Grading (2013)	14.6	25.5	3.1	7.3	4.5	0.0
Construction (2013)	26.0	36.2	5.4	2.7	2.4	0.0
Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
Painting (2014)	2.2	2.8	28.8	0.3	0.2	0.0

Table 16
Unmitigated Construction Emissions Estimates by Phase

Activity	Unmitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Phase 2a						
Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
Demolition (2014)	27.2	44.3	5.4	18.8	2.2	0.1
Grading (2014)	13.8	23.9	3.0	7.2	4.4	0.0
Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
Construction (2015)	25.1	30.4	4.6	2.2	1.9	0.0
Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
Paving (2015)	9.2	12.8	2.9	1.2	1.1	0.0
Phase 2b						
Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
Demolition (2013)	21.7	35.6	4.5	3.0	1.8	0.0
Grading (2014)	13.8	23.9	3.0	7.7	4.4	0.0
Construction (2014)	38.0	40.9	6.4	4.9	2.5	0.1
Construction (2015)	36.5	37.2	5.8	4.7	2.2	0.1
Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
Paving (2015)	10.8	15.1	3.3	1.4	1.3	0.0
Phase 2c						
Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
Lot F Construction (2016)	29.4	27.3	4.4	4.0	1.9	0.1
Police Demolition (2015)	19.9	30.5	4.0	2.4	1.5	0.0
Police Site Prep (2015)	13.1	22.2	2.8	7.1	4.3	0.0
Paving (2015)	10.8	15.1	2.6	1.4	1.3	0.0
Lot F Painting (2015)	3.5	2.7	54.6	0.6	0.3	0.0
Phase 2d						
Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Peak Demolition (2015)	21.2	34.4	4.3	13.1	1.8	0.0
Grading (2015)	10.2	17.1	2.2	5.5	3.3	0.0
Construction (2015)	16.4	20.6	3.9	1.5	1.3	0.0
Construction (2016)	16.1	19.1	3.5	1.3	1.2	0.0
Painting (2016)	2.0	2.4	7.3	0.2	0.2	0.0

Table 16
Unmitigated Construction Emissions Estimates by Phase

	Unmitigated Total Daily Emissions (lbs/day)					
Activity	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Phase 3a						
Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Demolition (2015)	19.9	32.2	4.1	9.6	1.7	0.0
Grading (2015)	10.2	17.1	2.2	5.5	3.3	0.0
Construction (2015)	16.9	20.9	3.9	1.6	1.4	0.0
Construction (2016)	16.6	19.4	3.6	1.5	1.2	0.0
Painting (2016)	2.1	2.4	12.0	0.3	0.2	0.0

Table 17
Unmitigated Concurrent Construction Emissions Estimates

Activity	Unmitigated Total Daily Emissions (lbs/day) CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 6/18/12 to 7/13/12						
1a Demo Field House (2012)	22.6	37.7	4.8	3.1	2.0	0.0
1b Construction (2012)	22.2	28.1	5.6	2.7	1.9	0.0
Total Combined	**44.8**	**65.8**	**10.3**	**5.8**	**3.9**	**0.1**
Modeled Period 7/14/12 to 12/18/12						
1a Demo/Export Stadium (2012)	60.8	99.1	11.6	12.4	8.5	0.1
1b Construction (2012)	22.2	28.1	5.6	2.7	1.9	0.0
Total Combined	**83.0**	***127.2***	**17.1**	**15.1**	**10.5**	**0.2**
Modeled Period 12/19/12 to 12/31/12						
1a Demo/Export Stadium (2012)	60.8	99.1	11.6	12.4	8.5	0.1
1b Painting (2012)	2.6	3.2	46.9	0.4	0.3	0.0
Total Combined	**63.4**	**102.3**	**58.5**	**12.8**	**8.8**	**0.1**
1a Demo/Export Stadium (2013)	56.0	90.9	10.7	11.9	8.0	0.1
1b Painting (2013)	2.6	3.0	46.9	0.4	0.3	0.0
Total Combined	**58.6**	**93.9**	**57.5**	**12.3**	**8.3**	**0.1**
Modeled Period 6/1/13 to 7/5/13						
1a Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
1c Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2c Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Total Combined	**71.6**	**95.1**	**14.2**	**14.3**	**9.3**	**0.1**
Modeled Period 7/6/13 to 7/12/13						
1a Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
1c Grading (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2c Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Total Combined	**71.6**	**95.1**	**14.2**	**14.3**	**9.3**	**0.1**
Modeled Period 7/13/13 to 10/31/13						
1a Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
1c Construction (2013)	26.0	36.2	5.4	2.7	2.4	0.0
2c Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Total Combined	**83.0**	***105.8***	**16.5**	**9.7**	**7.1**	**0.1**

Table 17
Unmitigated Concurrent Construction Emissions Estimates

Activity	Unmitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 11/1/13 to 11/30/13						
1a Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
1c Construction (2013)	26.0	36.2	5.4	2.7	2.4	0.0
2a Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2b Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2c Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Total Combined	**112.1**	***156.7***	**22.8**	**24.3**	**16.2**	**0.2**
Modeled Period 12/1/13 to 12/30/13						
1a Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
1c Construction (2013)	26.0	36.2	5.4	2.7	2.4	0.0
2a Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2b Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2b Demolition (2013)	21.7	35.6	4.5	3.0	1.8	0.0
2c Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Total Combined	**133.8**	***192.3***	**27.3**	**27.4**	**18.0**	**0.2**
Modeled Period 12/31/13 to 12/31/13						
1a Construct Stadium (2013)	23.9	35.0	5.2	2.4	2.3	0.0
1c Construction (2013)	26.0	36.2	5.4	2.7	2.4	0.0
2a Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2b Remedial Demo/Site Prep (2013)	14.6	25.5	3.1	7.3	4.5	0.0
2c Lot F Construction (2013)	33.1	34.6	5.8	4.6	2.5	0.1
Total Combined	**112.1**	***156.7***	**22.8**	**24.3**	**16.2**	**0.2**
Modeled Period 1/1/14 to 5/1/14						
1a Construct Stadium (2014)	23.6	32.4	4.8	2.1	2.0	0.0
1c Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
2a Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2a Demolition (2014)	27.2	44.3	5.4	18.8	2.2	0.1
2b Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**135.6**	***190.0***	**26.5**	**42.2**	**17.5**	**0.2**

Table 17
Unmitigated Concurrent Construction Emissions Estimates

Activity	Unmitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 5/2/14 to 5/15/14						
1a Construct Stadium (2014)	23.6	32.4	4.8	2.1	2.0	0.0
1c Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
2a Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2b Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**108.5**	***145.7***	**21.1**	**23.4**	**15.3**	**0.2**
Modeled Period 5/16/14 to 5/16/14						
1c Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
2a Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2b Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**84.8**	***113.3***	**16.3**	**21.3**	**13.2**	**0.1**
Modeled Period 5/17/14 to 5/31/14						
1c Painting (2014)	2.2	2.8	28.8	0.3	0.2	0.0
2a Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2b Remedial Demo/Site Prep (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**61.5**	**82.7**	**40.1**	**19.1**	**11.4**	**0.1**
Modeled Period 6/1/14 to 6/6/14						
1c Painting (2014)	2.2	2.8	28.8	0.3	0.2	0.0
2a Grading (2014)	13.8	23.9	3.0	7.2	4.4	0.0
2b Grading (2014)	13.8	23.9	3.0	7.7	4.4	0.0
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**61.5**	**82.7**	**40.1**	**19.7**	**11.4**	**0.1**
Modeled Period 6/7/14 to 12/30/14						
1c Painting (2014)	2.2	2.8	28.8	0.3	0.2	0.0
2a Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
2b Construction (2014)	38.0	40.9	6.4	4.9	2.5	0.1
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**97.5**	***109.2***	**45.5**	**12.1**	**7.1**	**0.2**

Table 17
Unmitigated Concurrent Construction Emissions Estimates

Activity	Unmitigated Total Daily Emissions (lbs/day) CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 12/31/14 to 12/31/14						
2a Construction (2014)	25.5	33.4	5.0	2.5	2.1	0.0
2b Construction (2014)	38.0	40.9	6.4	4.9	2.5	0.1
2c Lot F Construction (2014)	31.8	32.2	5.3	4.4	2.3	0.1
Total Combined	**95.3**	***106.4***	**16.7**	**11.8**	**6.9**	**0.2**
Modeled Period 1/1/15 to 1/31/15						
2a Construction (2015)	25.1	30.4	4.6	2.2	1.9	0.0
2a Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
2b Construction (2015)	36.5	37.2	5.8	4.7	2.2	0.1
2b Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
Total Combined	**97.9**	***102.4***	***77.3***	**12.0**	**6.6**	**0.2**
Modeled Period 2/1/15 to 3/31/15						
2a Construction (2015)	25.1	30.4	4.6	2.2	1.9	0.0
2a Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
2b Construction (2015)	36.5	37.2	5.8	4.7	2.2	0.1
2b Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**109.7**	***122.3***	***79.8***	**18.3**	**10.5**	**0.2**
Modeled Period 4/1/15 to 4/27/15						
2a Construction (2015)	25.1	30.4	4.6	2.2	1.9	0.0
2a Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
2b Construction (2015)	36.5	37.2	5.8	4.7	2.2	0.1
2b Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Peak Demolition (2015)	21.2	34.4	4.3	13.1	1.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**130.9**	***156.7***	***84.1***	**31.4**	**12.2**	**0.2**

Table 17
Unmitigated Concurrent Construction Emissions Estimates

Activity	Unmitigated Total Daily Emissions (lbs/day) CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 4/28/15 to 5/31/15						
2a Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
2b Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
2d Peak Demolition (2015)	21.2	34.4	4.3	13.1	1.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**81.1**	***109.0***	***76.3***	**30.8**	**12.0**	**0.1**
Modeled Period 6/1/15 to 7/29/15						
2a Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
2b Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Demolition (2015)	19.9	32.2	4.1	9.6	1.7	0.0
Total Combined	**79.9**	***106.8***	***76.0***	**27.3**	**11.9**	**0.1**
Modeled Period 7/2/15 to 7/15/15						
2a Painting (2015)	2.2	2.6	8.5	0.3	0.2	0.0
2b Painting (2015)	3.7	2.7	53.5	0.7	0.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Police Demolition (2015)	19.9	30.5	4.0	2.4	1.5	0.0
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**79.8**	***105.1***	***76.0***	**20.0**	**11.7**	**0.1**
Modeled Period 7/16/15 to 7/29/15						
2a Paving (2015)	9.2	12.8	2.9	1.2	1.1	0.0
2b Paving (2015)	10.8	15.1	3.3	1.4	1.3	0.0
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Police Demolition (2015)	19.9	30.5	4.0	2.4	1.5	0.0
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**94.0**	***127.7***	**20.1**	**21.7**	**13.6**	**0.2**

Table 17
Unmitigated Concurrent Construction Emissions Estimates

	Unmitigated Total Daily Emissions (lbs/day)					
Activity	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Modeled Period 7/30/15 to 8/12/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Police Site Prep (2015)	13.1	22.2	2.8	7.1	4.3	0.0
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**67.2**	**91.5**	**12.8**	**23.9**	**14.1**	**0.1**
Modeled Period 8/13/15 to 8/27/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Paving (2015)	10.8	15.1	2.6	1.4	1.3	0.0
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**64.9**	**84.4**	**12.5**	**18.2**	**11.0**	**0.1**
Modeled Period 8/28/15 to 8/31/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**54.1**	**69.3**	**9.9**	**16.8**	**9.7**	**0.1**
Modeled Period 9/1/15 to 9/28/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Grading (2015)	10.2	17.1	2.2	5.5	3.3	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**52.5**	**66.5**	**9.6**	**15.9**	**9.2**	**0.1**
Modeled Period 9/29/15 to 10/14/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2d Construction (2015)	16.4	20.6	3.9	1.5	1.3	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**58.7**	**70.0**	**11.3**	**12.0**	**7.2**	**0.1**

Modeled Period 10/15/15 to 10/31/15

Table 17
Unmitigated Concurrent Construction Emissions Estimates

Activity	Unmitigated Total Daily Emissions (lbs/day) CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Lot F Painting (2015)	3.5	2.7	54.6	0.6	0.3	0.0
2d Construction (2015)	16.4	20.6	3.9	1.5	1.3	0.0
3a Remedial Demo/Site Prep (2015)	11.8	19.9	2.5	6.3	3.8	0.0
Total Combined	**62.2**	**72.7**	**65.8**	**12.6**	**7.5**	**0.1**
Modeled Period 11/1/15 to 11/27/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Lot F Painting (2015)	3.5	2.7	54.6	0.6	0.3	0.0
2d Construction (2015)	16.4	20.6	3.9	1.5	1.3	0.0
3a Grading (2015)	10.2	17.1	2.2	5.5	3.3	0.0
Total Combined	**60.6**	**69.9**	**65.5**	**11.7**	**6.9**	**0.1**
Modeled Period 11/28/15 to 12/31/15						
2c Lot F Construction (2015)	30.5	29.6	4.9	4.2	2.1	0.1
2c Lot F Painting (2015)	3.5	2.7	54.6	0.6	0.3	0.0
2d Construction (2015)	16.4	20.6	3.9	1.5	1.3	0.0
3a Construction (2015)	16.9	20.9	3.9	1.6	1.4	0.0
Total Combined	**67.3**	**73.8**	**67.2**	**7.9**	**5.0**	**0.1**

Table 18
Mitigated Construction Emissions Estimates by Phase

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Phase 1a						
Demo Field House (2012)	22.6	13.1	1.0	1.1	0.2	0.0
Demo/Export Stadium (2012)	60.8	70.0	6.8	6.3	4.1	0.1
Demo/Export Stadium (2013)	56.0	64.6	6.2	6.0	3.8	0.1
Import/Grade Stadium (2013)	39.6	44.7	4.4	18.4	3.0	0.1
Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
Construct Stadium (2014)	23.6	17.6	1.3	0.3	0.2	0.0
Phase 1b						
Site Prep (2012)	13.9	6.7	0.6	2.2	1.2	0.0
Grading (2012)	12.0	5.8	0.5	2.0	1.0	0.0
Construction (2012)	22.2	20.6	4.4	2.1	1.3	0.0
Painting (2012)	2.6	3.2	46.9	0.4	0.3	0.0
Painting (2013)	2.6	3.0	46.9	0.4	0.3	0.0
Phase 1c						
Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
Grading (2013)	14.6	7.4	0.7	2.5	1.4	0.0
Construction (2013)	26.0	18.8	1.5	0.6	0.3	0.0
Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
Painting (2014)	2.1	1.3	28.5	0.1	0.0	0.0
Phase 2a						
Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
Demolition (2014)	27.2	24.0	2.2	14.1	0.7	0.1
Grading (2014)	13.8	7.4	0.7	2.5	1.4	0.0
Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
Construction (2015)	25.1	18.5	1.4	0.6	0.2	0.0
Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
Paving (2015)	8.6	5.5	1.1	0.2	0.0	0.0

Table 18
Mitigated Construction Emissions Estimates by Phase

	Mitigated Total Daily Emissions (lbs/day)					
Activity	**CO**	**NO_x**	**VOC**	**PM_{10}**	**$PM_{2.5}$**	**SO_x**
Phase 2b						
Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
Demolition (2013)	21.7	13.1	1.0	1.2	0.2	0.0
Grading (2014)	13.8	7.4	0.7	2.7	1.4	0.0
Construction (2014)	38.0	26.1	2.8	3.1	0.7	0.1
Construction (2015)	36.5	25.3	2.7	3.1	0.6	0.1
Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
Paving (2015)	10.0	6.5	1.2	0.2	0.1	0.0
Phase 2c						
Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
Lot F Construction (2016)	29.4	19.9	2.1	2.7	0.5	0.1
Police Demolition (2015)	19.9	12.6	1.0	0.8	0.1	0.0
Police Site Prep (2015)	13.1	7.4	0.7	2.5	1.4	0.0
Paving (2015)	10.0	6.5	0.5	0.2	0.1	0.0
Lot F Painting (2015)	3.4	1.4	54.2	0.4	0.0	0.0
Phase 2d						
Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Peak Demolition (2015)	20.9	22.2	3.2	10.6	1.5	0.0
Grading (2015)	9.9	9.2	1.5	2.5	1.6	0.0
Construction (2015)	16.4	15.4	3.3	1.5	1.3	0.0
Construction (2016)	16.1	15.3	3.3	1.3	1.2	0.0
Painting (2016)	2.0	1.5	7.2	0.2	0.2	0.0
Phase 3a						
Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Demolition (2015)	19.6	20.0	2.9	7.8	1.4	0.0
Grading (2015)	9.9	9.2	1.5	2.5	1.6	0.0
Construction (2015)	16.9	15.7	3.3	1.6	1.3	0.0
Construction (2016)	16.6	15.6	3.3	1.5	1.2	0.0
Painting (2016)	2.0	1.5	11.9	0.2	0.2	0.0

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 6/18/12 to 7/13/12						
1a Demo Field House (2012)	22.6	13.1	1.0	1.1	0.2	0.0
1b Construction (2012)	22.2	20.6	4.4	2.1	1.3	0.0
Total Combined	**44.8**	**44.8**	**33.7**	**5.4**	**3.2**	**0.1**
Modeled Period 7/14/12 to 12/18/12						
1a Demo/Export Stadium (2012)	60.8	70.0	6.8	6.3	4.1	0.1
1b Construction (2012)	2.6	3.2	46.9	0.4	0.3	0.0
Total Combined	**83.0**	**90.6**	**11.2**	**8.3**	**5.4**	**0.2**
Modeled Period 12/19/12 to 12/31/12						
1a Demo/Export Stadium (2012)	60.8	70.0	6.8	6.3	4.1	0.1
1b Painting (2012)	2.6	3.2	46.9	0.4	0.3	0.0
Total Combined	**63.4**	**73.2**	**53.7**	**6.7**	**4.4**	**0.1**
Modeled Period1/1/13 to 5/31/13						
1a Demo/Export Stadium (2013)	56.0	64.6	6.2	6.0	3.8	0.1
1b Painting (2013)	2.6	3.0	46.9	0.4	0.3	0.0
Total Combined	**58.6**	**67.6**	**53.1**	**6.4**	**4.1**	**0.1**
Modeled Period 6/1/13 to 7/5/13						
1a Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
1c Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Total Combined	**71.2**	**46.9**	**4.3**	**5.5**	**2.2**	**0.1**
Modeled Period 7/6/13 to 7/12/13						
1a Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
1c Grading (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Total Combined	**71.2**	**46.9**	**4.3**	**5.5**	**2.2**	**0.1**
Modeled Period 7/13/13 to 10/31/13						
1a Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
1c Construction (2013)	26.0	18.8	1.5	0.6	0.3	0.0
2c Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Total Combined	**82.6**	**58.3**	**5.2**	**3.6**	**1.0**	**0.1**

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 11/1/13 to 11/30/13						
1a Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
1c Construction (2013)	26.0	18.8	1.5	0.6	0.3	0.0
2a Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2b Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Total Combined	**111.8**	**73.1**	**6.5**	**8.6**	**3.8**	**0.2**
Modeled Period 12/1/13 to 12/30/13						
1a Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
1c Construction (2013)	26.0	18.8	1.5	0.6	0.3	0.0
2a Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2b Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2b Demolition (2013)	21.7	13.1	1.0	1.2	0.2	0.0
2c Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Total Combined	**133.4**	**86.2**	**7.5**	**9.8**	**3.9**	**0.2**
Modeled Period 12/31/13 to 12/31/13						
1a Construct Stadium (2013)	23.9	17.6	1.3	0.3	0.2	0.0
1c Construction (2013)	26.0	18.8	1.5	0.6	0.3	0.0
2a Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2b Remedial Demo/Site Prep (2013)	14.6	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2013)	32.8	21.9	2.4	2.7	0.6	0.1
Total Combined	**111.8**	**73.1**	**6.5**	**8.6**	**3.8**	**0.2**
Modeled Period 1/1/14 to 5/1/14						
1a Construct Stadium (2014)	23.6	17.6	1.3	0.3	0.2	0.0
1c Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
2a Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2a Demolition (2014)	27.2	24.0	2.2	14.1	0.7	0.1
2b Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**135.4**	**96.1**	**8.5**	**22.7**	**4.4**	**0.2**

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 5/2/14 to 5/15/14						
1a Construct Stadium (2014)	23.6	17.6	1.3	0.3	0.2	0.0
1c Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
2a Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2b Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**108.3**	**72.2**	**6.3**	**8.6**	**3.8**	**0.2**
Modeled Period 5/16/14 to 5/16/14						
1c Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
2a Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2b Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**84.7**	**54.6**	**5.1**	**8.3**	**3.6**	**0.1**
Modeled Period 5/17/14 to 5/31/14						
1c Painting (2014)	2.1	1.3	28.5	0.1	0.0	0.0
2a Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2b Remedial Demo/Site Prep (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**61.3**	**37.2**	**32.1**	**7.8**	**3.3**	**0.1**
Modeled Period 6/1/14 to 6/6/14						
1c Painting (2014)	2.1	1.3	28.5	0.1	0.0	0.0
2a Grading (2014)	13.8	7.4	0.7	2.5	1.4	0.0
2b Grading (2014)	13.8	7.4	0.7	2.7	1.4	0.0
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**61.3**	**37.2**	**32.1**	**8.0**	**3.3**	**0.1**
Modeled Period 6/7/14 to 12/30/14						
1c Painting (2014)	2.1	1.3	28.5	0.1	0.0	0.0
2a Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
2b Construction (2014)	38.0	26.1	2.8	3.1	0.7	0.1
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**97.2**	**67.0**	**35.0**	**6.5**	**1.5**	**0.2**

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 12/31/14 to 12/31/14						
2a Construction (2014)	25.5	18.6	1.5	0.6	0.3	0.0
2b Construction (2014)	38.0	26.1	2.8	3.1	0.7	0.1
2c Lot F Construction (2014)	31.6	21.1	2.3	2.7	0.6	0.1
Total Combined	**95.1**	**65.8**	**6.6**	**6.4**	**1.5**	**0.2**
Modeled Period 1/1/15 to 1/31/15						
2a Construction (2015)	25.1	18.5	1.4	0.6	0.2	0.0
2a Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
2b Construction (2015)	36.5	25.3	2.7	3.1	0.6	0.1
2b Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
Total Combined	**97.8**	**66.8**	**67.7**	**6.9**	**1.5**	**0.2**
Modeled Period 2/1/15 to 3/31/15						
2a Construction (2015)	25.1	18.5	1.4	0.6	0.2	0.0
2a Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
2b Construction (2015)	36.5	25.3	2.7	3.1	0.6	0.1
2b Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**109.3**	**77.5**	**69.4**	**9.7**	**3.3**	**0.2**
Modeled Period 4/1/15 to 4/27/15						
2a Construction (2015)	25.1	18.5	1.4	0.6	0.2	0.0
2a Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
2b Construction (2015)	36.5	25.3	2.7	3.1	0.6	0.1
2b Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Peak Demolition (2015)	20.9	22.2	3.2	10.6	1.5	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**130.2**	**99.6**	**72.5**	**20.3**	**4.8**	**0.2**

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 4/28/15 to 5/31/15						
2a Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
2b Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
2d Peak Demolition (2015)	20.9	22.2	3.2	10.6	1.5	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**80.1**	**66.5**	**70.1**	**19.5**	**5.7**	**0.1**
Modeled Period 6/1/15 to 7/29/15						
2a Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
2b Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Demolition (2015)	19.6	20.0	2.9	7.8	1.4	0.0
Total Combined	**78.8**	**64.4**	**69.9**	**16.7**	**5.6**	**0.1**
Modeled Period 7/2/15 to 7/15/15						
2a Painting (2015)	2.1	1.3	8.2	0.1	0.0	0.0
2b Painting (2015)	3.6	1.4	53.2	0.4	0.0	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Police Demolition (2015)	19.9	12.6	1.0	0.8	0.1	0.0
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**79.0**	**57.0**	**67.9**	**9.7**	**4.4**	**0.1**
Modeled Period 7/16/15 to 7/29/15						
2a Paving (2015)	8.6	5.5	1.1	0.2	0.0	0.0
2b Paving (2015)	10.0	6.5	1.2	0.2	0.1	0.0
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Police Demolition (2015)	19.9	12.6	1.0	0.8	0.1	0.0
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**91.9**	**66.3**	**8.9**	**9.5**	**4.5**	**0.2**

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 7/30/15 to 8/12/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Police Site Prep (2015)	13.1	7.4	0.7	2.5	1.4	0.0
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**66.5**	**49.2**	**6.3**	**10.9**	**5.6**	**0.1**
Modeled Period 8/13/15 to 8/27/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Paving (2015)	10.0	6.5	0.5	0.2	0.1	0.0
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**63.5**	**48.2**	**6.1**	**8.6**	**4.3**	**0.1**
Modeled Period 8/28/15 to 8/31/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**53.5**	**41.7**	**5.6**	**8.4**	**4.2**	**0.1**
Modeled Period 9/1/15 to 9/28/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Grading (2015)	9.9	9.2	1.5	2.5	1.6	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**51.9**	**40.2**	**5.4**	**8.0**	**4.0**	**0.1**
Modeled Period 9/29/15 to 10/14/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2d Construction (2015)	16.4	15.4	3.3	1.5	1.3	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**58.4**	**46.4**	**7.2**	**7.0**	**3.7**	**0.1**

Table 19
Mitigated Concurrent Construction Emissions Estimates

Activity	Mitigated Total Daily Emissions (lbs/day)					
	CO	NO_x	VOC	PM_{10}	$PM_{2.5}$	SO_x
Modeled Period 10/15/15 to 10/31/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Lot F Painting (2015)	3.4	1.4	54.2	0.4	0.0	0.0
2d Construction (2015)	16.4	15.4	3.3	1.5	1.3	0.0
3a Remedial Demo/Site Prep (2015)	11.5	10.7	1.7	2.9	1.9	0.0
Total Combined	**61.8**	**47.8**	**61.4**	**7.4**	**3.8**	**0.1**
Modeled Period 11/1/15 to 11/27/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Lot F Painting (2015)	3.4	1.4	54.2	0.4	0.0	0.0
2d Construction (2015)	16.4	15.4	3.3	1.5	1.3	0.0
3a Grading (2015)	9.9	9.2	1.5	2.5	1.6	0.0
Total Combined	**60.2**	**46.3**	**61.2**	**7.0**	**3.5**	**0.1**
Modeled Period 11/28/15 to 12/31/15						
2c Lot F Construction (2015)	30.5	20.4	2.2	2.7	0.5	0.1
2c Lot F Painting (2015)	3.4	1.4	54.2	0.4	0.0	0.0
2d Construction (2015)	16.4	15.4	3.3	1.5	1.3	0.0
3a Construction (2015)	16.9	15.7	3.3	1.6	1.3	0.0
Total Combined	**67.2**	**52.7**	**63.0**	**6.1**	**3.2**	**0.1**

Table 20
Unmitigated On-Site Construction Emissions

Activity	On-Site Unmitigated Daily Emissions (lbs/day) CO	NO_X	PM_{10}	$PM_{2.5}$
Phase 1a				
Demo Field House (2012)	21.4	36.8	2.3	1.9
Demo/Export Stadium (2012)	29.3	47.5	8.8	5.9
Demo/Export Stadium (2013)	28.7	45.1	8.6	5.7
Import/Grade Stadium (2013)	20.8	35.6	8.9	5.1
Construct Stadium (2013)	23.5	34.7	2.3	2.3
Construct Stadium (2014)	23.2	32.1	2.0	2.0
Significance Threshold	**1796.0**	**197.0**	**87.5**	**34.7**
Phase 1b				
Site Prep (2012)	13.5	24.1	6.5	4.1
Grading (2012)	11.6	20.7	5.9	3.5
Construction (2012)	16.8	24.9	1.8	1.8
Painting (2012)	2.0	3.2	0.3	0.3
Painting (2013)	2.0	3.0	0.3	0.3
Significance Threshold	**845.8**	**115.0**	**37.4**	**12.6**
Phase 1c				
Site Prep (2013)	14.2	25.5	7.2	4.5
Grading (2013)	14.2	25.5	7.2	4.5
Construction (2013)	23.5	34.7	2.3	2.3
Construction (2014)	23.3	32.1	2.0	2.0
Painting (2014)	1.9	2.8	0.2	0.2
Significance Threshold	**845.8**	**115.0**	**9.6**	**4.6**
Phase 2a				
Remedial Demo/Site Prep (2013)	14.2	25.5	7.2	4.5
Remedial Demo/Site Prep (2014)	13.4	23.8	7.1	4.4
Demolition (2014)	26.6	44.3	18.7	2.2
Grading (2014)	13.4	23.8	7.1	4.4
Construction (2014)	23.3	32.1	2.0	2.0
Construction (2015)	23.0	29.2	1.8	1.8
Painting (2015)	1.9	2.6	0.2	0.2
Paving (2015)	8.7	12.8	1.1	1.1
Significance Threshold	**1,657.8**	**186.0**	**20.0**	**8.1**

Table 20
Unmitigated On-Site Construction Emissions

Activity	On-Site Unmitigated Daily Emissions (lbs/day)			
	CO	NO_X	PM_{10}	$PM_{2.5}$
Phase 2b				
Remedial Demo/Site Prep (2013)	14.2	25.5	7.2	4.5
Remedial Demo/Site Prep (2014)	13.4	23.8	7.1	4.4
Demolition (2013)	21.1	35.5	2.9	1.8
Grading (2014)	13.4	23.8	7.7	4.4
Construction (2014)	23.6	32.4	2.1	2.0
Construction (2015)	23.4	29.5	1.9	1.8
Painting (2015)	1.9	2.6	0.2	0.2
Significance Threshold	**1796.0**	**197.0**	**21.8**	**8.7**
Phase 2c				
Lot F Construction (2013)	19.4	26.2	2.1	2.1
Lot F Construction (2014)	19.1	24.6	1.9	1.9
Lot F Construction (2015)	23.0	28.9	2.4	1.9
Lot F Construction (2016)	22.5	26.7	2.2	1.7
Police Demolition (2015)	19.3	30.5	2.2	1.5
Police Site Prep (2015)	12.7	22.2	7.0	4.3
Paving (2015)	10.3	15.1	1.3	1.3
Significance Threshold	**1796.0**	**197.0**	**44.5**	**10.9**
Phase 2d				
Remedial Demo/Site Prep (2015)	11.5	19.8	6.2	3.8
Peak Demolition (2015)	16.6	27.4	5.2	1.4
Grading (2015)	9.9	17.1	5.4	3.3
Construction (2015)	15.9	20.6	1.4	1.3
Construction (2016)	15.4	18.7	1.2	1.2
Painting (2016)	1.9	2.4	0.2	0.2
Significance Threshold	**967.0**	**131.0**	**94.0**	**44.6**

Table 20
Unmitigated On-Site Construction Emissions

Activity	On-Site Unmitigated Daily Emissions (lbs/day) CO	NO_X	PM_{10}	$PM_{2.5}$
Phase 3a				
Remedial Demo /Site Prep (2015)	11.5	19.8	6.2	3.8
Demolition (2015)	16.6	27.3	4.0	1.4
Grading (2015)	9.9	17.1	5.4	3.3
Construction (2015)	15.6	20.2	1.3	1.3
Construction (2016)	15.4	18.7	1.2	1.2
Painting (2016)	1.9	2.4	0.2	0.2
Significance Threshold	**815.5**	**111.0**	**36.5**	**12.3**

Construction Emissions CalEEMod Input Worksheets

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	1a ConstructT4iA.xls
Project:	El Camino College Demo & Construciton 1a
Year:	2011
Size:	12.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	0
Land Use:	Junior College (2Yr)	0
Units:	6.3 1000sqft	
Lot Size:	12.4 Acres	0.0 Acres
Bulding Size	6,300 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 1a ConstructT4iA.xls

Project: El Camino College Demo & Construciton 1a

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Demolition	Demolition	6/18/12	7/13/12	5	20	Demolish Field House
2	Demo Stadium	Grading	7/14/12	4/19/13	5	200	Demolish/Remove Stadium
3	Grading	Site Preparation	4/20/13	5/3/13	5	10	Import Fill Material
4	Construct	Building Construction	5/4/13	5/2/14	5	260	Construct Bleachers and Field

Demolition

No.	Phase	Amount	
1	Demolition	6,377	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Demolition	8	0	29	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Demo Stadium	13	0	17,300	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Grading	8	0	600	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Construct	3	2	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 1a ConstructT4iA.xls

Project: El Camino College Demo & Construciton 1a

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Excavators	1	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
2	Demo Stadium	Excavators	2	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	2	8.0	75	0.55
3	Grading	Graders	1	8.0	162	0.61
		Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
4	Construct	Cranes	1	7.0	208	0.43
		Forklifts	3	8.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	3	7.0	75	0.55
		Welders	1	8.0	46	0.45

Off Road Equipment Mitigation

		Numer of Units				Oxidation Catalyst
Equipment	Fuel	Used	Mitigated	Tier	DPF	(% Reduction)
Concrete/Industrial Saws	Diesel	1	1	ier 4 Interir		
Cranes	Diesel	1	1	ier 4 Interir		
Excavators	Diesel	3	3	ier 4 Interir		
Forklifts	Diesel	3	3	ier 4 Interir		
Generator Sets	Diesel	1	1	ier 4 Interir		
Graders	Diesel	1	1	ier 4 Interir		
Rubber Tired Dozers	Diesel	3	3	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	6	6	ier 4 Interir		
Welders	Diesel	1	1	ier 4 Interir		

CalEEMod Input Summary - Construction Emissions

File 1a ConstructT4iA.xls

Project: El Camino College Demo & Construciton 1a

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
2	Demo Stadium	0	128,500	Cubic Yard:	5.00	7.1	7.9%	12.0%	6.9
3	Grading	4,500	0	Cubic Yard:	5.00	7.1	7.9%	12.0%	6.9

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Percent Paved Road Trips Vendor	Percent Paved Road Trips Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Demo Stadium	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Construct	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

	Phase	% Reduction PM_{10}	% Reduction $PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

CalEEMod Input Summary - Construction Emissions

File 1a ConstructT4iA.xls

Project: El Camino College Demo & Construciton 1a

Architectural Coating

No.	Phase	Emission Factor (g/L) Res Int	Res Ext.	Com Int.	Com. Ext	Painted Area (Sq. Ft.) Res Int	Res Ext.	Com Int.	Com. Ext	VOC Content Regulation Start	End

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	1b Construct T4i.xls
Project:	El Camino College Construction Phase 1b
Year:	2013
Size:	1.6 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	0
Land Use:	Junior College (2Yr)	0
Units:	100 1000sqft	
Lot Size:	1.6 Acres	0.0 Acres
Bulding Size	100,000 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 1b Construct T4i.xls

Project: El Camino College Construction Phase 1b

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Site Preparation	Site Preparation	2/1/12	3/6/12	5	25	
2	Grading	Grading	3/7/12	3/13/12	5	5	
3	Building Construction	Building Construction	3/14/12	12/18/12	5	200	
4	Architectural Coating	Architectural Coating	12/19/12	2/26/13	5	50	

Demolition

No.	Phase	Amount

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Site Preparation	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Grading	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Building Construction	42	16	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Architectural Coating	8	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 1b Construct T4i.xls

Project: El Camino College Construction Phase 1b

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Site Preparation	Rubber Tired Dozers	1	7.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
2	Grading	Rubber Tired Dozers	1	6.0	358	0.59
		Tractors/Loaders/Backhoes	1	7.0	75	0.55
3	Building Construction	Cranes	1	6.0	208	0.43
		Forklifts	1	6.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	1	6.0	75	0.55
		Welders	3	8.0	46	0.45
4	Architectural Coating	Air Compressors	1	6.0	78	0.48

Off Road Equipment Mitigation

		Numer of Units				Oxidation Catalyst
Equipment	**Fuel**	**Used**	**Mitigated**	**Tier**	**DPF**	**(% Reduction)**
Air Compressors	Diesel	1				
Cranes	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	1	1	ier 4 Interir		
Generator Sets	Diesel	1				
Rubber Tired Dozers	Diesel	2	2	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	3	3	ier 4 Interir		
Welders	Diesel	3				

Grading

						Veh.	Moisture Content		Silt
No.	**Phase**	**Import**	**Export**	**Units**	**Acres**	**Speed.**	**Bulldozing**	**Loading**	**Content**
1	Site Preparation	0	0		1.00	7.1	7.9%	12.0%	6.9
2	Grading	0	0		1.50	7.1	7.9%	12.0%	6.9

CalEEMod Input Summary - Construction Emissions

File 1b Construct T4i.xls

Project: El Camino College Construction Phase 1b

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Site Preparation	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Building Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Architectural Coating	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

	Phase	% Reduction PM_{10}	$PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

No.	Phase	Emission Factor (g/L) Res Int	Res Ext.	Com Int.	Com. Ext	Painted Area (Sq. Ft.) Res Int	Res Ext.	Com Int.	Com. Ext	VOC Content Regulation Start	End
4	Architectural Coating	50	100.0	250.0	250.0	0	0	150,000	50,000	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	1c Construct T4IA.xls
Project:	El Camino College Construction Phase 1c
Year:	2014
Size:	4.3 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	0
Land Use:	Junior College (2Yr)	0
Units:	49 1000sqft	
Lot Size:	4.3 Acres	0.0 Acres
Bulding Size	49,000 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 1c Construct T4IA.xls

Project: El Camino College Construction Phase 1c

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Site Preparation	Site Preparation	6/1/13	7/5/13	5	25	
2	Grading	Grading	7/6/13	7/12/13	5	5	
3	Building Construction	Building Construction	7/13/13	5/16/14	5	220	
4	Architectural Coating	Architectural Coating	5/17/14	7/11/14	5	40	

Demolition

No.	Phase	Amount

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Site Preparation	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Grading	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Building Construction	21	8	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Architectural Coating	4	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 1c Construct T4IA.xls

Project: El Camino College Construction Phase 1c

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Site Preparation	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
2	Grading	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
3	Building Construction	Cranes	1	7.0	208	0.43
		Forklifts	3	8.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	3	7.0	75	0.55
		Welders	1	8.0	46	0.45
4	Architectural Coating	Air Compressors	1	6.0	78	0.48

Off Road Equipment Mitigation

Equipment	Fuel	Numer of Units Used	Mitigated	Tier	DPF	Oxidation Catalyst (% Reduction)
Air Compressors	Diesel	1	1	ier 4 Interir		
Cranes	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	3	3	ier 4 Interir		
Generator Sets	Diesel	1	1	ier 4 Interir		
Rubber Tired Dozers	Diesel	2	2	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	5	5	ier 4 Interir		
Welders	Diesel	1	1	ier 4 Interir		

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Loading	Silt Content
1	Site Preparation	0	0		0.00	7.1	7.9%	12.0%	6.9
2	Grading	0	0		0.00	7.1	7.9%	12.0%	6.9

CalEEMod Input Summary - Construction Emissions

File 1c Construct T4IA.xls

Project: El Camino College Construction Phase 1c

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Site Preparation	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Building Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Architectural Coating	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

	Phase	% Reduction PM_{10}	$PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

No.	Phase	Emission Factor (g/L) Res Int	Res Ext.	Com Int.	Com. Ext	Painted Area (Sq. Ft.) Res Int	Res Ext.	Com Int.	Com. Ext	VOC Content Regulation Start	End
4	Architectural Coating	50	100.0	250.0	250.0	0	0	73,500	24,500	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	2a Construct T4IA.xls
Project:	El Camino College Demo & Const. Phase 2a
Year:	2015
Size:	3.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	Parking
Land Use:	Junior College (2Yr)	Parking Lot
Units:	49 1000sqft	3 Acre
Lot Size:	0.4 Acres	3.0 Acres
Bulding Size	49,000 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 2a Construct T4IA.xls

Project: El Camino College Demo & Const. Phase 2a

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Remedial Demo & Site Pr	Site Preparation	11/1/13	5/29/14	5	150	
2	Peak Demolition	Demolition	1/1/14	1/28/14	5	20	
3	Grading	Grading	6/1/14	6/6/14	5	5	
4	Building Construction	Building Construction	6/7/14	4/24/15	5	230	
5	Architectural Coating	Architectural Coating	1/1/15	7/15/15	5	140	
6	Paving	Paving	7/16/15	7/29/15	5	10	

Demolition

No.	Phase	Amount	
2	Peak Demolition	105,908	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Remedial Demo & Site Pr	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Peak Demolition	8	0	482	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Grading	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Building Construction	21	8	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
5	Architectural Coating	4	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
6	Paving	8	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 2a Construct T4IA.xls

Project: El Camino College Demo & Const. Phase 2a

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Remedial Demo & Site Pr	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
2	Peak Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Excavators	1	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
3	Grading	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
4	Building Construction	Cranes	1	7.0	208	0.43
		Forklifts	3	8.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	3	7.0	75	0.55
		Welders	1	8.0	46	0.45
5	Architectural Coating	Air Compressors	1	6.0	78	0.48
6	Paving	Pavers	1	8.0	89	0.62
		Paving Equipment	1	6.0	82	0.53
		Rollers	1	6.0	84	0.56

CalEEMod Input Summary - Construction Emissions

File 2a Construct T4IA.xls

Project: El Camino College Demo & Const. Phase 2a

Off Road Equipment Mitigation

Equipment	Fuel	Numer of Units Used	Numer of Units Mitigated	Tier	DPF	Oxidation Catalyst (% Reduction)
Air Compressors	Diesel	1	1	ier 4 Interir		
Concrete/Industrial Saws	Diesel	1	1	ier 4 Interir		
Cranes	Diesel	1	1	ier 4 Interir		
Excavators	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	3	3	ier 4 Interir		
Generator Sets	Diesel	1	1	ier 4 Interir		
Pavers	Diesel	1	1	ier 4 Interir		
Paving Equipment	Diesel	1	1	ier 4 Interir		
Rollers	Diesel	1	1	ier 4 Interir		
Rubber Tired Dozers	Diesel	3	3	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	5	5	ier 4 Interir		
Welders	Diesel	1	1	ier 4 Interir		

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
1	Remedial Demo & Site Pr	0	0		0.00	7.1	7.9%	12.0%	6.9
3	Grading	0	0		0.00	7.1	7.9%	12.0%	6.9

CalEEMod Input Summary - Construction Emissions

File 2a Construct T4IA.xls

Project: El Camino College Demo & Const. Phase 2a

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Remedial Demo & Site Pr	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Peak Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Building Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
5	Architectural Coating	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
6	Paving	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

	Phase	% Reduction PM_{10}	$PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

No.	Phase	Emission Factor (g/L) Res Int	Res Ext.	Com Int.	Com. Ext	Painted Area (Sq. Ft.) Res Int	Res Ext.	Com Int.	Com. Ext	VOC Content Regulation Start	End
5	Architectural Coating	50	100.0	250.0	250.0	0	0	73,500	24,500	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	2b Construct T4iA.xls
Project:	El Camino College Demo & Const. Phase 2b
Year:	2015
Size:	8.6 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Parking	Parking
Land Use:	Parking Lot	Parking Structure
Units:	2.92 Acre	800 Space
Lot Size:	2.9 Acres	5.7 Acres
Bulding Size	0 sq. ft.	320,000 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 2b Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2b

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Remedial Demo & Site Pr	Site Preparation	11/1/13	5/29/14	5	150	
2	Peak Demolition	Demolition	12/1/13	12/27/13	5	20	
3	Grading	Grading	6/1/14	6/6/14	5	5	
4	Building Construction	Building Construction	6/7/14	4/24/15	5	230	
5	Architectural Coating	Architectural Coating	1/1/15	7/15/15	5	140	
6	Paving	Paving	7/16/15	7/29/15	5	10	

Demolition

No.	Phase	Amount	
2	Peak Demolition	6,982	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Remedial Demo & Site Pr	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Peak Demolition	8	0	32	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Grading	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Building Construction	134	52	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
5	Architectural Coating	27	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
6	Paving	8	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 2b Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2b

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Remedial Demo & Site Pr	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
2	Peak Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Excavators	1	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
3	Grading	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
4	Building Construction	Cranes	1	7.0	208	0.43
		Forklifts	3	8.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	3	7.0	75	0.55
		Welders	1	8.0	46	0.45
5	Architectural Coating	Air Compressors	1	6.0	78	0.48
6	Paving	Pavers	1	8.0	89	0.62
		Paving Equipment	1	8.0	82	0.53
		Rollers	1	8.0	84	0.56

CalEEMod Input Summary - Construction Emissions

File 2b Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2b

Off Road Equipment Mitigation

Equipment	Fuel	Numer of Units Used	Numer of Units Mitigated	Tier	DPF	Oxidation Catalyst (% Reduction)
Air Compressors	Diesel	1	1	ier 4 Interir		
Concrete/Industrial Saws	Diesel	1	1	ier 4 Interir		
Cranes	Diesel	1	1	ier 4 Interir		
Excavators	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	3	3	ier 4 Interir		
Generator Sets	Diesel	1	1	ier 4 Interir		
Pavers	Diesel	1	1	ier 4 Interir		
Paving Equipment	Diesel	1	1	ier 4 Interir		
Rollers	Diesel	1	1	ier 4 Interir		
Rubber Tired Dozers	Diesel	3	3	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	5	5	ier 4 Interir		
Welders	Diesel	1	1	ier 4 Interir		

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
1	Remedial Demo & Site Pr	0	0		0.00	7.1	7.9%	12.0%	6.9
3	Grading	0	0		2.50	7.1	7.9%	12.0%	6.9

CalEEMod Input Summary - Construction Emissions

File 2b Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2b

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Remedial Demo & Site Pr	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Peak Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Building Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
5	Architectural Coating	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
6	Paving	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

	Phase	% Reduction PM_{10}	$PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

No.	Phase	Emission Factor (g/L) Res Int	Res Ext.	Com Int.	Com. Ext	Painted Area (Sq. Ft.) Res Int	Res Ext.	Com Int.	Com. Ext	VOC Content Regulation Start	End
5	Architectural Coating	50	100.0	250.0	250.0	0	0	480,000	160,000	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	2c Construct T4iA.xls
Project:	El Camino College Demo & Const. Phase 2c
Year:	2016
Size:	6.6 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Parking	Parking
Land Use:	Parking Lot	Parking Structure
Units:	0.21 Acre	700 Space
Lot Size:	0.2 Acres	6.4 Acres
Bulding Size	0 sq. ft.	280,000 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 2c Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2c

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Lot F Construction	Building Construction	6/1/13	3/4/16	5	720	
2	Police Demolition	Demolition	7/2/15	7/29/15	5	20	
3	Police Site Preparation	Site Preparation	7/30/15	8/12/15	5	10	
4	Police Paving	Paving	8/13/15	8/26/15	5	10	
5	Lot F Architectural Coatin	Architectural Coating	10/15/15	3/30/16	5	120	

Demolition

No.	Phase	Amount	
2	Police Demolition	4,536	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Lot F Construction	118	46	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Police Demolition	8	0	21	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Police Site Preparation	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Police Paving	8	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
5	Lot F Architectural Coatin	24	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 2c Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2c

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Lot F Construction	Concrete/Industrial Saws	2	8.0	81	0.73
		Forklifts	1	8.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	1	7.0	75	0.55
		Welders	1	8.0	46	0.45
2	Police Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Excavators	1	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
3	Police Site Preparation	Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
4	Police Paving	Pavers	1	8.0	89	0.62
		Paving Equipment	1	8.0	82	0.53
		Rollers	1	8.0	84	0.56
5	Lot F Architectural Coatin	Air Compressors	1	6.0	78	0.48

CalEEMod Input Summary - Construction Emissions

File 2c Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2c

Off Road Equipment Mitigation

Equipment	Fuel	Numer of Units Used	Mitigated	Tier	DPF	Oxidation Catalyst (% Reduction)
Air Compressors	Diesel	1	1	ier 4 Interir		
Concrete/Industrial Saws	Diesel	3	3	ier 4 Interir		
Excavators	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	1	1	ier 4 Interir		
Generator Sets	Diesel	1	1	ier 4 Interir		
Pavers	Diesel	1	1	ier 4 Interir		
Paving Equipment	Diesel	1	1	ier 4 Interir		
Rollers	Diesel	1	1	ier 4 Interir		
Rubber Tired Dozers	Diesel	2	2	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	2	2	ier 4 Interir		
Welders	Diesel	1	1	ier 4 Interir		

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Loading	Silt Content
3	Police Site Preparation	0	0		0.00	7.1	7.9%	12.0%	6.9

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Lot F Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Police Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Police Site Preparation	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Police Paving	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
5	Lot F Architectural Coatin	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

CalEEMod Input Summary - Construction Emissions

File 2c Construct T4iA.xls

Project: El Camino College Demo & Const. Phase 2c

Construciton Fugitive Dust Mitigation

		% Reduction		
	Phase	**PM_{10}**	**$PM_{2.5}$**	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

		Emission Factor (g/L)				Painted Area (Sq. Ft.)				VOC Content Regulation	
No.	**Phase**	**Res Int**	**Res Ext.**	**Com Int.**	**Com. Ext**	**Res Int**	**Res Ext.**	**Com Int.**	**Com. Ext**	**Start**	**End**
5	Lot F Architectural Coatin	50	100.0	250.0	250.0	0	0	420,000	140,000	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	2d Construct T4i.xls
Project:	El Camino College Demo & Const. Phase 2d
Year:	2015
Size:	1.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	0
Land Use:	Junior College (2Yr)	0
Units:	18 1000sqft	
Lot Size:	1.4 Acres	0.0 Acres
Bulding Size	18,000 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 2d Construct T4i.xls

Project: El Camino College Demo & Const. Phase 2d

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Remedial Demo & Site Pr	Site Preparation	2/1/15	8/28/15	5	150	
2	Peak Demolition	Demolition	4/1/15	4/28/15	5	20	
3	Grading	Grading	9/1/15	9/28/15	5	20	
4	Building Construction	Building Construction	9/29/15	7/4/16	5	200	
5	Architectural Coating	Architectural Coating	5/1/16	7/22/16	5	60	

Demolition

No.	Phase	Amount	
2	Peak Demolition	72,209	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	**Phase**	**Worker**	**Vendor**	**Trips**	**Worker**	**Vendor**	**Hauling**	**Worker**	**Vendor**	**Hauling**
1	Remedial Demo & Site Pr	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Peak Demolition	8	0	328	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Grading	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Building Construction	8	3	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
5	Architectural Coating	2	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 2d Construct T4i.xls

Project: El Camino College Demo & Const. Phase 2d

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Remedial Demo & Site Pr	Rubber Tired Dozers	1	7.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
2	Peak Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
3	Grading	Rubber Tired Dozers	1	6.0	358	0.59
		Tractors/Loaders/Backhoes	1	7.0	75	0.55
4	Building Construction	Cranes	1	6.0	208	0.43
		Forklifts	1	6.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	1	6.0	75	0.55
		Welders	3	8.0	46	0.45
5	Architectural Coating	Air Compressors	1	6.0	78	0.48

Off Road Equipment Mitigation

		Numer of Units				Oxidation Catalyst
Equipment	Fuel	Used	Mitigated	Tier	DPF	(% Reduction)
Air Compressors	Diesel	1				
Concrete/Industrial Saws	Diesel	1				
Cranes	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	1	1	ier 4 Interir		
Generator Sets	Diesel	1				
Rubber Tired Dozers	Diesel	3	3	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	4	4	ier 4 Interir		
Welders	Diesel	3				

CalEEMod Input Summary - Construction Emissions

File 2d Construct T4i.xls

Project: El Camino College Demo & Const. Phase 2d

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
1	Remedial Demo & Site Pr	0	0		1.00	7.1	7.9%	12.0%	6.9
3	Grading	0	0		1.50	7.1	7.9%	12.0%	6.9

Construciton On-Road Dust

		Percent Paved Road Trips			Silt	Silt	Moisture	Avg. Veh	Speed
No.	Phase	Worker	Vendor	Hauling	Loading	Content	Content	Wgt. (ton)	(mph)
1	Remedial Demo & Site Pr	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Peak Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Building Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
5	Architectural Coating	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

	Phase	% Reduction PM_{10}	% Reduction $PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

		Emission Factor (g/L)				Painted Area (Sq. Ft.)				VOC Content Regulation	
No.	Phase	Res Int	Res Ext.	Com Int.	Com. Ext	Res Int	Res Ext.	Com Int.	Com. Ext	Start	End
5	Architectural Coating	50	100.0	250.0	250.0	0	0	27,000	9,000	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	3a Construct T4i.xls
Project:	El Camino College Demo & Const. Phase 3a
Year:	2015
Size:	1.5 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	0
Land Use:	Junior College (2Yr)	0
Units:	30 1000sqft	
Lot Size:	1.5 Acres	0.0 Acres
Bulding Size	30,000 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 3a Construct T4i.xls

Project: El Camino College Demo & Const. Phase 3a

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Remedial Demo & Site Pr	Site Preparation	4/1/15	10/27/15	5	150	
2	Peak Demolition	Demolition	6/1/15	6/26/15	5	20	
3	Grading	Grading	11/1/15	11/27/15	5	20	
4	Building Construction	Building Construction	11/28/15	9/2/16	5	200	
5	Architectural Coating	Architectural Coating	8/1/16	10/21/16	5	60	

Demolition

No.	Phase	Amount	
2	Peak Demolition	50,358	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	**Phase**	**Worker**	**Vendor**	**Trips**	**Worker**	**Vendor**	**Hauling**	**Worker**	**Vendor**	**Hauling**
1	Remedial Demo & Site Pr	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Peak Demolition	8	0	229	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Grading	5	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Building Construction	13	5	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
5	Architectural Coating	3	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 3a Construct T4i.xls

Project: El Camino College Demo & Const. Phase 3a

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Remedial Demo & Site Pr	Rubber Tired Dozers	1	7.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
2	Peak Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
3	Grading	Rubber Tired Dozers	1	6.0	358	0.59
		Tractors/Loaders/Backhoes	1	7.0	75	0.55
4	Building Construction	Cranes	1	6.0	208	0.43
		Forklifts	1	6.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	1	6.0	75	0.55
		Welders	3	8.0	46	0.45
5	Architectural Coating	Air Compressors	1	6.0	78	0.48

Off Road Equipment Mitigation

		Numer of Units				Oxidation Catalyst
Equipment	**Fuel**	**Used**	**Mitigated**	**Tier**	**DPF**	**(% Reduction)**
Air Compressors	Diesel	1				
Concrete/Industrial Saws	Diesel	1				
Cranes	Diesel	1	1	ier 4 Interir		
Forklifts	Diesel	1	1	ier 4 Interir		
Generator Sets	Diesel	1				
Rubber Tired Dozers	Diesel	3	3	ier 4 Interir		
Tractors/Loaders/Backhoes	Diesel	4	4	ier 4 Interir		
Welders	Diesel	3				

CalEEMod Input Summary - Construction Emissions

File 3a Construct T4i.xls

Project: El Camino College Demo & Const. Phase 3a

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
1	Remedial Demo & Site Pr	0	0		1.00	7.1	7.9%	12.0%	6.9
3	Grading	0	0		1.50	7.1	7.9%	12.0%	6.9

Construciton On-Road Dust

		Percent Paved Road Trips							
No.	Phase	Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Remedial Demo & Site Pr	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Peak Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Building Construction	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
5	Architectural Coating	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

		% Reduction		
	Phase	PM_{10}	$PM_{2.5}$	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

		Emission Factor (g/L)				Painted Area (Sq. Ft.)				VOC Content Regulation	
No.	Phase	Res Int	Res Ext.	Com Int.	Com. Ext	Res Int	Res Ext.	Com Int.	Com. Ext	Start	End
5	Architectural Coating	50	100.0	250.0	250.0	0	0	45,000	15,000	7/1/08	12/31/00

Operational Emissions CalEEMod Input Worksheets

CalEEMod Input Summary - Land Use & Vehicular Trips

Project Characteristics

File Name:	Existing 2012.xls
Project:	El Camino College Operational Emissions-No Proj 2012
Year:	2012
Size:	117.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational
Land Use:	Junior College (2Yr)
Units:	16400 Student
Lot Size:	117.4 Acres
Bulding Size	1,264,916 sq. ft.
Population:	0

Vehicle Miles Traveled

Daily	**VMT**	**Total**
Home-Work:	0	0
Home-Shop	0	0
Home-Other	0	0
Comm-Cust:	167,213	167,213
Comm-Work:	8,083	8,083
Comm-NonWork:	5,251	5,251
Total:	**180,547**	**180,547**

Annual	**65,899,490**	65,899,490
CalEEMod Out	65,718,944	65,718,944
Δ	180,547	180,547
%Δ	0.27%	0.27%

CalEEMod Input Summary - Land Use & Vehicular Trips

File Name: Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Trip Generation

Trip Rate		
Weekday:	1.2 / Student	
Saturday:	0.42 / Student	
Sunday:	0.04 / Student	
Daily Trips:		**Total**
Weekday:	19,680	19,680
Saturday:	6,888	6,888
Sunday:	656	656
Average:	15,135	15,135

Trip Type

Trip Purpose	
Primary:	92%
Diverted:	7%
Pass By:	1%
Origin-Destination	
Home-Work:	0%
Home-School:	0%
Home-Office:	0%
Comm-Cust:	89%
Comm-Work:	6%
Comm-NonWork:	5%

Trip Length

Trip Length Basis	
Home-Work:	0.00
Home-School:	0.00
Home-Office	0.00
Comm-Cust	13.30
Comm-Work	8.90
Comm-NonWork	7.40
Modeled Trip Length	
Home-Work:	0.00
Home-School:	0.00
Home-Office:	0.00
Comm-Cust:	12.47
Comm-Work:	8.34
Comm-NonWork:	6.94

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Electicity and Natural Gas

	Junior College (2Yr)	0
Electrical Use (kWhr/size/year)		
Title 24:	6	0
Non-Title 24:	3	0
Lighting:	5	0
Total:	**14**	**0**
Natural Gas (kBTU/size/year)		
Title 24:	11	0
Non-Title 24:	5	0
Total:	**16**	**0**

Water & Wastewater

	Junior College (2Yr)	0
Water Use (gal/yr)		
Indoor:	35,114,040	0
Outdoor:	54,921,960	0
Total:	**90,036,000**	**0**
Electricity Intensity (kWhr/Mgal)		
Supply:	9,727	0
Supply Treat:	111	0
Distribute:	1,272	0
Waste Treat:	1,911	0
Total:	**11,638**	**0**
Waste Disposal		
Septic Tank:	10.0%	0.0%
Aerobic:	84.7%	0.0%
Anerobic		
Lagoon:	*2.1%*	*0.0%*
w/ Combust:	*3.2%*	*0.0%*
w/ Cogen:	*0.0%*	*0.0%*

Architectural Coatings

	Interior	Exterior
Residential		
Size:	0 sq. ft.	0 sq. ft.
Rate:	50 g/L	100 g/L
Commercial		
Square Feet:	1,897,380 sq. ft.	632,460 sq. ft.
Emission Factor:	250 g/L	250 g/L
	Reapplication Rate	**10.0%**

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2012.xls
Project: El Camino College Operational Emissions-No Proj 2012

Fireplace

	Junior College (2Yr)	0
Number of Units With:		
Wood:	0	0
Gas:	0	0
Propane:	0	0
None:	0	0
Use		
Hrs/day:	0.00	0.00
Days/Year:	0	0
Wood Mass:	0	0

Wood Stoves

	Junior College (2Yr)	0
Number of Units With:		
Conventional:	0	0
Catalytic:	0	0
Non-Catalytic:	0	0
Pellet:	0	0
Use		
Days/Year:	0.00	0.00
Wood Mass:	0	0

Consumer Products

Emission Factor:	1.98E-05 g VOC/sqr ft

Landscape Equipment

Snow Days	Summer Days
0	365

CalEEMod Input Summary - Operational Mitigation

File	Existing 2012.xls
Project:	El Camino College Operational Emissions-No Proj 2012

Land Use Mitigation

Project Setting		
0		
Land Use		
--	**Increased Density**	
	--	DU Per Acre
	--	Jobs/Acre
--	**Increase Diversity**	
--	**Improve Walkability**	
	--	Intersections/Square Mile
--	**Improve Destination Accessibility**	
	--	Dist. To Downtown Job Center (mi)
--	**Increase Transit Accessibility**	
	--	Dist. To Transit Station (mi)
--	**Integrate Below Market Rate Housing**	
	--	# of Units Below Market Rate
Neighborhood Enhancements		
--	**Improve Pedestrian Network**	
	--	
--	**Provide Traffic Calming Measures**	
	--	% of Streets With Improvement
	--	% Intersections With Improvement
--	**Implement NEV Network**	
Parking Policy/Pricing		
	Limit Parking Supply	
	--	% Reduction in Spaces
--	**Unbundle Parking Costs**	
	--	Monthly Parking Cost ($)
--	**On-Street Market Pricing**	
	--	% Increase in Price
Transit Improvement		
--	**Provide BRT System**	
	--	% Lines BRT
--	**Expand Transit Network**	
	--	% Increase in Transit Coverage
--	**Increase Transit Frequency**	
	--	Implementation Level
	--	% Reduction in Headway

Energy Mitigation

Building Energy		
--	**Exceed Title 24**	
	--	% Improvement
--	**Install Energy Efficient Lighting**	
	--	% Improvement
Alternative Energy		
--	**Onsite Renewable Energy**	
	--	Total kWH
	--	kWH Generated
	--	% of Use Generated
	--	% of Use

Appliance Mitigation

30%	Clothes Washer
15%	Dish Washer
50%	Fan
15%	Refrigerator

CalEEMod Input Summary - Operational Mitigation

File Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Commute Mitigation

Commute Trips

- -- **Implement Trip Reduction Program**
  - -- % Employees Eligible
  - -- Type
- -- **Implement Transit Subsidy**
  - -- % Employees Eligible
  - -- Daily Subsidy Amount($)
- -- **Implement Employee Parking "Cash Out"**
  - -- % Employees Eligible
- -- **Workplace Parking Charge**
  - -- % Employees Eligible
  - -- Daily Parking Charge ($)
- -- **Encourage Telecommute & Alt Schedules**
  - -- % Employees Work 9/80
  - -- % Employees Work 4/40
  - -- % Employees Telecommute 1.5 days
- -- **Market Commute Trip Reduction Program**
  - -- % Employees Eligible
- -- **Employee Vanpool/Shuttle**
  - -- % Employees Eligible
  - -- % Vanpool Mode Share
- -- **Provide Ride Sharing Program**
  - -- % Employees Eligible

School Trips

- -- **Implement School Bus Program**
  - -- % Families Using

Water Mitigation

Water Conservation Strategy

- -- **Apply Water Conservation Strategy**
  - -- % Reduction Indoor
  - -- % Reduction Outdoor

Water Supply

- -- **Use Reclaimed Water**
  - -- % Indoor Water use
  - -- % Outdoor Water Use
- -- **Use Grey Water**
  - -- % Indoor Water use
  - -- % Outdoor Water Use

Indoor Water Use

- -- **Install Low Flow Bathroom Faucet**
  - -- % Reduction in Flow
- -- **Install Low Flow Kitchen Faucet**
  - -- % Reduction in Flow
- -- **Install Low Flow Toilet Faucet**
  - -- % Reduction in Flow
- -- **Install Low Flow Shower**
  - -- % Reduction in Flow

Outdoor Water Use

- -- **Turf Reduction**
  - -- Turf Reduction Area (acres)
  - -- % Reduction in Turf
- -- **Use Water Efficient Irrigation Systems**
  - -- % Reduction
- -- **Water Efficient Landscape**
  - -- MAWA (gal/yr)
  - -- ETWU (gal/yr)

Municipal Waste Mitigation

- -- **Institute Recycling and Composting Services**
  - -- % Reduction in Waste Disposed

CalEEMod Input Summary - Land Use & Vehicular Trips

Project Characteristics

File Name:	Existing 2020.xls
Project:	El Camino College Operational Emissions-No Proj 2020
Year:	2020
Size:	117.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational
Land Use:	Junior College (2Yr)
Units:	16,400 Student
Lot Size:	117.4 Acres
Bulding Size	1,264,916 sq. ft.
Population:	0

Vehicle Miles Traveled

Daily	**VMT**	**Total**
Home-Work:	0	0
Home-Shop	0	0
Home-Other	0	0
Comm-Cust:	167,213	167,213
Comm-Work:	8,083	8,083
Comm-NonWork:	5,251	5,251
Total:	**180,547**	**180,547**

Annual	**65,899,490**	65,899,490
CalEEMod Out	65,718,944	65,718,944
Δ	180,547	180,547
%Δ	0.27%	0.27%

CalEEMod Input Summary - Land Use & Vehicular Trips

File Name: Existing 2020.xls
Project: El Camino College Operational Emissions-No Proj 2020

Trip Generation

Trip Rate		
Weekday:	1.2 / Student	
Saturday:	0.42 / Student	
Sunday:	0.04 / Student	
Daily Trips:		**Total**
Weekday:	19,680	19,680
Saturday:	6,888	6,888
Sunday:	656	656
Average:	15,135	15,135

Trip Type

Trip Purpose	
Primary:	92%
Diverted:	7%
Pass By:	1%
Origin-Destination	
Home-Work:	0%
Home-School:	0%
Home-Office:	0%
Comm-Cust:	89%
Comm-Work:	6%
Comm-NonWork:	5%

Trip Length

Trip Length Basis	
Home-Work:	0.00
Home-School:	0.00
Home-Office	0.00
Comm-Cust	13.30
Comm-Work	8.90
Comm-NonWork	7.40
Modeled Trip Length	
Home-Work:	0.00
Home-School:	0.00
Home-Office:	0.00
Comm-Cust:	12.47
Comm-Work:	8.34
Comm-NonWork:	6.94

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2020.xls
Project: El Camino College Operational Emissions-No Proj 2020

Electicity and Natural Gas

	Junior College (2Yr)	0
Electrical Use (kWhr/size/year)		
Title 24:	6	0
Non-Title 24:	3	0
Lighting:	5	0
Total:	**14**	**0**
Natural Gas (kBTU/size/year)		
Title 24:	11	0
Non-Title 24:	5	0
Total:	**16**	**0**

Water & Wastewater

	Junior College (2Yr)	0
Water Use (gal/yr)		
Indoor:	35,114,040	0
Outdoor:	54,921,960	0
Total:	**90,036,000**	**0**
Electricity Intensity (kWhr/Mgal)		
Supply:	9,727	0
Supply Treat:	111	0
Distribute:	1,272	0
Waste Treat:	1,911	0
Total:	**11,638**	**0**
Waste Disposal		
Septic Tank:	10.0%	0.0%
Aerobic:	84.7%	0.0%
Anerobic		
Lagoon:	*2.1%*	*0.0%*
w/ Combust:	*3.2%*	*0.0%*
w/ Cogen:	*0.0%*	*0.0%*

Architectural Coatings

	Interior	Exterior
Residential		
Size:	0 sq. ft.	0 sq. ft.
Rate:	50 g/L	100 g/L
Commercial		
Square Feet:	1,897,380 sq. ft.	632,460 sq. ft.
Emission Factor:	250 g/L	250 g/L
	Reapplication Rate	**10.0%**

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2020.xls
Project: El Camino College Operational Emissions-No Proj 2020

Fireplace

	Junior College (2Yr)	0
Number of Units With:		
Wood:	0	0
Gas:	0	0
Propane:	0	0
None:	0	0
Use		
Hrs/day:	0.00	0.00
Days/Year:	0	0
Wood Mass:	0	0

Wood Stoves

	Junior College (2Yr)	0
Number of Units With:		
Conventional:	0	0
Catalytic:	0	0
Non-Catalytic:	0	0
Pellet:	0	0
Use		
Days/Year:	0.00	0.00
Wood Mass:	0	0

Consumer Products

Emission Factor:	1.98E-05 g VOC/sqr ft

Landscape Equipment

Snow Days	Summer Days
0	365

CalEEMod Input Summary - Operational Mitigation

File	Existing 2020.xls
Project:	El Camino College Operational Emissions-No Proj 2020

Land Use Mitigation

Project Setting		
0		
Land Use		
--	**Increased Density**	
	--	DU Per Acre
	--	Jobs/Acre
--	**Increase Diversity**	
--	**Improve Walkability**	
	--	Intersections/Square Mile
--	**Improve Destination Accessibility**	
	--	Dist. To Downtown Job Center (mi)
--	**Increase Transit Accessibility**	
	--	Dist. To Transit Station (mi)
--	**Integrate Below Market Rate Housing**	
	--	# of Units Below Market Rate
Neighborhood Enhancements		
--	**Improve Pedestrian Network**	
	--	
--	**Provide Traffic Calming Measures**	
	--	% of Streets With Improvement
	--	% Intersections With Improvement
--	**Implement NEV Network**	
Parking Policy/Pricing		
	Limit Parking Supply	
	--	% Reduction in Spaces
--	**Unbundle Parking Costs**	
	--	Monthly Parking Cost ($)
--	**On-Street Market Pricing**	
	--	% Increase in Price
Transit Improvement		
--	**Provide BRT System**	
	--	% Lines BRT
--	**Expand Transit Network**	
	--	% Increase in Transit Coverage
--	**Increase Transit Frequency**	
	--	Implementation Level
	--	% Reduction in Headway

Energy Mitigation

Building Energy		
--	**Exceed Title 24**	
	--	% Improvement
--	**Install Energy Efficient Lighting**	
	--	% Improvement
Alternative Energy		
--	**Onsite Renewable Energy**	
	--	Total kWH
	--	kWH Generated
	--	% of Use Generated
	--	% of Use

Appliance Mitigation

30%	Clothes Washer
15%	Dish Washer
50%	Fan
15%	Refrigerator

CalEEMod Input Summary - Operational Mitigation

File Existing 2020.xls

Project: El Camino College Operational Emissions-No Proj 2020

Commute Mitigation

Commute Trips		
--	**Implement Trip Reduction Program**	
	--	% Employees Eligible
	--	Type
--	**Implement Transit Subsidy**	
	--	% Employees Eligible
	--	Daily Subsidy Amount($)
--	**Implement Employee Parking "Cash Out"**	
	--	% Employees Eligible
--	**Workplace Parking Charge**	
	--	% Employees Eligible
	--	Daily Parking Charge ($)
--	**Encourage Telecommute & Alt Schedules**	
	--	% Employees Work 9/80
	--	% Employees Work 4/40
	--	% Employees Telecommute 1.5 days
--	**Market Commute Trip Reduction Program**	
	--	% Employees Eligible
--	**Employee Vanpool/Shuttle**	
	--	% Employees Eligible
	--	% Vanpool Mode Share
--	**Provide Ride Sharing Program**	
	--	% Employees Eligible
School Trips		
--	**Implement School Bus Program**	
	--	% Families Using

Water Mitigation

Water Conservation Strategy		
--	**Apply Water Conservation Strategy**	
	--	% Reduction Indoor
	--	% Reduction Outdoor
Water Supply		
--	**Use Reclaimed Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
--	**Use Grey Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
Indoor Water Use		
--	**Install Low Flow Bathroom Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Kitchen Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Toilet Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Shower**	
	--	% Reduction in Flow
Outdoor Water Use		
--	**Turf Reduction**	
	--	Turf Reduction Area (acres)
	--	% Reduction in Turf
--	**Use Water Efficient Irrigation Systems**	
	--	% Reduction
--	**Water Efficient Landscape**	
	--	MAWA (gal/yr)
	--	ETWU (gal/yr)

Municipal Waste Mitigation

--	**Institute Recycling and Composting Services**	
	--	% Reduction in Waste Disposed

CalEEMod Input Summary - Land Use & Vehicular Trips

Project Characteristics

File Name:	With Proj 2020.xls
Project:	El Camino College Operational Emissions-With Proj 2020
Year:	2020
Size:	117.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational
Land Use:	Junior College (2Yr)
Units:	20,025 Student
Lot Size:	117.4 Acres
Bulding Size	1,314,600 sq. ft.
Population:	0

Vehicle Miles Traveled

Daily	**VMT**	**Total**
Home-Work:	0	0
Home-Shop	0	0
Home-Other	0	0
Comm-Cust:	204,173	204,173
Comm-Work:	9,870	9,870
Comm-NonWork:	6,411	6,411
Total:	**220,454**	**220,454**

Annual	**80,465,689**	80,465,689
CalEEMod Out	80,245,235	80,245,235
Δ	220,454	220,454
%Δ	0.27%	0.27%

CalEEMod Input Summary - Land Use & Vehicular Trips

File Name: With Proj 2020.xls

Project: El Camino College Operational Emissions-With Proj 2020

Trip Generation

Trip Rate		
Weekday:	1.2 / Student	
Saturday:	0.42 / Student	
Sunday:	0.04 / Student	
Daily Trips:		**Total**
Weekday:	24,030	24,030
Saturday:	8,411	8,411
Sunday:	801	801
Average:	18,480	18,480

Trip Type

Trip Purpose	
Primary:	92%
Diverted:	7%
Pass By:	1%
Origin-Destination	
Home-Work:	0%
Home-School:	0%
Home-Office:	0%
Comm-Cust:	89%
Comm-Work:	6%
Comm-NonWork:	5%

Trip Length

Trip Length Basis	
Home-Work:	0.00
Home-School:	0.00
Home-Office	0.00
Comm-Cust	13.30
Comm-Work	8.90
Comm-NonWork	7.40
Modeled Trip Length	
Home-Work:	0.00
Home-School:	0.00
Home-Office:	0.00
Comm-Cust:	12.47
Comm-Work:	8.34
Comm-NonWork:	6.94

CalEEMod Input Summary - Operational Emissions

File Name: With Proj 2020.xls
Project: El Camino College Operational Emissions-With Proj 202
With Proj 2020.xls

Electicity and Natural Gas

	Junior College (2Yr)	0
Electrical Use (kWhr/size/year)		
Title 24:	6	0
Non-Title 24:	3	0
Lighting:	5	0
Total:	**14**	**0**
Natural Gas (kBTU/size/year)		
Title 24:	11	0
Non-Title 24:	5	0
Total:	**16**	**0**

Water & Wastewater

	Junior College (2Yr)	0
Water Use (gal/yr)		
Indoor:	42,875,528	0
Outdoor:	67,061,723	0
Total:	**109,937,250**	**0**
Electricity Intensity (kWhr/Mgal)		
Supply:	9,727	0
Supply Treat:	111	0
Distribute:	1,272	0
Waste Treat:	1,911	0
Total:	**11,638**	**0**
Waste Disposal		
Septic Tank:	10.0%	0.0%
Aerobic:	84.7%	0.0%
Anerobic		
Lagoon:	*2.1%*	*0.0%*
w/ Combust:	*3.2%*	*0.0%*
w/ Cogen:	*0.0%*	*0.0%*

Architectural Coatings

	Interior	Exterior
Residential		
Size:	0 sq. ft.	0 sq. ft.
Rate:	50 g/L	100 g/L
Commercial		
Square Feet:	1,971,900 sq. ft.	657,300 sq. ft.
Emission Factor:	250 g/L	250 g/L
	Reapplication Rate	**10.0%**

CalEEMod Input Summary - Operational Emissions

File Name:	With Proj 2020.xls
Project:	El Camino College Operational Emissions-With Proj 202
	With Proj 2020.xls

Fireplace

	Junior College (2Yr)	0
Number of Units With:		
Wood:	0	0
Gas:	0	0
Propane:	0	0
None:	0	0
Use		
Hrs/day:	0.00	0.00
Days/Year:	0	0
Wood Mass:	0	0

Wood Stoves

	Junior College (2Yr)	0
Number of Units With:		
Conventional:	0	0
Catalytic:	0	0
Non-Catalytic:	0	0
Pellet:	0	0
Use		
Days/Year:	0.00	0.00
Wood Mass:	0	0

Consumer Products

Emission Factor:	1.98E-05 g VOC/sqr ft

Landscape Equipment

Snow Days	Summer Days
0	365

CalEEMod Input Summary - Operational Mitigation

File With Proj 2020.xls

Project: El Camino College Operational Emissions-With Proj 2020

Land Use Mitigation

Project Setting		
0		
Land Use		
--	**Increased Density**	
	--	DU Per Acre
	--	Jobs/Acre
--	**Increase Diversity**	
--	**Improve Walkability**	
	--	Intersections/Square Mile
--	**Improve Destination Accessibility**	
	--	Dist. To Downtown Job Center (mi)
--	**Increase Transit Accessibility**	
	--	Dist. To Transit Station (mi)
--	**Integrate Below Market Rate Housing**	
	--	# of Units Below Market Rate
Neighborhood Enhancements		
--	**Improve Pedestrian Network**	
	--	
--	**Provide Traffic Calming Measures**	
	--	% of Streets With Improvement
	--	% Intersections With Improvement
--	**Implement NEV Network**	
Parking Policy/Pricing		
	Limit Parking Supply	
	--	% Reduction in Spaces
--	**Unbundle Parking Costs**	
	--	Monthly Parking Cost ($)
--	**On-Street Market Pricing**	
	--	% Increase in Price
Transit Improvement		
--	**Provide BRT System**	
	--	% Lines BRT
--	**Expand Transit Network**	
	--	% Increase in Transit Coverage
--	**Increase Transit Frequency**	
	--	Implementation Level
	--	% Reduction in Headway

Energy Mitigation

Building Energy		
--	**Exceed Title 24**	
	--	% Improvement
--	**Install Energy Efficient Lighting**	
	--	% Improvement
Alternative Energy		
--	**Onsite Renewable Energy**	
	--	Total kWH
	--	kWH Generated
	--	% of Use Generated
	--	% of Use

Appliance Mitigation

30%	Clothes Washer
15%	Dish Washer
50%	Fan
15%	Refrigerator

CalEEMod Input Summary - Operational Mitigation

File With Proj 2020.xls

Project: El Camino College Operational Emissions-With Proj 2020

Commute Mitigation

Commute Trips		
--	**Implement Trip Reduction Program**	
	--	% Employees Eligible
	--	Type
--	**Implement Transit Subsidy**	
	--	% Employees Eligible
	--	Daily Subsidy Amount($)
--	**Implement Employee Parking "Cash Out"**	
	--	% Employees Eligible
--	**Workplace Parking Charge**	
	--	% Employees Eligible
	--	Daily Parking Charge ($)
--	**Encourage Telecommute & Alt Schedules**	
	--	% Employees Work 9/80
	--	% Employees Work 4/40
	--	% Employees Telecommute 1.5 days
--	**Market Commute Trip Reduction Program**	
	--	% Employees Eligible
--	**Employee Vanpool/Shuttle**	
	--	% Employees Eligible
	--	% Vanpool Mode Share
--	**Provide Ride Sharing Program**	
	--	% Employees Eligible
School Trips		
--	**Implement School Bus Program**	
	--	% Families Using

Water Mitigation

Water Conservation Strategy		
--	**Apply Water Conservation Strategy**	
	--	% Reduction Indoor
	--	% Reduction Outdoor
Water Supply		
--	**Use Reclaimed Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
--	**Use Grey Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
Indoor Water Use		
--	**Install Low Flow Bathroom Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Kitchen Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Toilet Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Shower**	
	--	% Reduction in Flow
Outdoor Water Use		
--	**Turf Reduction**	
	--	Turf Reduction Area (acres)
	--	% Reduction in Turf
--	**Use Water Efficient Irrigation Systems**	
	--	% Reduction
--	**Water Efficient Landscape**	
	--	MAWA (gal/yr)
	--	ETWU (gal/yr)

Municipal Waste Mitigation

--	**Institute Recycling and Composting Services**	
	--	% Reduction in Waste Disposed

GREENHOUSE GAS ASSESSMENT FOR
EL CAMINO COLLEGE
2012 FACILITIES MASTER PLAN
COUNTY OF LOS ANGELES

REPORT #537201GHG01
FEBRUARY 27, 2013

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1.0 INTRODUCTION

The purpose of this report is to assess the potential greenhouse gas (GHG) impacts from El Camino College's 2012 Facilities Master Plan (2012 FMP). A description of the project is presented below in Section 1.1. The existing setting is discussed in Section 2.0, which provides background information on GHGs and Climate Change in Section 2.1, a discussion of GHG sources and emissions on an international and state level in Sections 2.2 and 2.3, a discussion of existing regulations relating to GHG and Climate Change in Section 2.4, and an estimate of the campus' existing GHG Emissions in Section 2.5. The analysis of the project's potential impacts is presented in Section 3.0. The thresholds used to determine if the project's impact will be significant are discussed in Section 3.1. Section 3.2 presents the methodology used to estimate GHG emissions associated with the project. Construction related emissions are estimated in Section 3.3 and overall project emissions and project impact are examined in Section 3.4. Section 4.0 provides a discussion of the recommended mitigation measures for the project.

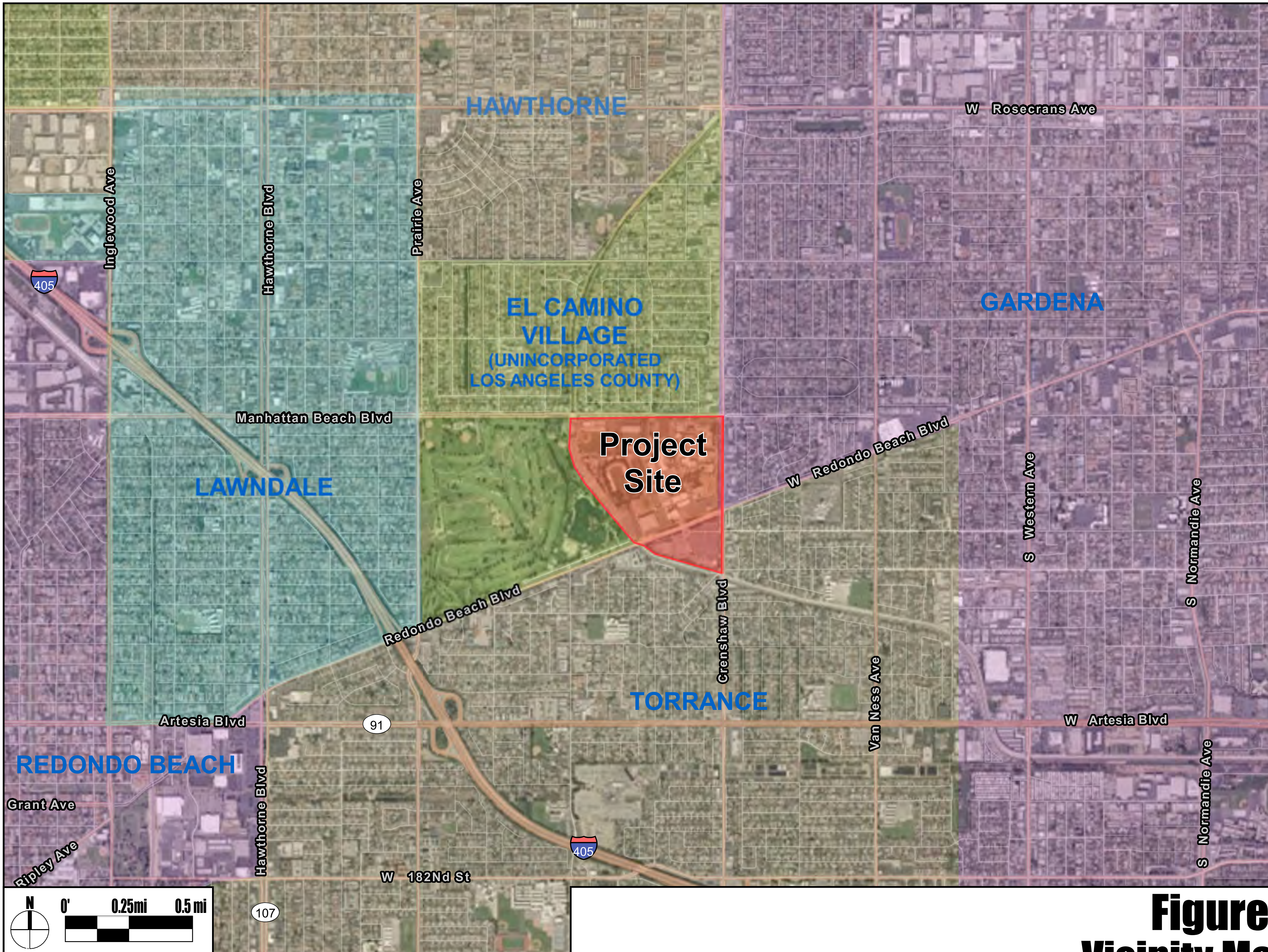
1.1 Project Description

El Camino College is located on a 126-acre parcel bounded by Manhattan Beach Boulevard to the north, Dominguez Channel to the south, Crenshaw Boulevard to the east and Alondra Community Regional Park to the west. The main campus, north of Redondo Beach Boulevard, is located in in the El Camino Village Community of Unincorporated Los Angeles County. The portion of the college south of Redondo Beach Boulevard, Parking Lot L, is located in the City of Redondo Beach. The project borders the City of Gardena, which is to the east of Crenshaw Boulevard and north of Redondo Beach Boulevard. A vicinity map showing the project location Figure 1.

Enrollment at the college was 16,400 full time equivalent students (FTES) on-campus for the 2011-2012 school year. The existing facilities at the school total 819,740 assignable square feet (ASF) and 1,277,546 overall gross square footage (OGSF). Figure 2 presents a map showing the existing facilities at the school.

The District's Facilities Planning and Services Division (FPS) projects that the campus will have an on-campus student enrollment of 20,025 FTES in 2020. The 2012 Facilities Master Plan (FMP) was developed by the FPS to accommodate the projected future enrollment, to modify prior Master Plan Updates for the projected facility needs, and to address new planning elements not previously included in the 2003 FMP. The 2012 FMP includes the construction of nine new buildings with a total of 695,356 OGSF and renovation of six buildings. Thirteen existing buildings with a total of 646,672 OGSF will be demolished with the project. The net increase in building space with the project is 49,684 OGSF (34,721 ASF). Figure 3 presents a map of the college with the buildout of the 2012 FMP.

The 2012 FMP also includes the structural rehabilitation of the Lot F Channel Parking Structure located on the western campus boundary along with the addition of a third parking level to add approximately 700 parking spaces.



Mestre Greve Associates

Figure 1
Vicinity Map

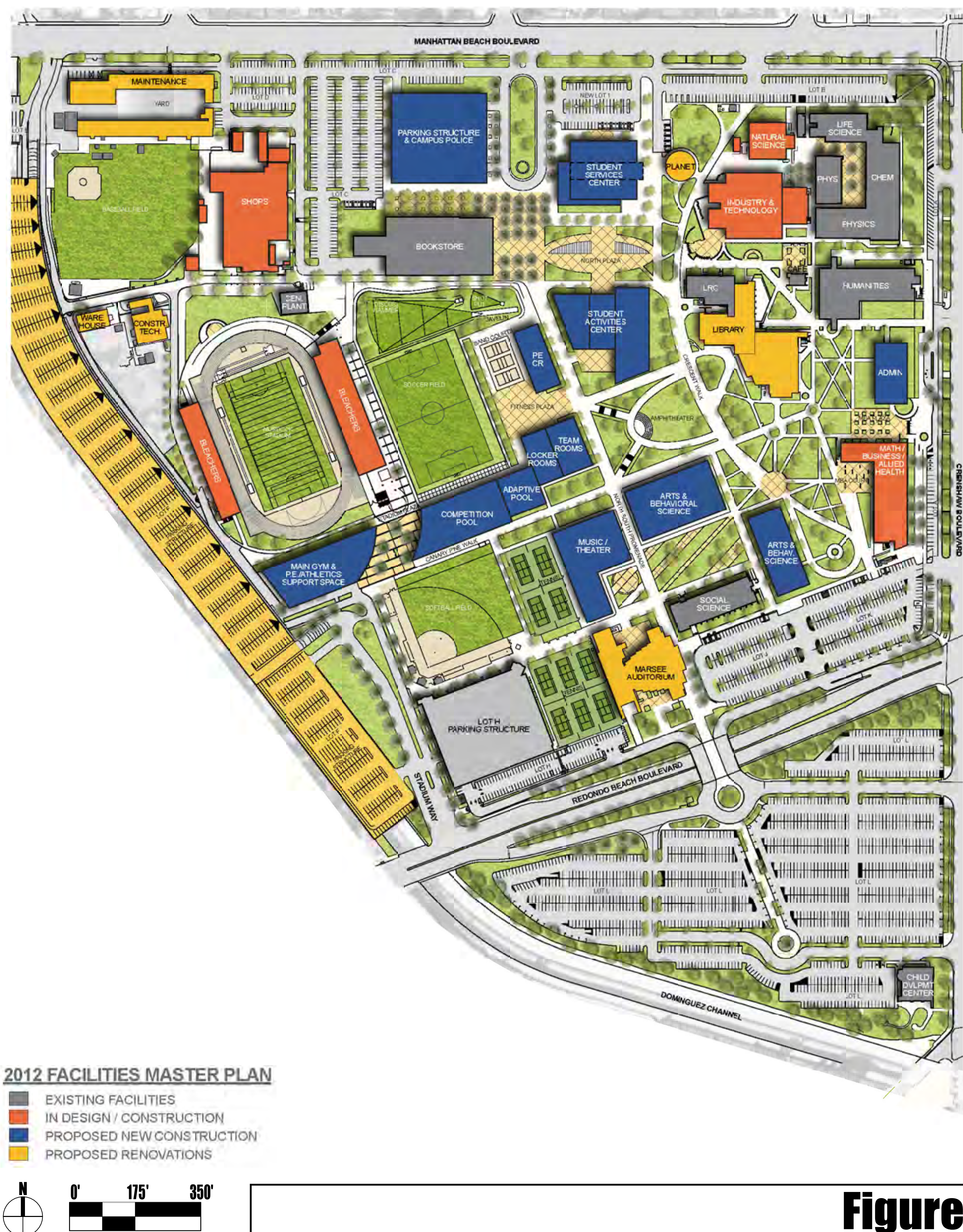
EXISTING CAMPUS PLAN

- EXISTING FACILITIES
- TEMPORARY FACILITIES
- IN DESIGN / CONSTRUCTION

N 0' 175' 350'

Mestre Greve Associates

Figure 2
Existing Campus Facilities Map



Mestre Greve Associates

Figure 3
Proposed Master Plan Buildout

2.0 EXISTING SETTING

2.1 Greenhouse Gases and Climate Change

2.1.1 Impact of Climate Change

The Earth's climate changes over periods of time that range from decades to millions of years. Climate change is due to many different natural factors. These factors include but are not limited to, changes in the Earth's orbit, volcanic eruptions, ocean variability, and solar output variations. Differences such as these have caused fluctuations in the temperature of the climate, ranging from ice ages to long periods of warmth. However, since the late 18th century, humans have had an increasing impact of the rate of climate change, beginning with the Industrial Revolution.

Many human activities have augmented the amount of "greenhouse gases" ("GHGs") being released into our atmosphere, specifically the burning of fossil fuels, such as coal and oil, and deforestation. The gases increase the efficiency of the greenhouse effect, which is the process of trapping and recycling energy (in the form of heat) that the Earth emits naturally, resulting in higher temperatures worldwide. The Intergovernmental Panel on Climate Change stated in February 2007 that warming is unequivocal, expressing very high confidence (expressed as a nine out of ten chance of being correct) that the net effect of human activities since 1750 has been one of warming. According to the National Oceanic and Atmospheric Administration (NOAA) and National Aeronautics and Space Administration (NASA) data, the average surface temperature of the Earth has increased by about 1.2 to 1.4 ºF in the last 100 years. The eight warmest years on record (since 1850) have all occurred since 1998, with the warmest year being 2005. [EPA, 2011, epa.gov/climatechange/basicinfo.html].

This process of heating is often referred to as 'global warming,' although the National Academy of Sciences prefers the terms 'climate change' as an umbrella phrase which includes global warming as well as other environmental changes, in addition to the increasing temperatures. Some of these effects include changes to rainfall, wind, and current weather patterns, as well as snow and ice cover, and sea level.

If greenhouse gases continue to increase, climate models predict that the average temperature at the Earth's surface could increase from 3.2 to 7.2ºF above 1990 levels by the end of this century. The degree of change is influenced by the assumed amount of GHG emissions, and how quickly atmospheric GHG levels are stabilized. At this point, however, the climate change models are not capable of predicting local impacts, but rather, can only predict global trends. [EPA, 2011, epa.gov/climatechange/basicinfo.html].

Global GHG emissions are measured in million metric tons of carbon dioxide equivalent ("MMT CO_2EQ") units. A metric ton is approximately 2,205 lbs. Some GHGs emitted into the atmosphere are naturally occurring, while others are caused solely by human activities. The principal GHGs that enter the atmosphere because of human activities are:

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), agriculture, irrigation, and deforestation, as well as the manufacturing of cement.
- **Methane (CH_4)** is emitted through the production and transportation of coal, natural gas, and oil, as well as from livestock. Other agricultural activities influence methane emissions as well as the decay of waste in landfills.

- **Nitrous oxide (N_2O)** is released most often during the burning of fuel at high temperatures. This greenhouse gas is caused mostly by motor vehicles, which also include non-road vehicles, such as those used for agriculture.
- **Fluorinated Gases** are emitted primarily from industrial sources, which often include hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). Though they are often released in smaller quantities, they are referred to as High Global Warming Potential Gases because of their ability to cause global warming. Fluorinated gases are often used as substitutes for ozone depleting substances.

These gases have different potentials for trapping heat in the atmosphere, called global warming potential ("GWP"). For example, one pound of methane has 21 times more heat capturing potential than one pound of carbon dioxide. When dealing with an array of emissions, the gases are converted to carbon dioxide equivalents for comparison purposes. The GWPs for common greenhouse gases are shown in Table 1.

Table 1
Global Warming Potentials (GWP)

Gas	Global Warming Potential
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310
HFC-23	11,700
HFC-134a	1,300
HFC-152a	140
PFC: Tetrafluoromethane (CF_4)	6,500
PFC: Hexafluoroethane (C_2F_6)	9,200
Sulfur Hexafluoride (SF_6)	23,900

Source: EPA 2006. Non CO_2 Gases Economic Analysis and inventory. (http://www.epa.gov/nonco2/econ-inv/table.html), December 2006

2.1.2 Impact of Climate Change on California and Human Health

The long term environmental impacts of global warming may include sea level rise that could cause devastating erosion and flooding of coastal cities and villages, as well as more intense hurricanes and typhoons worldwide. In the United States, Chicago is projected to experience 25 percent more frequent heat waves and Los Angeles a four-to-eight-fold increase in heat wave days by the end of the century (IPCC, 2007: Climate Change 2007: Impacts, Adaptation and Vulnerability, Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge).

Locally, global warming could cause changing weather patterns with increased storm and drought severity in California. Changes to local and regional ecosystems including the potential loss of species, and a significant reduction in winter snow pack (e.g., estimates include a 30 to 90% reduction in snow pack in the Sierra Nevada mountain range). Current data suggest that in the next 25 years, in every season of the year, California could experience unprecedented heat, longer and more extreme heat waves, greater intensity and frequency of heat waves, and longer dry periods. The California Climate Change Center (2006) predicted that California could witness the following events:

- Temperature rises between 3 and 10.5˚ F
- 6 to 20 inches or more increase in sea level
- 2 to 4 times as many heat-wave days in major urban centers
- 2 to 6 times as many heat-related deaths in major urban centers
- 1 to 1.5 times more critically dry years
- 10 to 55% increase in the risk of wildfires

An increase in the frequency of extreme events may result in more event-related deaths, injuries, infectious diseases, and stress-related disorders. Particular segments of the population such as those with heart problems, asthma, the elderly, the very young and the homeless can be especially vulnerable to extreme heat. Also, climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects. These "vector-borne" diseases include malaria, dengue fever, yellow fever, and encephalitis. Also, algal blooms could occur more frequently as temperatures warm — particularly in areas with polluted waters — in which case diseases (such as cholera) that tend to accompany algal blooms could become more frequent.

2.1.3 Adaptation Impact

Adaptation refers to potential climate change impacts on the project. Global warming is already having a profound impact on water resources. Climate change already altered the weather patterns and water supply in California leading to increased water shortages (i.e., a dwindling snowpack, bigger flood flows, rising sea levels, longer and harsher droughts). Water supplies are also at risk from rising sea levels. Risks may include degradation to California's estuaries, wetlands, and groundwater aquifers which would threaten the quality and reliability of the major California fresh water supply (Climate Change Adaptation Strategies for California's Water, State of California Department of Water Resources, October 2008).

Higher temperatures will also likely increase electricity demand due to higher air conditioning use. Even if the population remained unchanged, toward the end of the century annual electricity demand could increase by as much as 20 percent if temperatures rise into the higher warming range. (Implementing aggressive efficiency measures could lower this estimate).

Higher temperatures may require that the project consume more electricity for cooling. Additionally, more water may be needed for the landscaping. However, sea level rise won't impact the project because it is so far and high relative to the ocean.

Adaptation includes the responses to the changing climate and policies to minimize the predicted impacts (e.g., building better coastal defenses to sea level rise). Adaptation is not included in this report. It should be note that adaptation is not mitigation. Mitigation includes intervention or policies to reduce GHG emissions or to enhance the sinks of GHGs.

2.2 Emission Inventories

To put perspective on the emissions generated by a project and to better understand the sources of GHGs, it is important to look at emission inventories. The United Nations has taken the lead in quantifying GHG emissions and compiling the literature on climate change. The United Nations estimated for CO_2 equivalents for the world and for the top ten CO_2 producing countries are presented in Table 2.

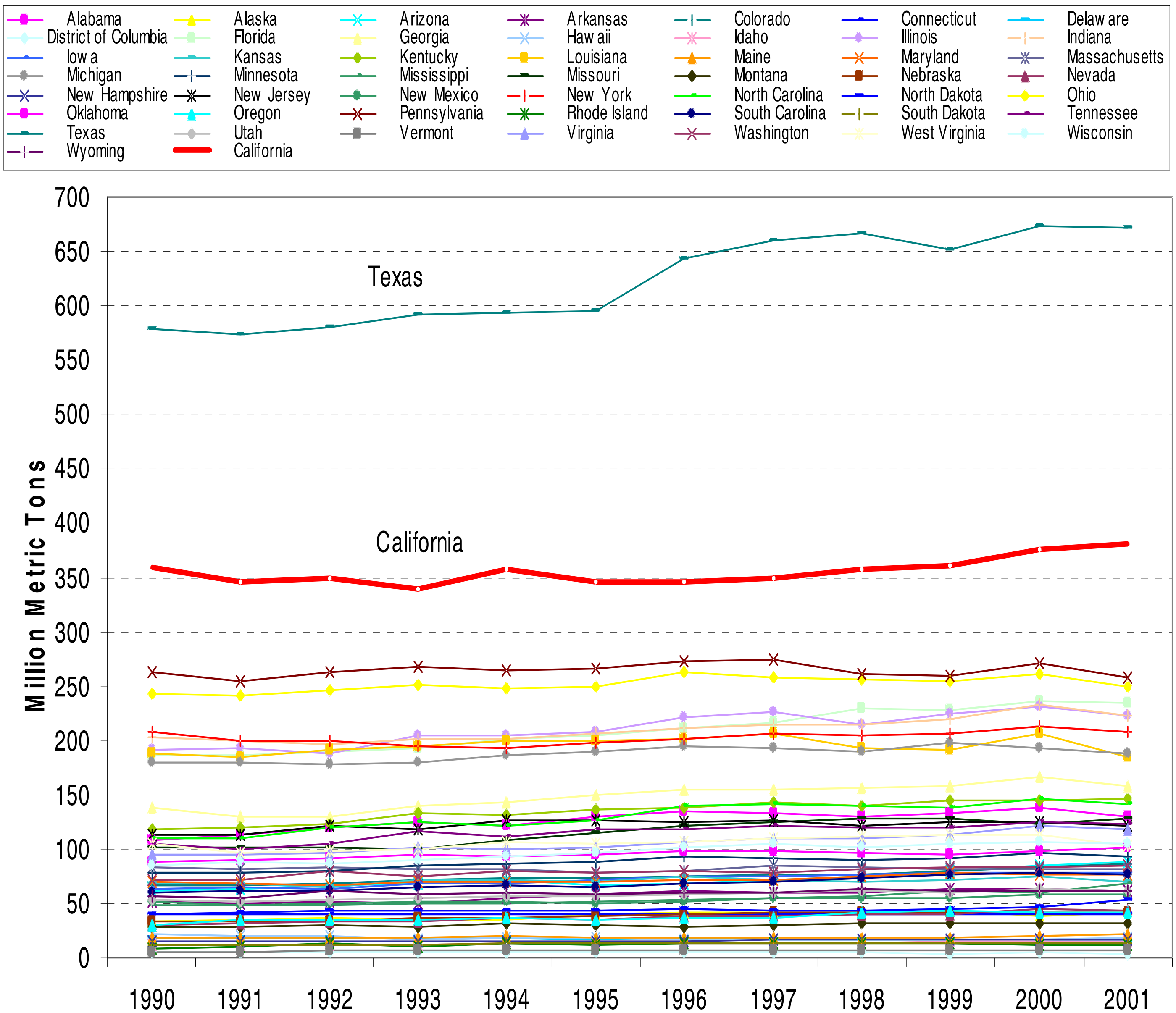
Table 2
Top Ten CO_2 Producing Nations in 2007
(Emissions in Million Metric Tons (MMT) CO_2)

Country	GHG Emissions (MMT CO_2EQ)	Percent of Global
1. China	6,538	22%
2. United States	6,094	20%
3. India	1,610	5%
4. Russian Federation	1,580	5%
5. Japan	1,304	4%
6. Germany	841	3%
7. Canada	590	2%
8. United Kingdom	546	2%
9. South Korea	503	2%
10. Iran	496	2%
Remaining Countries	*10,010*	*33%*
Total Global	**30,114**	**100%**

Source: United Nations, 2011,
http://unstats.un.org/unsd/environment/air_co2_emissions.htm

Global CO_2 emissions totaled about 30,114 million metric tons (MMT) CO_2 in 2007. China released the most CO_2 emissions. The United States was second and released 6,094 MMT CO_2 in 2007, which is approximately 20% of the earth's total emissions. The data in Table 2 emphasize the major role that the United States and China play in climate change with the emissions of the two countries accounting for 42% of the emissions.

Within the United States, California has the second highest level of GHG production with Texas having the highest. In 2001, the burning of fossil fuels produced over 81% of total GHG emissions. In relation to other states, California is the second highest producer of CO_2 by fossil fuels, as shown in Figure 4.



Source: California Energy Commission, "Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004," December 2006

Figure 4 - CO_2 Emissions from Fossil Fuel Combustion by State

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2.3 Sources of Greenhouse Gas in California

The California Energy Commission ("CEC") categorizes GHG generation by source into five broad categories. The categories are:

- **Transportation** includes the combustion of gasoline and diesel in automobiles and trucks. Transportation also includes jet fuel consumption and bunker fuel for ships.

- **Agriculture and forestry** GHG emissions are composed mostly of nitrous oxide from agricultural soil management, CO_2 from forestry practice changes, methane from enteric fermentation, and methane and nitrous oxide from manure management.

- **Commercial and residential** uses generate GHG emissions primarily from the combustion of natural gas for space and water heating.

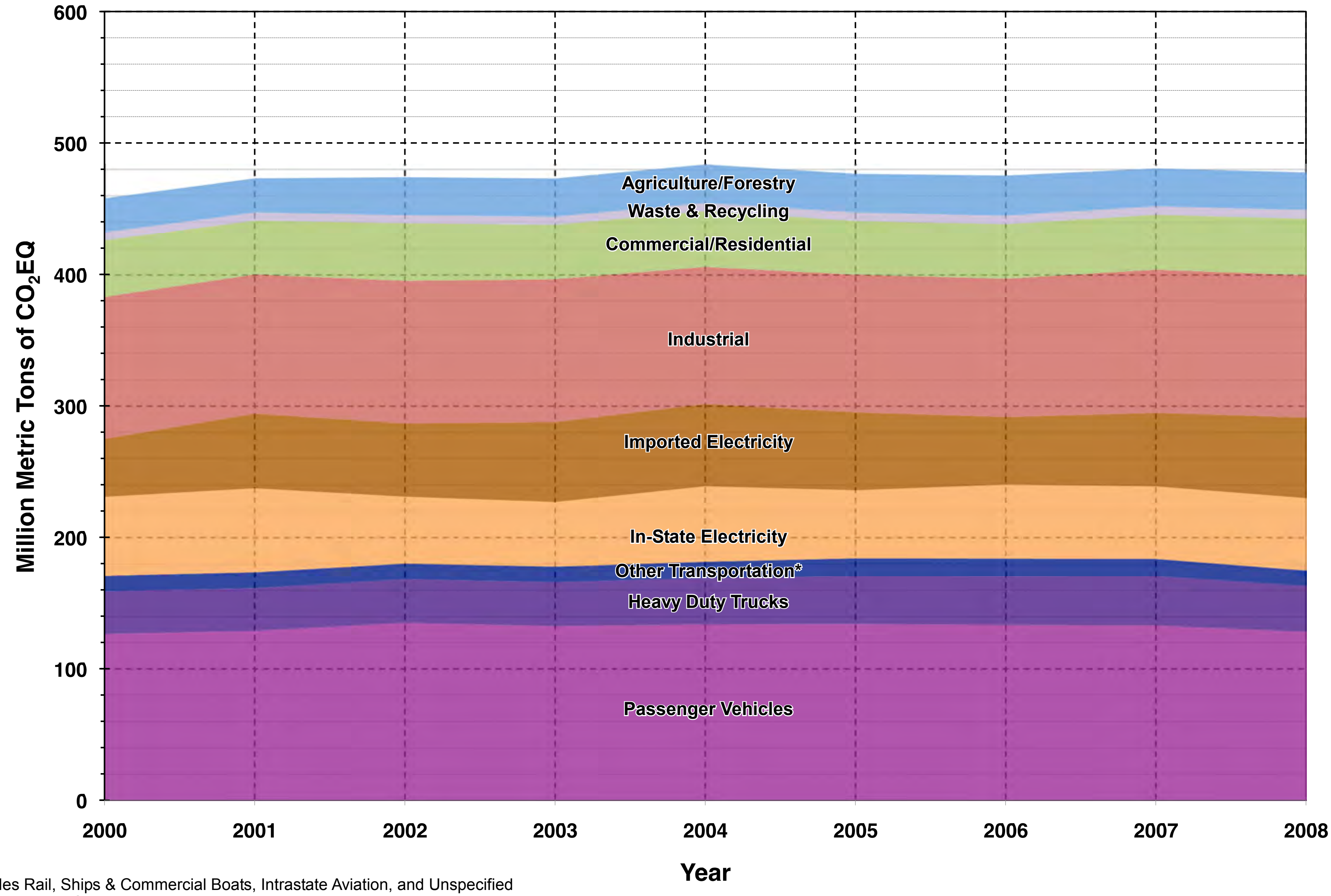
- **Industrial** GHG emissions are produced from many industrial activities. Major contributors include oil and natural gas extraction; crude oil refining; food processing; stone, clay, glass, and cement manufacturing; chemical manufacturing; and cement production. Wastewater treatment plants are also significant contributors to this category.

- **Electric generation** includes both emissions from power plants in California as well as power plants located outside of the state that supply electricity to the state.

The amount of GHGs released from each of these categories in California from 2000 to 2008 is shown in Figure 5.

Examination of Figure 5 indicates that most of California's GHGs are emitted by transportation sources, such as automobiles, trucks, and airplanes. (The transportation sector is labeled as gasoline, jet fuel, distillate, and other transportation in Figure 5.) Combustion of fossil fuels in the transportation sector contributed approximately 38% of the California GHG. This category was followed by the electric power sector (including both in-state and out-of-state sources) (24%) and the industrial sector (23%). The smallest GHG contributors are the commercial and residential sector, as well as the agricultural and forestry sector, accounted for about 1% and 6%, respectively.

While California has the second highest rate of GHG production in the nation, it should also be noted that California has one of the lowest per capita rates of GHG emissions, as shown in Figure 6. According to Figure 6, California had the fourth lowest per capita rate of CO_2 production from fossil fuels in the United States. Wyoming produced the most CO_2 per capita, while the District of Columbia produced least.



*Includes Rail, Ships & Commercial Boats, Intrastate Aviation, and Unspecified Transportation Sources

Source: CARB Greenhouse Gas Inventory Website
http://www.arb.ca.gov/cc/inventory/inventory.htm, data last updated 5/12/10

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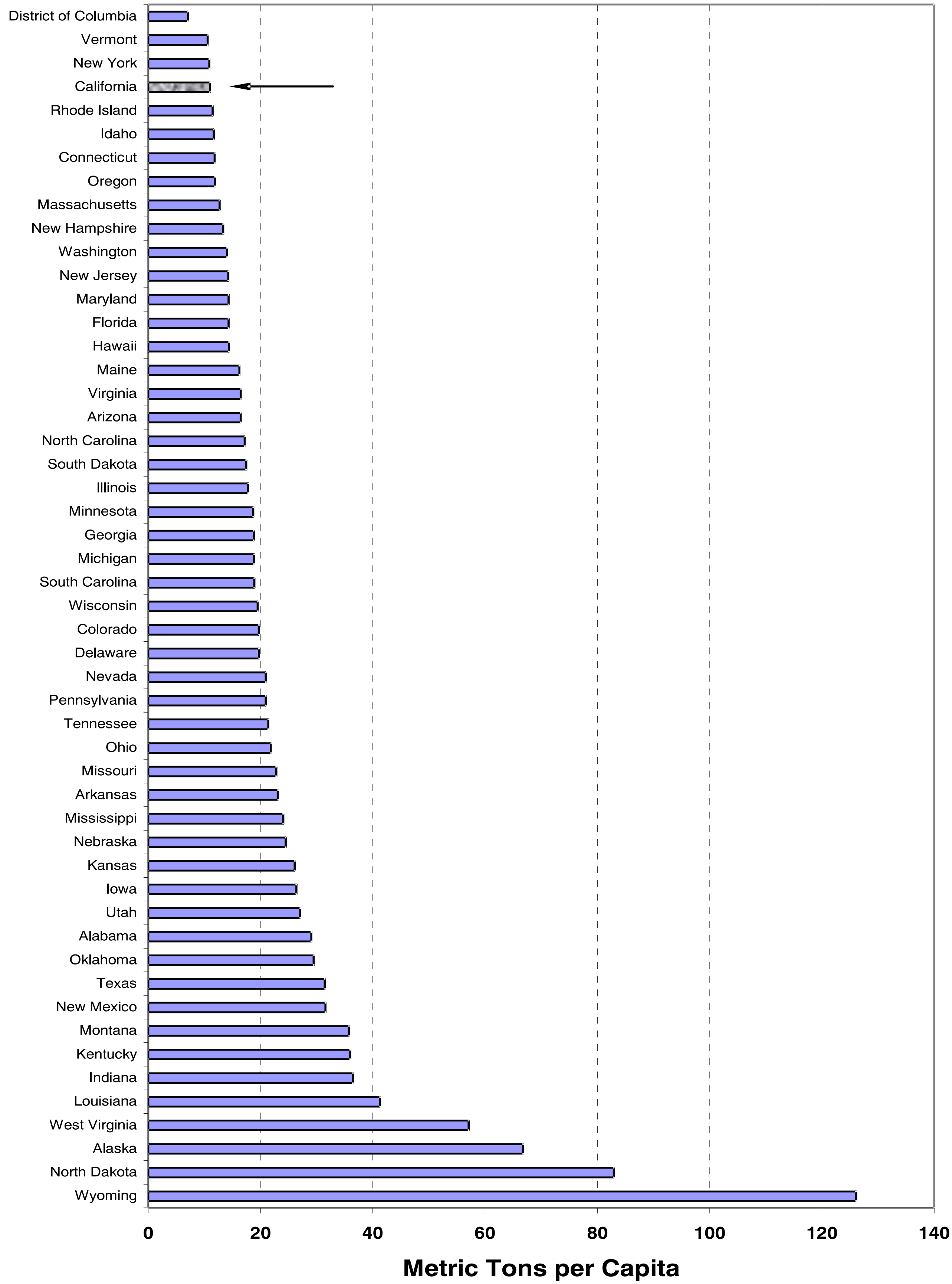
Figure 5
California GHG Emissions by Sector



Source: California Energy Commission, "Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004," December 2006

Figure 6 - CO_2 Emissions From Fossil Fuels Per Capita (2001)

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2.4 Regulatory Framework

2.4.1 Federal Plans, Policies, Regulations, and Laws.

The federal government began studying the phenomenon of global warming as early as 1978 with the National Climate Protection Act, 92 Stat. 601, which required the President to establish a program to "assist the Nation and the world to understand and respond to natural and man-induced climate processes and their implications." The 1987 Global Climate Protection Act, Title XI of Pub. L. 100-204, directed the U.S. EPA to propose a "coordinated national policy on global climate change," and ordered the Secretary of State to work "through the channels of multilateral diplomacy" to coordinate efforts to address global warming. Further, in 1992, the United States ratified a nonbinding agreement among 154 nations to reduce atmospheric GHGs.

More recently, in *Massachusetts v. EPA* (April 2, 2007), the United State Supreme Court held that GHGs fall within the Clean Air Act's definition of an "air pollutant," and directed the EPA to consider whether GHGs are causing climate change. If so, the EPA must regulate GHG emissions from automobiles under the Clean Air Act.

While EPA has not finalized a regulation, it did issue a proposed rule on April 17, 2009. The rule declared that GHGs endanger human health and is the first step to regulation through the federal Clean Air Act. If it becomes final, the EPA would define air pollution to include the six key GHGs – CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6.

In addition, Congress has increased the corporate average fuel economy (CAFE) of the U.S. automotive fleet. In December 2007, President Bush signed a bill raising the minimum average miles per gallon for cars, sport utility vehicles, and light trucks to 35 miles per gallon by 2020. This increase in CAFE standard will create a substantial reduction in GHG emissions from automobiles, which is the largest single emitting GHG sector in California.

As of this writing, however, there are no adopted federal plans, policies, regulations or laws setting a mandatory limit on GHG emissions. Further, the EPA has not finalized its evaluation in the wake of *Massachusetts v. EPA*.

2.4.2 California State Plans, Policies, Regulations, and Laws.

In recent years, California has distinguished itself as a national leader in efforts to address global climate change by enacting several major pieces of legislation, engaging in multi-national and multi-state collaborative efforts, and preparing a wealth of information on the impacts associated with global climate change.

In November 2008, the Governor issued Executive Order S-13-08 directing state agencies to plan for sea level rise and other climate change impacts. There are four key actions in the Executive Order: (1) initiation of a climate change adaptation strategy that will assess the state's expected climate change impacts where the state is most vulnerable, with recommendations by early 2009; (2) an expert panel on sea level rise will inform state planning and development efforts; (3) interim guidance to state agencies on planning for sea level rise in coastal and floodplain areas for new projects; and (4) initiation of a report on critical existing and planned infrastructure projects vulnerable to sea level rise. (http://gov.ca.gov/executive-order/11036/)

Pursuant to AB 32, the California Air Resources Board ("CARB") has adopted a number of relevant policies and directives. In December 2008, the Scoping Plan was adopted. The Plan is a central requirement of the statute. In addition, it has adopted a number of protocols for industry and government sectors, including one for local government (http://www.arb.ca.gov/cc/protocols/localgov/localgov.htm). (See also, the Local Government Toolkit (http://www.coolcalifornia.org/local-government).

In response to SB 97, the Office of Planning and Research ("OPR") issued a Technical Advisory on CEQA and Climate Change in June 2008. The Advisory provides an outline of what should be included in a GHG analysis under CEQA (http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf). In January 2009, OPR issued draft amendments to the CEQA Guidelines that address GHGs. Among the amendments are the following:

- Determining the Significance of Impacts from Greenhouse Gas Emissions (Guidelines § 15064.4);
- Thresholds of Significance (Guidelines ¤ 15064.7(c));
- Discussion of Cumulative Impacts (Guidelines ¤ 15130(a)(1)(B) and Guidelines § 15130(f));
- Tiering and Streamlining the Analysis of Greenhouse Gas Emissions (Guidelines § 15183.5);

Assembly Bill 32, the California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.). In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. In general, AB 32 directs the California Air Resources Board ("CARB") to do the following:

- On or before June 30, 2007, CARB shall publish a list of discrete early action measures for reducing GHG emissions that can be implemented by January 1, 2010;
- By January 1, 2008, establish the statewide GHG emissions cap for 2020, based on CARB's calculation of statewide GHG emissions in 1990 (an approximately 25 percent reduction in existing statewide GHG emissions);
- Also by January 1, 2008, adopt mandatory reporting rules for GHG emissions sources that "contribute the most to statewide emissions" (Health & Safety Code § 38530);
- By January 1, 2009, adopt a scoping plan that indicates how GHG emission reductions will be achieved from significant GHG sources through regulations, market mechanisms, and other strategies;
- On or before January 1, 2010, adopt regulations to implement the early action GHG emission reduction measures;
- On or before January 1, 2011, adopt quantifiable, verifiable, and enforceable emission reduction measures by regulation that will achieve the statewide GHG emissions limit by 2020; and
- On January 1, 2012, CARB's GHG emissions regulations become operative.
- On January 1, 2020, achieve 1990 levels of GHG emissions.

In a December 2006 report, CARB estimated that California emitted between 425 and 468 million metric tons of CO_2 in 1990. In December 2007, CARB finalized 1990 emissions at 427 million metric tons of CO_2. In the August 2007 draft report, CARB estimated California emitted approximately 480 million metric tons of CO_2 in 2004. Based on the U.S. Census Bureau

California 2007 population of 36,553,215, this would result in about 13 metric tons of CO_2 per capita.

AB 32 takes into account the relative contribution of each source or source category to protect adverse impacts on small businesses and others by requiring CARB to recommend a *de minimis* (minimal importance) threshold of GHG emissions below which emissions reduction requirements would not apply. AB 32 also allows the Governor to adjust the deadlines mentioned above for individual regulations or the entire state to the earliest feasible date in the event of extraordinary circumstances, catastrophic events, or threat of significant economic harm.

CARB "Early Action Measures" (June 30, 2007). On June 21, 2007, CARB approved its early action measures to address climate change, as required by AB 32. The three measures include: (1) a low carbon fuel standard, which will reduce the carbon-intensity in California fuels, thereby reducing total CO_2 emissions; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance through the restriction of "do-it-yourself" automotive refrigerants; and (3) increased CH_4 (methane) capture from landfills through the required implementation of state-of-the-art capture technologies.

CARB Mandatory Reporting Regulations (December 2008). Under AB 32, CARB propounded regulations to govern mandatory greenhouse gas emissions reporting for certain sectors of the economy, most dealing with approximately 94 percent of the industrial and commercial stationary sources of emissions. Regulated entities include electricity generating facilities, electricity retail providers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and industrial sources that emit over 25,000 metric tons of CO_2 from stationary source combustion.

Senate Bill 97 (2007). By July 1, 2009, the Governor's Office of Planning and Research (OPR) is directed to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by the California Environmental Quality Act. The Resources Agency is required to certify and adopt these guidelines by January 1, 2010. OPR is required to periodically update these guidelines as CARB implements AB 32. In addition, SB 97 states that the failure to include a discussion of greenhouse gas emissions in any CEQA document for a project funded under the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006 shall not be a cause of action under CEQA. This last provision will be repealed on January 1, 2010.

Executive Order S-01-07 (2007). Executive Order S-01-07 calls for a reduction in the carbon intensity of California's transportation fuels by at least 10 percent by 2020. As noted above, the low-carbon fuel standard ("LCFS") was adopted by CARB as one of its three "early action measures" on June 21, 2007.

Senate Bill 1368 (2006) (Public Utilities Code §§ 8340-41). SB 1368 required the California Public Utilities Commission ("PUC") to establish a "GHG emission performance standard" by February 1, 2007, for all electricity providers under its jurisdiction, including the state's three largest privately owned utilities (Pub. Res. Code § 8341(d)(1)). These utilities provide approximately 30 percent of the state's electric power. After the PUC acted, the CEC adopted a performance standard "consistent with" the PUC performance standard and applied it to local publicly-owned utilities on May 23, 2007 (over one month ahead of its June 30, 2007 deadline). Cal. Pub. Res. Code § 8341(e)(1). However, the California Office of Administrative Law ("OAL") found four alleged flaws in the CEC's rulemaking. The CEC overcame these alleged flaws and adopted reformulating regulations in August 2007.

Senate Bill 107 (2006). Senate Bill 107 ("SB 107") requires investor-owned utilities such as Pacific Gas and Electric, Southern California Edison and San Diego Gas and Electric, to generate 20 percent of their electricity from renewable sources by 2010. Previously, state law required that this target be achieved by 2017.

Senate Bill 375 (September 2008). In September 2008, Governor Schwarzenegger signed SB 375. SB 375 is a comprehensive global warming bill that helps to achieve the goals of AB32. To help establish these targets, the CARB assigned a Regional Targets Advisory Committee to recommend factors to be considered and methodologies for setting greenhouse gas emission reduction targets. SR 375 also provides incentive – relief from certain CEQA requirements for development projects that are consistent with regional plans that achieve the targets. SB 375 requires CARB to develop, in collaboration with the Metropolitan Planning Organization (MPO), passenger vehicle greenhouse gas emissions reduction targets for 2020 and 2035 by September 30, 2010. The MPO is required to include and adopt, in their regional transportation plan, a sustainable community strategy that will meet the region's target provided by CARB.

Energy Conservation Standards (2009). Energy Conservation Standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCF]) with the standards going into effect in 2009. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608), dated December 2006, were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non-federally regulated appliances. While these regulations are now often seen as "business as usual," they do exceed the standards imposed by any other state and reduce GHG emissions by reducing energy demand. On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 established voluntary standards, some of which became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

CEQA Guidelines. SB 97 required that the California Natural Resource Agency (CNRA) coordinate on the preparation of amendments to the CEQA Guidelines regarding feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions. Pursuant to SB 97, CNRA adopted CEQA Guidelines amendments on December 30, 2009. The amendments were approved by the Office of Administrative Law on February 16, 2010, and became effective on March 18, 2010.

With respect to the significance assessment, newly added CEQA Guidelines section 15064.4, subdivision (b), requires that the lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The new CEQA Guidelines do not include or recommend any particular threshold of significance; instead, they leave that decision to the discretion of the lead agency. The new CEQA Guidelines also do not suggest or recommend the use of any specific GHG emission mitigation measures. Instead, newly added CEQA Guidelines provides that lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Mitigation measures may include the following, among others:

(1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;

(2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F of the CEQA Guidelines;

(3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;

(4) Measures that sequester greenhouse gases;

(5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

Among other things, CNRA noted in its Public Notice for these changes that the impacts of GHG emissions should be considered in the context of a cumulative impact, rather than a project impact. The Public Notice states: "While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CNRA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable."

2.4.3 South Coast Air Quality Management District Plans, Policies, Regulations and Laws.

The South Coast Air Quality Management District ("SCAQMD") adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" in April 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons (CFCs), methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons (HCFCs) by the year 2000;
- Develop recycling regulations for HCFCs (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and,
- Support the adoption of a California GHG emission reduction goal.

The legislative and regulatory activity detailed above is expected to require significant development and implementation of energy efficient technologies and shifting of energy production to renewable sources.

2.4.4 County of Los Angeles Plans, Policies, Regulations, and Laws

In 2006, the County of Los Angeles adopted an Energy and Environmental Program for the development and enhancement of energy conservation and environmental programs for County departments. The program consists of a 20% target reduction rate in energy and water efficiency, the County's Green Building Program, the County's Environmental Stewardship Program and the Public Outreach and Education Program. The County is currently in the process of updating its General Plan. A draft of the plan was released in May 2012. Currently, county intends to have the draft EIR for the General Plan completed in the spring of 2013 with adoption of the Plan later in 2013.

The Draft Air Quality Element presents the County's proposed goals and policies to address climate change. Of the four goals presented, one of them is directly related to climate change, AQ3: Implementation of Plans and Programs to Address the Impacts of Climate Change, and two are related to general reductions in air pollutant emissions, AQ 2: The Reduction of Air Pollution and Mobile Source Emissions Through Coordinated Land use Transportation and Air Quality Planning, and AQ 4: Energy Efficiency and Conservation Through Development and Design Techniques.

The five policies for Goal AQ 3 include reducing energy and water consumption in County operations, participate in local, regional and state programs to reduce greenhouse gas emissions, encourage maximum amounts of energy conservation in new development and municipal operations and to prepare a climate action plan. The climate action plan is to include an inventory of greenhouse gas emissions, an action plan for how the County will meet it's GHG emission targets, and the mechanism for tracking and evaluation its progress toward meeting the County's goal.

2.4.5 El Camino College Plans, Policies, Regulations, and Laws

El Camino Community College has not adopted any plans, policies, regulations or laws relating to greenhouse gas emissions or climate change.

2.5 Existing Emissions

Using the methodology described below in Section 3.2 the existing annual GHG emissions from El Camino College were calculated and are presented in Table 3. The emissions estimate is based on the existing 16,400 full time equivalent students (FTES) and existing buildings with an overall gross floor area of 1,277,546 square feet. The total annual emissions associated with the operation of the campus are presented along with the annual emissions per service population, which in this case is the number of employees. Service population is discussed further in Section 3.1 and in this case is the number of persons employed by the college. Worksheets showing the CalEEMod input parameters used to model the emissions is presented in the appendix and the CalEEMod input files are available upon request.

Table 3
Annual Existing ECC GHG Emissions (2012)

	Annual Emissions (MT/year)			
Activity	**CO_2**	**CH_4**	**N_2O**	**CO_2EQ**
Vehicular Emissions	32,312.8	1.9	0.0	32,353.0
Natural Gas Combustion	1,070.6	0.0	0.0	1,077.1
Electricity	5,169.4	0.2	0.1	5,201.8
Landscaping	0.0	0.0	0.0	0.0
Consumer Products	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.0	0.0	0.0
Municipal Waste	607.6	35.9	0.0	1,361.6
Water	310.9	1.1	0.0	343.6
Total Annual Emissions	**39,471.1**	**39.2**	**0.1**	**40,337.0**
Service Population:				**1,320**
Emissions Per Service Population (MT CO_2EQ/yr/person)):				**30.6**

3.0 Potential Greenhouse Gas Impacts

3.1 Significance Thresholds

As discussed above, the CEQA Guidelines do not include or recommend any particular threshold of significance; instead, they leave that decision to the discretion of the lead agency. During the development of the CEQA Guidelines update to address GHG, the Natural Resources Agency concluded that the CEQA Guidelines do not establish significance thresholds for other potential impacts and SB97 did not authorize the development of a statewide threshold as a part of the guidelines update[1].

Early in the process of developing the guidelines The Governor's Office of Planning and Research (OPR) published a Technical Advisory[2] that requested CARB to recommend a method for setting significance thresholds to encourage consistency and uniformity in the CEQA analysis of the GHG emission impacts. On October 24, 200, CARB published its proposed approach to setting significance thresholds[3]. Two public meetings were held to present and clarify the proposed approach and CARB received public comments on the proposal[4]. However, development of the thresholds was not continued after the close of the public comment period at the request of OPR.

Several California Air Districts have adopted significance thresholds for projects where they are the lead agency (primarily air permits for industrial projects) and have provided recommendations for significance thresholds for commercial and residential development projects. In June 2010, the Bay Area Air Quality Management District (BAAQMD) adopted CEQA guidelines with recommended GHG thresholds of significance for general development projects, which were updated in 2011. On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the Air District had failed to comply with CEQA when it adopted the Thresholds and ordered the district to no longer recommend the Thresholds. SCAQMD has adopted significance thresholds for industrial projects where they are the lead agency, which included recommendations for recommended significance thresholds for development projects. However, SCAQMD has stopped working on developing these recommendations awaiting a resolution of the BAAQMD legal proceedings.

The following sections discuss the recommended CARB threshold approach as well as the proposed SCAQMD and adopted but rescinded BAAQMD significance thresholds. Section 3.1.1 discusses CARB's significance threshold development and section 3.1.2 discusses SCAQMD's significance threshold development. Section 3.1.3 discusses the BAAQMD significance thresholds. These proposed thresholds were used as guidance for the Significance Thresholds that will be used to determine the project's GHG impact potential and are described in Section 3.1.4.

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[1] "Final Statement of Reasons for Regulatory Action Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97" California Natural Resources Agency, December 2009. http://ceres.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf (accessed 1/22/2013)
[2] "CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review" June 19, 2008. http://opr.ca.gov/docs/june08-ceqa.pdf (accessed 1/22/2013)
[3] "Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act" October 24, 2008. http://www.arb.ca.gov/cc/localgov/ceqa/meetings/102708/prelimdraftproposal102408.pdf (accessed 1/22/2013)
[4] http://www.arb.ca.gov/cc/localgov/ceqa/ceqacomm.htm (accessed 1/22/2013)

3.1.1 California Air Resource Board Significance Thresholds Approach

On October 24, 2008 CARB published a preliminary staff proposal of approaches for setting GHG significance thresholds for CEQA. In this document, CARB considered but rejected the use of a "zero threshold" that would have identified any project emitting GHGs as being significant and asserted that a non-zero threshold can be supported by substantial evidence. Non-zero thresholds were found to be not mandated because some level of emissions is still consistent with stabilizing atmospheric GHG concentrations and that current and anticipated regulations, apart from CEQA, will proliferate and increasingly will reduce GHG contributions of past, present and future projects. However, CARB argued that any non-zero threshold must make substantial contributions in reducing the peak of the State's GHG emissions. The thresholds should cause that peak to occur sooner and put California on track to meet its interim (2020) and long-term (2050) emission reduction targets.

The CARB approach recognized that different GHG thresholds may apply in different sectors because some sectors contribute more to the problem and should be obliged to provide greater reductions and that differing levels of emissions reductions were expected from different sectors in order to meet the State's objectives. Further, the data and science suggests that sectors must be treated separately and different thresholds—qualitative, quantitative and performance-based—can apply to different sectors.

Specific threshold recommendations were proposed for the two types of projects which local agencies are typically the CEQA lead agency, industrial projects, and residential/commercial projects. However, the two approaches are similar. A non-exempt project that meets specified performance standards and whose emissions are less than a specified amount would be determined to be less than significant. For residential/commercial projects, a project that is consistent with a previously approved plan meeting the following requirements would be considered to have a less than significant impact relative to climate change:

- Addresses GHG emissions.
- Satisfies 15064(h)(3) of the California Code of Regulations.
- Meets a community level GHG target consistent with the statewide emissions limit in AB 32 and where the plan will apply beyond 2020, Executive Order S-3-05.
- Is consistent with a transportation related reduction target adopted by ARB pursuant to SB 375.
- Includes a GHG inventory and mechanisms to regularly monitor and evaluate emissions.
- Incorporates specific, enforceable GHG requirements.
- Incorporates mechanisms that allow the plan to be revised in order to meet targets.

AND

- Has a certified final CEQA document (see 15152(f)).

ARB proposed that Industrial projects that meet ARB performance standards for construction-related emissions and transportation emissions or incorporate equivalent mitigation measures AND emit less than 7,000 MT/yr CO_2EQ from non-transportation sources would be considered less than significant. Residential/commercial projects that meet ARB performance standards for constructed related emissions, energy use, water use, waste and transportation AND emit less GHG's than a threshold to be developed later would be considered less than significant. All other projects would be presumed to be significant and implement all feasible mitigation measures. Note that the initial proposal did not specify the performance standards but left their development for later work.

In October of 2008 CARB held a public meeting to present the draft document and request public input. In December of 2008 CARB held a second public meeting that provided a refinement of the proposal including specific performance standards. The suggested construction performance standards were:

- Provide alternative transportation mode options or incentives for workers to and from worksite on days that construction requires 200 or more workers; and
- Recycle and/or salvage at least 75% of non-hazardous construction and demolition debris by weight (residential) or by weight in volume (commercial); and
- Use recycled materials for at least 20% of construction materials based on cost for building materials, based on volume for roadway, parking lot, sidewalk and curb material. Recycled materials may include salvaged, reused, and recycled content materials.

The proposed performance standards for energy use, water use, waste and transportation applicable to residential/commercial projects were:

> **ENERGY:** Meet California Energy Commission's (CEC) Tier II Energy Efficiency standards in effect at the time building construction begins. At the time this represented a 30% reduction in combined space heating, cooling, and water-heating energy compared to 2008 Title 24 Standards.
>
> **WATER:** Provide a minimum 20% reduction in indoor potable water use and 50% reduction in outdoor potable water used for landscape irrigation over the water use level projected by the methodology in the California Green Building Code, Section 603.2 (indoor) and 604.2 (outdoor).
>
> **WASTE:** Where local recycling and/or composting programs exist design facilities and structures to encourage participation in the program, install adequate, accessible recycling and composting receptacles in common or public areas, AND provide easy access to central recycling and composting receptacles or collections areas.
>
> **TRANSPORTATION:** Residential projects demonstrate that the average vehicle miles traveled per household year year is projected not to exceed 14,000 miles. Commercial projects must be within ½ mile of residential zone with average density of 10 du/net acre AND within ½ mile of at least 10 neighborhood services AND provide pedestrian access between project and services AND institute a comprehensive transportation demand management (TDM) program to reduce employee trips by at least 20%.

In mid December CARB announced that it was extending the deadline for public comments until January 9, 2009 and after that a revised draft would be prepared and circulated for public comment prior to taking the proposal to the board for approval. However, CARBs work on developing the thresholds ceased soon after this due to the conclusions reached by OPR discussed above.

3.1.2 SCAQMD's Significance Thresholds

On December 5, 2008, the South Coast Air Quality Management District (SCAQMD) adopted GHG significance threshold for Stationary Sources, Rules and Plans where the SCAQMD is lead agency. The threshold uses a tiered approach. The project is compared with the requirements of each tier sequentially and if it complies with any tier, it is determined to not result in a significant impact.

Tier 1 excludes projects that are specifically exempt from SB97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. Tier 4 consists of three decision tree options. Under the first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the second option, the project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the third option, project would be excluded if it met sector based performance standards. However, the specifics of the Tier 4 compliance options were not adopted by the SCAQMD board to allow further time to develop the options and coordinate with CARB's GHG significance threshold development efforts. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level

The guidance document prepared for the stationary source threshold recommended using the same tiered approach for residential and commercial projects with a 3,000 metric ton CO_2 Equivalent per year (MT CO_2EQ/yr) Tier 3 screening threshold. However, this was not adopted as the SCAQMD Board felt that more analysis was required along with coordination with CARBs GHG significance threshold development. At subsequent meetings of the SCAQMD GHG Working Group SCAQMD staff recommended two options for the Tier 3 screening threshold for residential and commercial projects. The first option would use a 3,500 MT CO_2EQ/yr threshold for residential projects, a 1,400 MT CO_2EQ/yr threshold for commercial projects and a 3,000 MT CO_2 EQ/yr for mixed use projects. The second option would apply the 3,000 MT CO_2EQ/yr for all commercial and residential projects.

The SCAQMD proposed compliance options for Tier 4 of the significance thresholds at subsequent GHG Working Group meetings. The first option would be a reduction of 23.9% in GHG emissions over the base case. This percentage reduction is the land use sector portion of the CARB Scoping Plan's overall reduction of 28%. This target would be updated as the AB 32 Scoping Plan is revised. The base case scenario for this reduction still needs to be defined. Residual emissions would need to be less than 25,000 MT CO_2EQ/year to comply with the option. Staff proposed efficiency targets for the third option of 4.6 MT CO_2EQ/year per service population (the population of residential portions of projects plus the number of employees of commercial portions of projects.) for project level analysis and 6.6 MT CO_2EQ/year for plan level analyses. For project level analyses, residual emissions would need to be less than 25,000 MT CO_2EQ/year to comply with this option.

3.1.3 BAAQMD Significance Thresholds

In June 2010, the Bay Area Air Quality Management District (BAAQMD) adopted CEQA guidelines with GHG thresholds of significance, which were updated in 2011. On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the Air District had failed to comply with CEQA when it adopted the Thresholds. The court did not determine whether the Thresholds were valid on the merits, but found that the adoption of the Thresholds was a project under CEQA. The court issued a writ of mandate ordering the District to set aside the Thresholds and cease dissemination of them until the Air District had complied with CEQA. The Air District has appealed the Alameda County Superior Court's decision. The appeal is currently pending in the Court of Appeal of the State of California, First Appellate District.

In view of the court's order, the BAAQMD can no longer recommend that the Thresholds be used as a generally applicable measure of a project's significant air quality impacts. Lead agencies will need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Although lead agencies may rely on the Air District's CEQA Guidelines (updated May 2011) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, the Air District has been ordered to set aside the Thresholds and is no longer recommending that these Thresholds be used as a general measure of a project's significant air quality impacts. Lead agencies may continue to rely on the Air District's 1999 Thresholds of Significance and they may continue to make determinations regarding the significance of an individual project's air quality impacts based on the substantial evidence in the record for that project.

Under the rescinded BAAQMD thresholds, a project would not have a significant GHG impact if it is compliant with qualified GHG reduction strategy, or emissions less than 1,100 MT of CO_2EQ/yr, or emission less than 4.6 MT CO_2EQ/yr per service population (residents plus employees).

3.1.4 Project Significance Threshold

The Significance Threshold that will be used for this project is based on SCAQMD's suggested tiered approach which is consistent with CARB's recommendations and the thresholds developed by the BAAQMD. The project is not specifically exempted in SB97 and there are no GHG reduction plans that are consistent with the AB32 GHG reduction goals that with a certified final CEQA document that are applicable to the proposed project. Therefore, the project is not compliant with Tiers 1 or 2. The significance of the project will be determined based on compliance with the Tier 3 and 4 requirements. The project will be considered to have a significant impact if total annual GHG emissions exceed 3,000 MT CO_2EQ per and the annual emissions per service population (the number of persons employed by the college in this case) exceed 4.6 MT CO_2EQ/yr. Note that the methodology recommends that total construction emissions be amortized over a 30-year period or the project's expected lifetime if it is less than 30 years.

3.2 Project Emissions Calculation Methodology

GHG emissions during construction of the project were estimated using the methodologies presented below. Note that no activities associated with the construction or operation of the proposed project would be expected to generate fluorocarbon emissions, and therefore, emissions from hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6) are not included in the emissions estimates.

Construction related pollutant emissions resulting from the primary construction activities of the project were calculated using the CalEEMod (California Emissions Estimator Model) program (version 2011.1.1) published by SCAQMD. In general, CalEEMod defaults were used determined based on the proposed increase in building area proposed by the project. The defaults were modified to appropriately reflect the building area proposed to be demolished. The renovation of Murdock Stadium will require considerable material export and was modeled separately using project specific data. Construction activities proposed by the project and specific parameters used in the modeling are described in Section 3.3.

Construction delays or lengthening of the projected schedule from what was assumed would not be expected to considerably alter the estimate of GHG emissions. If daily activity levels were reduced the, the daily emissions would be reduced but this would likely be offset by the increase in duration resulting in an overall increase in GHG emissions. A shortening of the construction schedule from what was assumed for modeling purposes could result in an increase daily emissions over the levels presented below if emission-generating activities are greater than described below. However, this increase in daily emissions could easily be offset by a reduction in duration resulting in lower total GHG emissions. In any case, changes to the construction schedule would not be expected to considerably alter GHG emissions amortized over thirty-year period, which is what is compared to the SCAQMD screening threshold.

Operational emissions estimates were based on the number of enrolled students (16,400 under the no project scenario and 20,250 with the project) and the total gross floor area of the buildings (1,264,916 square feet under the no project scenario and 1,314,600 square feet with the project. CalEEmod default settings were used for all other modeling parameters.

3.3 Construction Emissions

Section 3.3.1 provides a description of the construction activities proposed by the project and the specific non-default modeling parameters used to estimate GHG emissions associated with construction activities proposed by the project. Section 3.3.2 presents the results of the GHG emissions estimate.

3.3.1 Construction Activities and Modeling Parameters

The El Camino College 2012 Faculties Master Plan includes approximately 36 different demolition, construction, or renovation projects to implement the plan. In some cases, the construction required to implement the plan have already begun. Buildout of the plan is anticipated in early 2022. Table 4 presents a listing of the individual demolition, construction and renovation projects that are proposed by the project along with the expected starting date and duration of each activity. Note that schedule presented in Table 4 is based on planning expectations but changes will likely occur. As discussed above, changes to the schedule would not be expected to increase emissions considerably from the modeling performed for this analysis. Figure 7 presents the locations of the demolition activities. Figure 8 presents the locations of the construction activities. Buildings that will be renovated are shown in Figure 3. Building renovations will primarily consist of interior renovations.

Table 4
Anticipated Construction Activities and Schedule

Phase	What	Project	Start	Duration (Months)
1a	Demolish	Stadium, Field House, Community Advancement	5/2012	10.5
1a	Construct	Stadium Complex/Field House	6/2013	12
1b	Construct	Math Business & Health Science	2/2012	12
1c	Construct	Shops	11/2012	12
	Renovate	Natural Science/STEM	1/2013	6
2a	Demolish	Shops	3/2016	6
2a	Construct	Student Services Center	11/2013	12
	Renovate	Industry and Technology	3/2014	6
	Renovate	Warehouse	4/2014	6
	Renovate	Construction Technology	4/2014	6
2b	Demolish	Technical Arts	10/2013	6
2b	Construct	Parking Structure & Campus Police	6/2014	12
2c	Demolish	Campus Police	7/2015	6
	Renovate	Maintenance	6/2014	6
2c	Construct	Lot F Parking Structure Expansion	6/2013	33
2d	Demolish	Physical Education South/South Gym & Handball Courts	2/2015	6
2d	Construct	Adaptive Pool	9/2015	12
3a	Demolish	Administration	4/2015	6
3a	Construct	Administration	11/2015	12
2e	Demolish	North Gym/Physical Education North	2/2016	6
2e	Construct	Main Gym/Athletic Support Space	12/2016	12
4	Construct	Music/Theater	5/2017	12
	Renovate	Library	6/2017	6
	Renovate	Planetarium	4/2014	6

Table Continued on Next Page

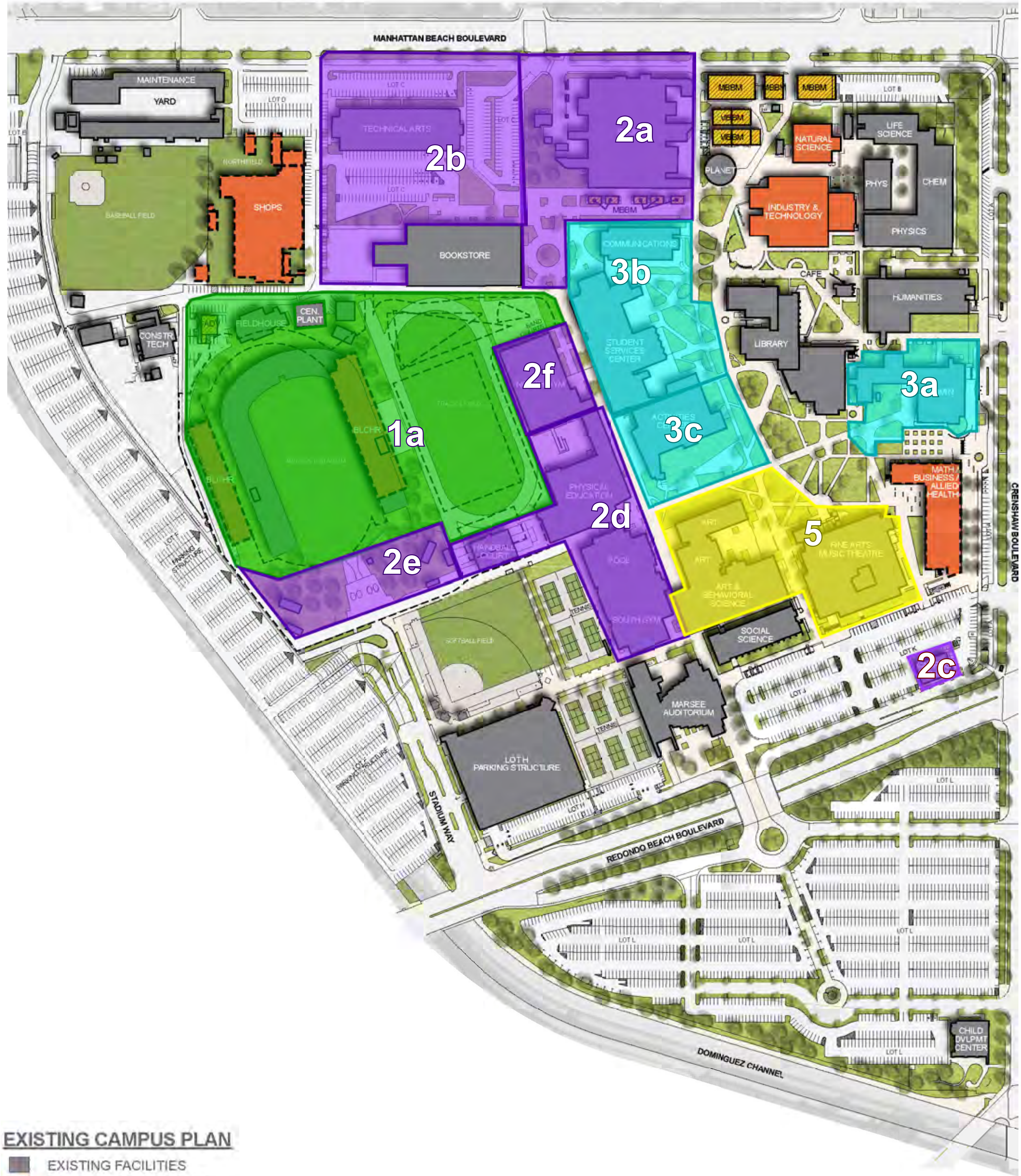
Table 4 (Continued)
Anticipated Construction Activities and Schedule

Phase	What	Project	Start	Duration (Months)
2f	Construct	Locker Rooms	7/2017	12
2f	Construct	Team Rooms	7/2017	12
2f	Construct	PE CR	7/2017	12
5	Demolish	Art/North B/Gallery & Music/Campus Theatre	12/2017	6
	Renovate	Marsee Auditorium	6/2018	6
5	Construct	Art & Behavioral Science I	7/2018	12
5	Construct	Art & Behavioral Science II	7/2018	12
3b	Demolish	Student Services & Communications	10/2018	6
3b	Construct	Student Activities Center	4/2019	12
3c	Demolish	Activities Center	10/2020	6
3c	Construct	Amphitheater area	8/2021	6

The general path of construction schedule will be to demolish an existing building and then construct a new building in the same location. Generally, building a replacement building before demolishing the existing building serving the same function. The project proposes the demolition of 15 existing buildings with a total floor area of 645,672 square feet. The existing buildings to be demolished are: Stadium, Field House, Community Advancement, Shops, Technical Arts, Campus Police, Physical Education South/South Gym, Administration, North Gym/Physical Education North, Art/North B/Gallery, Music/Campus Theater, Student Services, and Activities Center. It is anticipated that the total duration of each demolition phase will be approximately six months. However, the majority of this time will be spent preparing the buildings for the primary demolition as they will all likely require asbestos removal prior to physically demolishing the building with heavy equipment which will result in the peak emissions from demolition. This peak emissions activity period is expected to take between two and four weeks.

As a worst-case assumption, the modeling assumes that the total duration of each demolition phase will take six months and the peak emissions activity periods will last for one month for demolition phases involving less than 50,000 sq. ft. of building, one and a half months for phases involving between 50,000 sq. ft. and 100,000 sq. ft. and two months for demolition phases involving more than 100,000 sq. ft.

Demolition of Murdoch Stadium represents a special case. There is a berm that surrounds the stadium field and provides the structure for bleachers. Under the proposed project most of the berm will be removed which will require considerable export of materials. Approximately 128,500 cubic yards of soil and debris are expected to be removed in 8,600 truck trips occurring over approximately 17 weeks. In addition there will be approximately 4,500 cubic yards of material imported for the renovated field.



EXISTING CAMPUS PLAN

- EXISTING FACILITIES
- TEMPORARY FACILITIES
- IN DESIGN / CONSTRUCTION

N

0' 175' 350'

Mestre Greve Associates

Figure 7
Demolition Activity Locations

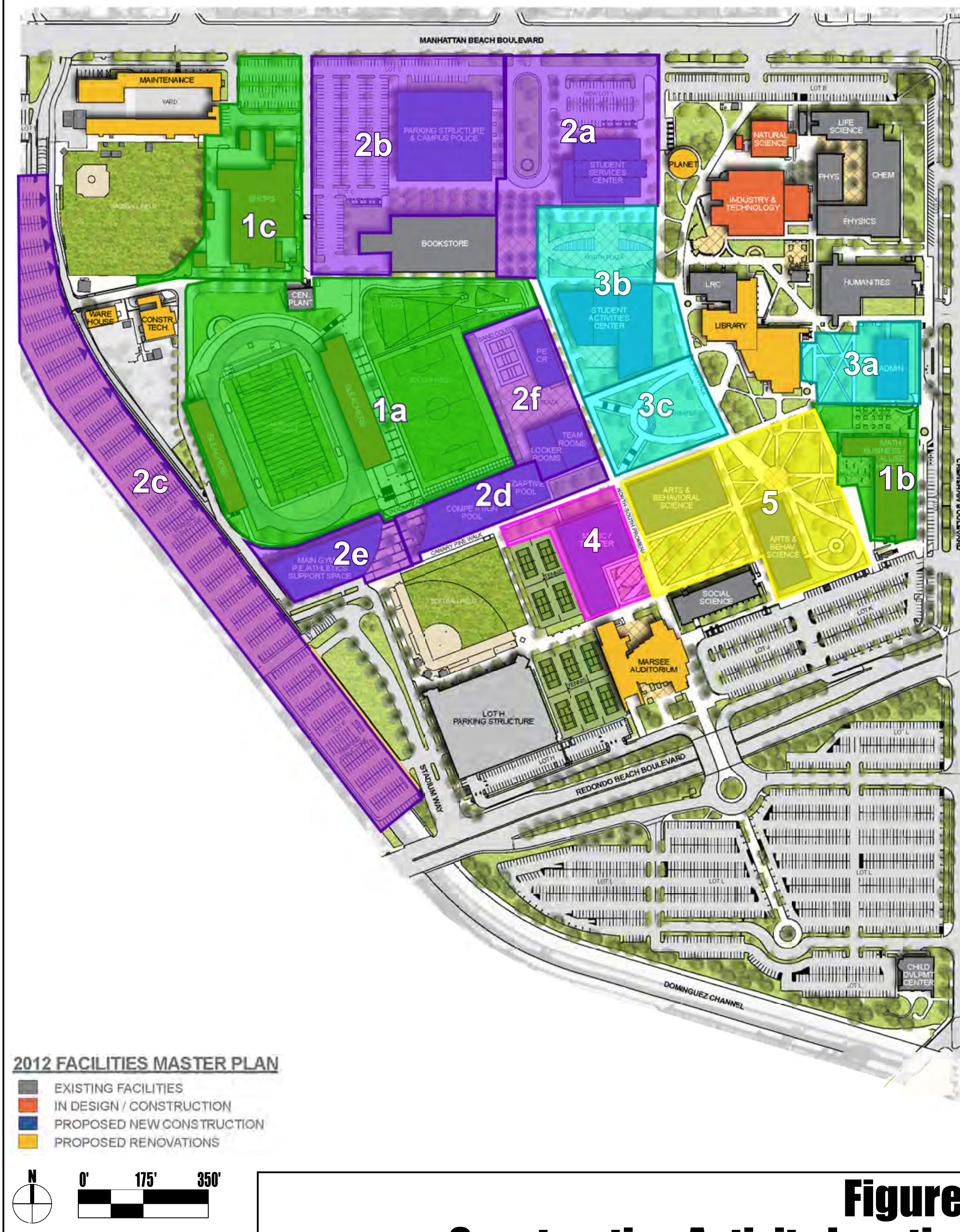


Figure 8
Construction Activity Locations

Mestre Greve Associates

After demolition, the individual project area will be graded. The site is essentially flat and only fine grading will be required to prepare each site for construction. Grading is not expected to last for more than one week for each construction phase. Site preparation is expected to take approximately one month per construction project. Building construction is anticipated to take approximately one year for each construction phase. The project includes 15 separate building construction projects that include the construction of 695,356 square feet of new buildings. The only asphalt paving for the project will occur during construction Phases 2a and 2b with a total area of 5 acres of asphalt paving.

Construction related GHG emissions were estimated using two CalEEMod models. The first modeled the emissions related to Demolition Phase 1a, the demolition of the Stadium, Field House and Community Advancement because this phase involves considerable amounts of material export. In addition, more specific information was available regarding the activities required for this demolition phase and the schedule is more certain because will be undertaken in the near term. The second model estimated emissions related to all other construction, demolition and renovation phases.

The "all other phases" model was primarily based on CalEEMod defaults for a project involving the construction of the new buildings proposed by the project, 695,356 square feet of Junior College and 5 acres of parking lot and the demolition of 645,672 square feet of building as proposed by the project. These inputs were used to determine the defaults for the off-road equipment usage and vehicular trips. The duration of active demolition, construction, and renovation were calculated based on the durations presented in Table 4. The duration of active site preparation, grading and architectural coating was estimated assuming that site preparation for each construction project will take 25 work days, grading for each construction project will take 10 work days, and architectural coating will take 30 days for each construction project. There are 15 separate construction projects proposed by the 2012 FMP. The total duration of the demolition, construction (including site preparation, grading and architectural coatings), and renovation activities were calculated based on the starting date of the first phase and the completion date of the last phase.

Using the information above, the modeling estimates that there will be approximately 4.75 years with active demolition over a 7.5-year period. There will be approximately 16.25 years of active building construction over a 10.5-year period. There are more years of activity than the total duration because of overlapping projects. It is estimated that there will be approximately 4 years of renovation activity over a 6-year period. There will be 75 days of grading, 375 days of site preparation and 450 days of architectural coating over the 10.5 year construction period.

Because of the uncertainty in the construction schedule construction emission for the "other phases" model, it assumed that the demolition, construction (including site preparation, grading and architectural coating) and renovation work was evenly distributed over the total duration of each of these activities based on the first project starting date and the last project ending date. This was done by using these dates as the start and end of each of these activities and then scaling the construction equipment usage by the ratio of the active work duration to the total duration. The number of daily worker and vendor trips were similarly scaled.

The project only involves approximately 5 acres of asphalt paving as a part of construction phases 2a and 2b. Emissions from the asphalt paving were modeled assuming it would take 21 days in June of 2014.

The stadium demolition is unique from the other demolition projects because the sides and one end of the stadium are earthen berms that will be removed during the demolition. This will result in approximately 128,500 cubic yards of material being removed from the site. This will result in approximately 17,300 haul truck trips to remove the soil and is anticipated to take approximately 200 workdays. In addition, this phase includes the demolition of the 6,377 square foot field house and the import of 4,500 cubic yards of material that will result in approximately 29 and 600 haul truck trips respectively. Construction equipment utilization was based on CalEEMod defaults. Worksheets showing the CalEEMod input parameters used to model the construction emissions are presented in the appendix and the CalEEMod input files are available upon request

3.3.2 Estimate of Construction Greenhouse Gas Emissions

Using the methodologies described above GHG emissions during construction of the project were estimated and are presented in Table 5. For each construction activity the projected annual CO_2, CH_4, and N_2O emissions are presented for each construction activity. The total emissions from all construction activities are presented along with the average emissions amortized over a 30-year span. The SCAQMD GHG guidance recommends that construction emissions be amortized over a 30-year project lifetime to determine significance.

Table 5
Total Construction GHG Emissions

Year	Emissions (MT) CO_2	CH_4	N_20	CO_2EQ
Phase 1a (Stadium) Demolition				
2012	700.6	0.05	0.00	701.6
2013	474.9	0.03	0.00	475.5
All Other Construction Activities				
2011	868.6	0.08	0.00	870.2
2012	2,051.4	0.17	0.00	2,054.9
2013	2,576.8	0.19	0.00	2,580.8
2014	2,793.9	0.20	0.00	2,798.1
2015	2,745.8	0.18	0.00	2,749.6
2016	2,732.9	0.17	0.00	2,736.4
2017	2,704.5	0.16	0.00	2,707.7
2018	2,697.4	0.14	0.00	2,700.4
2019	2,230.3	0.11	0.00	2,232.6
2020	2,230.1	0.10	0.00	2,232.3
2021	2,056.7	0.09	0.00	2,058.5
2022	158.6	0.01	0.00	158.7
Total Emissions	**27,022**	**1.68**	**0.00**	**27,057**
Project Life Average Annual Emissions*	**900.7**	**0.06**	**0.00**	**901.9**

*Based on 30 Yyear Project Life Per SCAQMD Significance Thresholds

3.4 Operational Emissions

The impact of the proposed project is measured against the net increase in emissions that will result from the implementation of the project. Using the methodologies described in Section 3.2 the greenhouse GHG emissions associated the operation of El Camino College with and without the proposed project. Table 6 presents the emissions estimate without the proposed project and Table 7 presents the emissions estimate with the proposed project.

Table 6
Annual ECC GHG Emissions in 2020 Without Project

	Annual Emissions (MT/year)			
Activity	**CO_2**	**CH_4**	**N_2O**	**CO_2EQ**
Vehicular Emissions	27,884.1	1.0	0.0	27,905.9
Natural Gas Combustion	1,070.6	0.0	0.0	1,077.1
Electricity	5,169.4	0.2	0.1	5,201.8
Landscaping	0.0	0.0	0.0	0.0
Consumer Products	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.0	0.0	0.0
Municipal Waste	607.6	35.9	0.0	1,361.6
Water	310.9	1.1	0.0	343.6
Total Annual Emissions	**35,042.5**	**38.3**	**0.1**	**35,889.8**
Service Population:				**1,320**
Emissions Per Service Population (MT CO_2EQ/yr/person)):				**27.2**

Table 7
Annual ECC GHG Emissions in 2020 With Project

	Annual Emissions (MT/year)			
Activity	**CO_2**	**CH_4**	**N_2O**	**CO_2EQ**
Vehicular Emissions	34,047.5	1.3	0.0	34,074.1
Natural Gas Combustion	1,112.6	0.0	0.0	1,119.4
Electricity	5,372.4	0.2	0.1	5,406.1
Landscaping	0.0	0.0	0.0	0.0
Consumer Products	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.0	0.0	0.0
Municipal Waste	741.8	43.8	0.0	1,662.5
Water	379.6	1.3	0.0	419.5
Total Emissions	**41,654.0**	**46.7**	**0.2**	**42,681.6**
Annualized Construction Emissions	900.7	0.1	0.0	901.9
Total Annual Emissions	**42,554.7**	**46.7**	**0.2**	**43,583.5**
Service Population:				**1,465**
Emissions Per Service Population (MT CO_2EQ/yr/person)):				**29.8**

Table 8 presents the projected increase in GHG emissions due to the project which is the difference between the with project emissions presented in Table 7 and the no project emissions presented in Table 6. The project's impact is measured against the increase in emissions due to the project. The total emissions are compared to the 3,000 MT/yr screening threshold and the 4.6 MT/yr/service population performance standard.

Table 8
Annual GHG Emissions Increase Due to Project

	Annual Emissions (MT/year)			
Activity	**CO_2**	**CH_4**	**N_2O**	**CO_2EQ**
Vehicular Emissions	6,163.4	0.2	0.0	6,168.2
Natural Gas Combustion	42.1	0.0	0.0	42.3
Electricity	203.1	0.0	0.0	204.3
Landscaping	0.0	0.0	0.0	0.0
Consumer Products	0.0	0.0	0.0	0.0
Architectural Coatings	0.0	0.0	0.0	0.0
Municipal Waste	134.3	7.9	0.0	301.0
Water	68.7	0.2	0.0	76.0
Total Emissions	**6,611.5**	**8.4**	**0.0**	**6,791.7**
Annualized Construction Emissions	900.7	0.1	0.0	901.9
Total Annual Emissions Increase Due to Project	**7,512.3**	**8.5**	**0.0**	**7,693.7**
			Screening Threshold:	**3,000**
			Exceed Threshold?	**Yes**
			Service Population:	**145**
			Emissions Per Service Population (MT CO_2EQ/yr/person)):	**53.1**
			Performance Standard Per Service Population:	**4.6**
			Exceed Performance Standard?	**Yes**

Table 8 shows that the GHG emissions associated with the project will be in excess of the 3,000 MT CO_2EQ/year screening threshold and that the emissions per service population will exceed the 4.6 MT CO_2EQ/person/year. Therefore, without mitigation, the project will result in a significant GHG Impact. Mitigation is discussed in Section 4.0.

4.0 Mitigation Measures

As presented above, without mitigation the project will result in a significant GHG impact. CEQA requires projects to mitigate any significant impacts to less than significant and if that cannot be accomplished the project is required to incorporate all feasible mitigation measures.

The analysis presented above shows that the projected emissions increase due to the project is 2.6 times greater than the 3,000 MT/CO_2EQ/year screening threshold and 11.4 times greater than the performance standard. Therefore, mitigation would need to reduce the overall emissions increase by 4,694 MT CO_2EQ/year (61%) to be less than the screening threshold and by 7,027 MT CO_2EQ/year (91%) to be less than the performance standard. Vehicular emission represent 80% of the overall emissions increase due to the project. These emissions are due to students and employees driving to and from campus. The campus is already required to implement a trip reduction plan per existing SCAQMD regulations and only provides accommodations to enable students and employees to reduce vehicular trips. The college has no direct control of how the students and staff travel to and from the school. GHG emissions increase due to the project from all other sources 1,525 MT CO_2EQ/yr, is less than the reduction in emissions needed to be less than the significance thresholds. Therefore, there is no feasible way for the project to mitigate the GHG emissions to a less than significant level. Therefore all feasible mitigation measures should be applied to the project. A list of potential mitigation measures is presented below. All of these measures should be reviewed to determine if they are feasible to implement and all feasible measures should be implemented.

Emissions associated with electrical usage and natural gas consumption are directly related to the energy efficiency of the buildings constructed under the project. The CalEEMod model uses electricity and natural gas use based on the 2008 Building Code. In 2010 the state adopted the CalGreen building code, which was developed so that new buildings constructed in the state are as energy efficient as reasonably feasible. Typically, a building constructed under the new code is approximately 25% more energy efficient than the previous code. Therefore, the actual emissions from natural gas combustion and electrical consumption of the newly constructed buildings will be approximately 30% less than presented above. The required compliance with the 2010 CalGreen Building Code will result in the greatest feasible energy efficiency and the minimum feasible emissions from these sources. The CalGreen Building Code will also reduce water usage and the associated GHG emission to the greatest extent feasible.

The 2012 FMP indicates that solar panels may be mounted on the top level of Parking Lot F. Solar panels provide a direct reduction in the outside electricity supplied to the school and a direct reduction in GHG emissions associated with the generation of the electricity. In addition, federal and state programs may be available to reduce the cost of the solar panels to make them fiscally feasible when the reduced cost of electricity is also included in the determination.

> **Mitigation Measure GHG-1:** During the design of each construction and renovation project the incorporation of solar panels into the design shall be investigated and determined if it is financially feasible. Solar panels shall be incorporated into the construction and renovation projects to the greatest extent feasible.

Site planning, which is not covered by the CalGreen Building code can reduce energy requirements and potential urban heat island effects. The orientation of the buildings relative to the path of the sun can be used to reduce energy requirements and substantial tree canopies can be used to minimize urban heat island effects.

Mitigation Measure GHG-2: During the design of each construction and renovation project the solar orientation and design of the building will be reviewed to minimize energy requirements to the greatest extent possible.

Mitigation Measure GHG-3: The project shall include as many trees and green-scaped areas as feasible.

The primary method for reducing emissions associated with Municipal Waste is through recycling to divert materials from landfills, which are significant sources of the GHG methane (CH_4). The campus provides receptacles for recycled materials around the campus and generally promotes recycling. To maximize the amount of recycling, the campus should prepare a recycling plan to promote, encourage, and enable recycling to the greatest extent feasible.

Mitigation Measure GHG-4: By the end of 2014 El Camino College will produce and implement a plan to promote, encourage, and enable recycling to the greatest extent feasible. This plan shall be based on best management practices as well as input from staff and students on potential to identify strategies and measures to decrease the amount of municipal waste produced by the facility and increase recycling to the greatest extent possible.

Construction emissions represent approximately 11% of the total annual emissions increase due to the project. There are several measures available to reduce GHG emissions associated with construction that should be implemented to the greatest extent possible.

Mitigation Measure GHG-5: Minimize emissions associated with increases in off-site construction activities by limiting lane closures to off-peak travel periods, park construction vehicles off traveled roadways, and encouraging receipt of materials during non-peak traffic hours.

Mitigation Measure GHG-5: Minimize emissions associated with construction worker vehicle trips by encourage carpooling for construction workers and provide alternative transportation mode options or incentives for workers to and from worksite on days that construction requires 200 or more workers.

Mitigation Measure GHG-6: Recycle and/or salvage at least 75% of non-hazardous construction and demolition debris by weight (residential) or by weight in volume (commercial).

Mitigation Measure GHG-7: Use recycled materials for at least 20% of construction materials based on cost for building materials, based on volume for roadway, parking lot, sidewalk and curb material. Recycled materials may include salvaged, reused, and recycled content materials.

5.0 PROJECT SIGNIFICANCE AFTER MITIGATION

The analysis presented above shows that the GHG emissions reductions required for the project to not result in a significant impact are less than the increase in vehicular emissions due to the project and that the college has no feasible method to control vehicular emissions from students and staff. Even if emissions from all other sources were eliminated, the project would still result in a significant impact. Therefore, the project's GHG impact will remain significant even after all feasible mitigation measures are implemented. The project's GHG impact will remain significant with mitigation.

6.0 REFERENCES

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APPENDIX

CalEEMod Input Data Worksheets

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	GHG Construciton.xls
Project:	El Camino College GHG Construciton
Year:	2022
Size:	56.0 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	Parking
Land Use:	Junior College (2Yr)	Parking Lot
Units:	695.67 1000sqft	5 Acre
Lot Size:	51.0 Acres	5.0 Acres
Bulding Size	695,672 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File GHG Construciton.xls

Project: El Camino College GHG Construciton

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Site Preparation	Site Preparation	8/1/11	1/31/22	5	2,741	
2	Grading	Grading	8/1/11	1/31/22	5	2,741	
3	Building Construciton	Building Construction	8/1/11	1/31/22	5	2,741	
4	Painting	Architectural Coating	8/1/11	1/31/22	5	2,741	
5	Rennovation	Building Construction	1/1/13	12/31/18	5	1,565	
6	Peak Demolition	Demolition	11/1/13	4/30/21	5	1,956	
7	General Demolition	Site Preparation	11/1/13	4/30/21	5	1,956	
8	Paving	Paving	6/1/14	6/30/14	5	21	

Demolition

No.	Phase	Amount	
6	Peak Demolition	645,672	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Site Preparation	18	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Grading	20	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Building Construciton	292	176	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Painting	58	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
5	Rennovation	292	1	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
6	Peak Demolition	15	0	2,937	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
7	General Demolition	5	0	180	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
8	Paving	15	0	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File GHG Construciton.xls

Project: El Camino College GHG Construciton

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Site Preparation	Rubber Tired Dozers	3	1.1	358	0.59
		Tractors/Loaders/Backhoes	4	1.1	75	0.55
2	Grading	Excavators	2	0.2	157	0.57
		Graders	1	0.2	162	0.61
		Rubber Tired Dozers	1	0.2	358	0.59
		Scrapers	2	0.2	356	0.72
		Tractors/Loaders/Backhoes	2	0.2	75	0.55
3	Building Construciton	Cranes	1	10.8	208	0.43
		Forklifts	3	12.4	149	0.3
		Generator Sets	1	12.4	84	0.74
		Tractors/Loaders/Backhoes	3	10.8	75	0.55
		Welders	1	12.4	46	0.45
4	Painting	Air Compressors	1	1.0	78	0.48
5	Rennovation	Forklifts	2	5.3	149	0.3
6	Peak Demolition	Concrete/Industrial Saws	1	1.1	81	0.73
		Excavators	3	1.1	157	0.57
		Rubber Tired Dozers	2	1.1	358	0.59
7	General Demolition	Concrete/Industrial Saws	1	5.1	81	0.73
		Tractors/Loaders/Backhoes	1	5.1	75	0.55
8	Paving	Pavers	2	8.0	89	0.62
		Paving Equipment	2	8.0	82	0.53
		Rollers	2	8.0	84	0.56

CalEEMod Input Summary - Construction Emissions

File GHG Construciton.xls

Project: El Camino College GHG Construciton

Off Road Equipment Mitigation

Equipment	Fuel	Numer of Units Used	Numer of Units Mitigated	Tier	DPF	Oxidation Catalyst (% Reduction)
Air Compressors	Diesel	1				
Concrete/Industrial Saws	Diesel	2				
Cranes	Diesel	1				
Excavators	Diesel	5				
Forklifts	Diesel	5				
Generator Sets	Diesel	1				
Graders	Diesel	1				
Pavers	Diesel	2				
Paving Equipment	Diesel	2				
Rollers	Diesel	2				
Rubber Tired Dozers	Diesel	6				
Scrapers	Diesel	2				
Tractors/Loaders/Backhoes	Diesel	10				
Welders	Diesel	1				

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
1	Site Preparation	0	0		0.00	7.1	7.9%	12.0%	6.9
2	Grading	0	0		171.31	7.1	7.9%	12.0%	6.9

CalEEMod Input Summary - Construction Emissions

File GHG Construciton.xls

Project: El Camino College GHG Construciton

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Vendor	Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Site Preparation	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Building Construciton	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Painting	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
5	Rennovation	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
6	Peak Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
7	General Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
8	Paving	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

Construciton Fugitive Dust Mitigation

Phase	% Reduction PM_{10}	$PM_{2.5}$
Unpaved Rd Soil Stabilize		
Replace Ground Cover		
Water Exposed Area		
Unpaved Road Mitigation		
Moisture Content		
Vehicle Speed		
Clean Paved Road		

Architectural Coating

No.	Phase	Emission Factor (g/L) Res Int	Res Ext.	Com Int.	Com. Ext	Painted Area (Sq. Ft.) Res Int	Res Ext.	Com Int.	Com. Ext	VOC Content Regulation Start	End
4	Painting	50	100.0	250.0	250.0	0	0	1,043,508	347,836	7/1/08	12/31/00

CalEEMod Input Summary - Land Use

Project Characteristics

File Name:	1a Demo & Construct.xls
Project:	El Camino College Demo & Construciton 1a
Year:	2011
Size:	12.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational	0
Land Use:	Junior College (2Yr)	0
Units:	6.3 1000sqft	
Lot Size:	12.4 Acres	0.0 Acres
Bulding Size	6,300 sq. ft.	0 sq. ft.
Population:	0	0

CalEEMod Input Summary - Construction Emissions

File 1a Demo & Construct.xls

Project: El Camino College Demo & Construciton 1a

Construciton Phases

No.	Name	Type	Start	End	Days/Wk	Days	Description
1	Demolition	Demolition	6/18/12	7/13/12	5	20	Demolish Field House
2	Demo Stadium	Grading	7/16/12	4/19/13	5	200	Demolish/Remove Stadium
3	Grading	Site Preparation	4/22/13	5/3/13	5	10	Import Fill Material
4	Construct	Building Construction	6/4/13	6/3/14	5	261	Construct Bleachers and Field

Demolition

No.	Phase	Amount	
1	Demolition	6,377	Building Square Footage

Construciton Trips and Trip Length

		Daily Trips		Hauling	Trip Length			Vehicle Class		
No.	Phase	Worker	Vendor	Trips	Worker	Vendor	Hauling	Worker	Vendor	Hauling
1	Demolition	8	0	29	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
2	Demo Stadium	13	0	17,300	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
3	Grading	8	0	600	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT
4	Construct	3	2	0	12.7	7.4	20.0	LD_Mix	HDT_Mix	HHDT

CalEEMod Input Summary - Construction Emissions

File 1a Demo & Construct.xls

Project: El Camino College Demo & Construciton 1a

Off Road Equipment

No.	Phase	Equipment	No.	Hrs/day	HP	Load Factor
1	Demolition	Concrete/Industrial Saws	1	8.0	81	0.73
		Excavators	1	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
2	Demo Stadium	Excavators	2	8.0	157	0.57
		Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	2	8.0	75	0.55
3	Grading	Graders	1	8.0	162	0.61
		Rubber Tired Dozers	1	8.0	358	0.59
		Tractors/Loaders/Backhoes	1	8.0	75	0.55
4	Construct	Forklifts	3	8.0	149	0.3
		Generator Sets	1	8.0	84	0.74
		Tractors/Loaders/Backhoes	3	7.0	75	0.55
		Welders	1	8.0	46	0.45

CalEEMod Input Summary - Construction Emissions

File 1a Demo & Construct.xls

Project: El Camino College Demo & Construciton 1a

Off Road Equipment Mitigation

Equipment	Fuel	Numer of Units Used	Numer of Units Mitigated	Tier	DPF	Oxidation Catalyst (% Reduction)
Concrete/Industrial Saws	Diesel	1				
Excavators	Diesel	3	3	Tier 3		
Forklifts	Diesel	3	3	Tier 3		
Generator Sets	Diesel	1				
Graders	Diesel	1	1	Tier 3		
Rubber Tired Dozers	Diesel	3	3	Tier 3		
Tractors/Loaders/Backhoes	Diesel	6		Tier 3		
Welders	Diesel	1				

Grading

No.	Phase	Import	Export	Units	Acres	Veh. Speed.	Moisture Content Bulldozing	Moisture Content Loading	Silt Content
2	Demo Stadium	0	128,500	Cubic Yard:	5.00	7.1	7.9%	12.0%	6.9
3	Grading	4,500	0	Cubic Yard:	5.00	7.1	7.9%	12.0%	6.9

Construciton On-Road Dust

No.	Phase	Percent Paved Road Trips Worker	Percent Paved Road Trips Vendor	Percent Paved Road Trips Hauling	Silt Loading	Silt Content	Moisture Content	Avg. Veh Wgt. (ton)	Speed (mph)
1	Demolition	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
2	Demo Stadium	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
3	Grading	100%	100%	100%	0.1	8.5%	0.5%	2.4	40
4	Construct	100%	100%	100%	0.1	8.5%	0.5%	2.4	40

CalEEMod Input Summary - Construction Emissions

File 1a Demo & Construct.xls

Project: El Camino College Demo & Construciton 1a

Construciton Fugitive Dust Mitigation

		% Reduction		
	Phase	**PM_{10}**	**$PM_{2.5}$**	
	Unpaved Rd Soil Stabilize			
	Replace Ground Cover			
✓	Water Exposed Area	61%	61%	3 Times per Day
Unpaved Road Mitigation				
	Moisture Content			
	Vehicle Speed			
	Clean Paved Road			

Architectural Coating

		Emission Factor (g/L)				Painted Area (Sq. Ft.)				VOC Content Regulation	
No.	**Phase**	**Res Int**	**Res Ext.**	**Com Int.**	**Com. Ext**	**Res Int**	**Res Ext.**	**Com Int.**	**Com. Ext**	**Start**	**End**

CalEEMod Input Summary - Land Use & Vehicular Trips

Project Characteristics

File Name:	Existing 2012.xls
Project:	El Camino College Operational Emissions-No Proj 2012
Year:	2012
Size:	117.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational
Land Use:	Junior College (2Yr)
Units:	16400 Student
Lot Size:	117.4 Acres
Bulding Size	1,264,916 sq. ft.
Population:	0

Vehicle Miles Traveled

Daily	**VMT**	**Total**
Home-Work:	0	0
Home-Shop	0	0
Home-Other	0	0
Comm-Cust:	167,213	167,213
Comm-Work:	8,083	8,083
Comm-NonWork:	5,251	5,251
Total:	**180,547**	**180,547**
Annual	**65,899,490**	65,899,490
CalEEMod Out	65,718,944	65,718,944
Δ	180,547	180,547
%Δ	0.27%	0.27%

CalEEMod Input Summary - Land Use & Vehicular Trips

File Name: Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Trip Generation

Trip Rate		
Weekday:	1.2 / Student	
Saturday:	0.42 / Student	
Sunday:	0.04 / Student	
Daily Trips:		**Total**
Weekday:	19,680	19,680
Saturday:	6,888	6,888
Sunday:	656	656
Average:	15,135	15,135

Trip Type

Trip Purpose	
Primary:	92%
Diverted:	7%
Pass By:	1%
Origin-Destination	
Home-Work:	0%
Home-School:	0%
Home-Office:	0%
Comm-Cust:	89%
Comm-Work:	6%
Comm-NonWork:	5%

Trip Length

Trip Length Basis	
Home-Work:	0.00
Home-School:	0.00
Home-Office	0.00
Comm-Cust	13.30
Comm-Work	8.90
Comm-NonWork	7.40
Modeled Trip Length	
Home-Work:	0.00
Home-School:	0.00
Home-Office:	0.00
Comm-Cust:	12.47
Comm-Work:	8.34
Comm-NonWork:	6.94

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2012.xls
Project: El Camino College Operational Emissions-No Proj 2012

Electicity and Natural Gas

	Junior College (2Yr)	0
Electrical Use (kWhr/size/year)		
Title 24:	6	0
Non-Title 24:	3	0
Lighting:	5	0
Total:	**14**	**0**
Natural Gas (kBTU/size/year)		
Title 24:	11	0
Non-Title 24:	5	0
Total:	**16**	**0**

Water & Wastewater

	Junior College (2Yr)	0
Water Use (gal/yr)		
Indoor:	35,114,040	0
Outdoor:	54,921,960	0
Total:	**90,036,000**	**0**
Electricity Intensity (kWhr/Mgal)		
Supply:	9,727	0
Supply Treat:	111	0
Distribute:	1,272	0
Waste Treat:	1,911	0
Total:	**11,638**	**0**
Waste Disposal		
Septic Tank:	10.0%	0.0%
Aerobic:	84.7%	0.0%
Anerobic		
Lagoon:	*2.1%*	*0.0%*
w/ Combust:	*3.2%*	*0.0%*
w/ Cogen:	*0.0%*	*0.0%*

Architectural Coatings

	Interior	Exterior
Residential		
Size:	0 sq. ft.	0 sq. ft.
Rate:	50 g/L	100 g/L
Commercial		
Square Feet:	1,897,380 sq. ft.	632,460 sq. ft.
Emission Factor:	250 g/L	250 g/L
	Reapplication Rate	**10.0%**

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Fireplace

	Junior College (2Yr)	0
Number of Units With:		
Wood:	0	0
Gas:	0	0
Propane:	0	0
None:	0	0
Use		
Hrs/day:	0.00	0.00
Days/Year:	0	0
Wood Mass:	0	0

Wood Stoves

	Junior College (2Yr)	0
Number of Units With:		
Conventional:	0	0
Catalytic:	0	0
Non-Catalytic:	0	0
Pellet:	0	0
Use		
Days/Year:	0.00	0.00
Wood Mass:	0	0

Consumer Products

Emission Factor:	1.98E-05 g VOC/sqr ft

Landscape Equipment

Snow Days	Summer Days
0	365

CalEEMod Input Summary - Operational Mitigation

File Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Land Use Mitigation

Project Setting		
	0	
Land Use		
--	**Increased Density**	
	--	DU Per Acre
	--	Jobs/Acre
--	**Increase Diversity**	
--	**Improve Walkability**	
	--	Intersections/Square Mile
--	**Improve Destination Accessibility**	
	--	Dist. To Downtown Job Center (mi)
--	**Increase Transit Accessibility**	
	--	Dist. To Transit Station (mi)
--	**Integrate Below Market Rate Housing**	
	--	# of Units Below Market Rate
Neighborhood Enhancements		
--	**Improve Pedestrian Network**	
	--	
--	**Provide Traffic Calming Measures**	
	--	% of Streets With Improvement
	--	% Intersections With Improvement
--	**Implement NEV Network**	
Parking Policy/Pricing		
	Limit Parking Supply	
	--	% Reduction in Spaces
--	**Unbundle Parking Costs**	
	--	Monthly Parking Cost ($)
--	**On-Street Market Pricing**	
	--	% Increase in Price
Transit Improvement		
--	**Provide BRT System**	
	--	% Lines BRT
--	**Expand Transit Network**	
	--	% Increase in Transit Coverage
--	**Increase Transit Frequency**	
	--	Implementation Level
	--	% Reduction in Headway

Energy Mitigation

Building Energy		
--	**Exceed Title 24**	
	--	% Improvement
--	**Install Energy Efficient Lighting**	
	--	% Improvement
Alternative Energy		
--	**Onsite Renewable Energy**	
	--	Total kWH
	--	kWH Generated
	--	% of Use Generated
	--	% of Use

Appliance Mitigation

30%	Clothes Washer
15%	Dish Washer
50%	Fan
15%	Refrigerator

CalEEMod Input Summary - Operational Mitigation

File Existing 2012.xls

Project: El Camino College Operational Emissions-No Proj 2012

Commute Mitigation

Commute Trips		
--	**Implement Trip Reduction Program**	
	--	% Employees Eligible
	--	Type
--	**Implement Transit Subsidy**	
	--	% Employees Eligible
	--	Daily Subsidy Amount($)
--	**Implement Employee Parking "Cash Out"**	
	--	% Employees Eligible
--	**Workplace Parking Charge**	
	--	% Employees Eligible
	--	Daily Parking Charge ($)
--	**Encourage Telecommute & Alt Schedules**	
	--	% Employees Work 9/80
	--	% Employees Work 4/40
	--	% Employees Telecommute 1.5 days
--	**Market Commute Trip Reduction Program**	
	--	% Employees Eligible
--	**Employee Vanpool/Shuttle**	
	--	% Employees Eligible
	--	% Vanpool Mode Share
--	**Provide Ride Sharing Program**	
	--	% Employees Eligible
School Trips		
--	**Implement School Bus Program**	
	--	% Families Using

Water Mitigation

Water Conservation Strategy		
--	**Apply Water Conservation Strategy**	
	--	% Reduction Indoor
	--	% Reduction Outdoor
Water Supply		
--	**Use Reclaimed Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
--	**Use Grey Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
Indoor Water Use		
--	**Install Low Flow Bathroom Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Kitchen Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Toilet Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Shower**	
	--	% Reduction in Flow
Outdoor Water Use		
--	**Turf Reduction**	
	--	Turf Reduction Area (acres)
	--	% Reduction in Turf
--	**Use Water Efficient Irrigation Systems**	
	--	% Reduction
--	**Water Efficient Landscape**	
	--	MAWA (gal/yr)
	--	ETWU (gal/yr)

Municipal Waste Mitigation

--	**Institute Recycling and Composting Services**	
	--	% Reduction in Waste Disposed

CalEEMod Input Summary - Land Use & Vehicular Trips

Project Characteristics

File Name:	Existing 2020.xls
Project:	El Camino College Operational Emissions-No Proj 2020
Year:	2020
Size:	117.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational
Land Use:	Junior College (2Yr)
Units:	16,400 Student
Lot Size:	117.4 Acres
Bulding Size	1,264,916 sq. ft.
Population:	0

Vehicle Miles Traveled

Daily	**VMT**	**Total**
Home-Work:	0	0
Home-Shop	0	0
Home-Other	0	0
Comm-Cust:	167,213	167,213
Comm-Work:	8,083	8,083
Comm-NonWork:	5,251	5,251
Total:	**180,547**	**180,547**

Annual	**65,899,490**	65,899,490
CalEEMod Out	65,718,944	65,718,944
Δ	180,547	180,547
%Δ	0.27%	0.27%

CalEEMod Input Summary - Land Use & Vehicular Trips

File Name: Existing 2020.xls

Project: El Camino College Operational Emissions-No Proj 2020

Trip Generation

Trip Rate		
Weekday:	1.2 / Student	
Saturday:	0.42 / Student	
Sunday:	0.04 / Student	
Daily Trips:		**Total**
Weekday:	19,680	19,680
Saturday:	6,888	6,888
Sunday:	656	656
Average:	15,135	15,135

Trip Type

Trip Purpose	
Primary:	92%
Diverted:	7%
Pass By:	1%
Origin-Destination	
Home-Work:	0%
Home-School:	0%
Home-Office:	0%
Comm-Cust:	89%
Comm-Work:	6%
Comm-NonWork:	5%

Trip Length

Trip Length Basis	
Home-Work:	0.00
Home-School:	0.00
Home-Office	0.00
Comm-Cust	13.30
Comm-Work	8.90
Comm-NonWork	7.40
Modeled Trip Length	
Home-Work:	0.00
Home-School:	0.00
Home-Office:	0.00
Comm-Cust:	12.47
Comm-Work:	8.34
Comm-NonWork:	6.94

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2020.xls
Project: El Camino College Operational Emissions-No Proj 2020

Electicity and Natural Gas

	Junior College (2Yr)	0
Electrical Use (kWhr/size/year)		
Title 24:	6	0
Non-Title 24:	3	0
Lighting:	5	0
Total:	**14**	**0**
Natural Gas (kBTU/size/year)		
Title 24:	11	0
Non-Title 24:	5	0
Total:	**16**	**0**

Water & Wastewater

	Junior College (2Yr)	0
Water Use (gal/yr)		
Indoor:	35,114,040	0
Outdoor:	54,921,960	0
Total:	**90,036,000**	**0**
Electricity Intensity (kWhr/Mgal)		
Supply:	9,727	0
Supply Treat:	111	0
Distribute:	1,272	0
Waste Treat:	1,911	0
Total:	**11,638**	**0**
Waste Disposal		
Septic Tank:	10.0%	0.0%
Aerobic:	84.7%	0.0%
Anerobic		
Lagoon:	*2.1%*	*0.0%*
w/ Combust:	*3.2%*	*0.0%*
w/ Cogen:	*0.0%*	*0.0%*

Architectural Coatings

	Interior	Exterior
Residential		
Size:	0 sq. ft.	0 sq. ft.
Rate:	50 g/L	100 g/L
Commercial		
Square Feet:	1,897,380 sq. ft.	632,460 sq. ft.
Emission Factor:	250 g/L	250 g/L
	Reapplication Rate	**10.0%**

CalEEMod Input Summary - Operational Emissions

File Name: Existing 2020.xls
Project: El Camino College Operational Emissions-No Proj 2020

Fireplace

	Junior College (2Yr)	0
Number of Units With:		
Wood:	0	0
Gas:	0	0
Propane:	0	0
None:	0	0
Use		
Hrs/day:	0.00	0.00
Days/Year:	0	0
Wood Mass:	0	0

Wood Stoves

	Junior College (2Yr)	0
Number of Units With:		
Conventional:	0	0
Catalytic:	0	0
Non-Catalytic:	0	0
Pellet:	0	0
Use		
Days/Year:	0.00	0.00
Wood Mass:	0	0

Consumer Products

Emission Factor:	1.98E-05 g VOC/sqr ft

Landscape Equipment

	Snow Days	Summer Days
	0	365

CalEEMod Input Summary - Operational Mitigation

File	Existing 2020.xls
Project:	El Camino College Operational Emissions-No Proj 2020

Land Use Mitigation

Project Setting		
	0	
Land Use		
--	**Increased Density**	
	--	DU Per Acre
	--	Jobs/Acre
--	**Increase Diversity**	
--	**Improve Walkability**	
	--	Intersections/Square Mile
--	**Improve Destination Accessibility**	
	--	Dist. To Downtown Job Center (mi)
--	**Increase Transit Accessibility**	
	--	Dist. To Transit Station (mi)
--	**Integrate Below Market Rate Housing**	
	--	# of Units Below Market Rate
Neighborhood Enhancements		
--	**Improve Pedestrian Network**	
	--	
--	**Provide Traffic Calming Measures**	
	--	% of Streets With Improvement
	--	% Intersections With Improvement
--	**Implement NEV Network**	
Parking Policy/Pricing		
	Limit Parking Supply	
	--	% Reduction in Spaces
--	**Unbundle Parking Costs**	
	--	Monthly Parking Cost ($)
--	**On-Street Market Pricing**	
	--	% Increase in Price
Transit Improvement		
--	**Provide BRT System**	
	--	% Lines BRT
--	**Expand Transit Network**	
	--	% Increase in Transit Coverage
--	**Increase Transit Frequency**	
	--	Implementation Level
	--	% Reduction in Headway

Energy Mitigation

Building Energy		
--	**Exceed Title 24**	
	--	% Improvement
--	**Install Energy Efficient Lighting**	
	--	% Improvement
Alternative Energy		
--	**Onsite Renewable Energy**	
	--	Total kWH
	--	kWH Generated
	--	% of Use Generated
	--	% of Use

Appliance Mitigation

30%	Clothes Washer
15%	Dish Washer
50%	Fan
15%	Refrigerator

CalEEMod Input Summary - Operational Mitigation

File Existing 2020.xls
Project: El Camino College Operational Emissions-No Proj 2020

Commute Mitigation

Commute Trips		
--	**Implement Trip Reduction Program**	
	--	% Employees Eligible
	--	Type
--	**Implement Transit Subsidy**	
	--	% Employees Eligible
	--	Daily Subsidy Amount($)
--	**Implement Employee Parking "Cash Out"**	
	--	% Employees Eligible
--	**Workplace Parking Charge**	
	--	% Employees Eligible
	--	Daily Parking Charge ($)
--	**Encourage Telecommute & Alt Schedules**	
	--	% Employees Work 9/80
	--	% Employees Work 4/40
	--	% Employees Telecommute 1.5 days
--	**Market Commute Trip Reduction Program**	
	--	% Employees Eligible
--	**Employee Vanpool/Shuttle**	
	--	% Employees Eligible
	--	% Vanpool Mode Share
--	**Provide Ride Sharing Program**	
	--	% Employees Eligible
School Trips		
--	**Implement School Bus Program**	
	--	% Families Using

Water Mitigation

Water Conservation Strategy		
--	**Apply Water Conservation Strategy**	
	--	% Reduction Indoor
	--	% Reduction Outdoor
Water Supply		
--	**Use Reclaimed Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
--	**Use Grey Water**	
	--	% Indoor Water use
	--	% Outdoor Water Use
Indoor Water Use		
--	**Install Low Flow Bathroom Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Kitchen Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Toilet Faucet**	
	--	% Reduction in Flow
--	**Install Low Flow Shower**	
	--	% Reduction in Flow
Outdoor Water Use		
--	**Turf Reduction**	
	--	Turf Reduction Area (acres)
	--	% Reduction in Turf
--	**Use Water Efficient Irrigation Systems**	
	--	% Reduction
--	**Water Efficient Landscape**	
	--	MAWA (gal/yr)
	--	ETWU (gal/yr)

Municipal Waste Mitigation

--	**Institute Recycling and Composting Services**	
	--	% Reduction in Waste Disposed

CalEEMod Input Summary - Land Use & Vehicular Trips

Project Characteristics

File Name:	With Proj 2020.xls
Project:	El Camino College Operational Emissions-With Proj 2020
Year:	2020
Size:	117.4 Acres
Population:	0
Location:	LASC
Climate Zone:	8
Urbanization:	Urban
Wind Speed:	2.2 m/s
Precipitation:	33 days/year
Utility:	Southern California Edison
CO_2:	641.26 lb/MWhr
CH_4:	0.029 lb/MWhr
N_2O:	0.011 lb/MWhr

Land Use Information

Category:	Educational
Land Use:	Junior College (2Yr)
Units:	20,025 Student
Lot Size:	117.4 Acres
Bulding Size	1,314,600 sq. ft.
Population:	0

Vehicle Miles Traveled

Daily	**VMT**	**Total**
Home-Work:	0	0
Home-Shop	0	0
Home-Other	0	0
Comm-Cust:	204,173	204,173
Comm-Work:	9,870	9,870
Comm-NonWork:	6,411	6,411
Total:	**220,454**	**220,454**

Annual	**80,465,689**	80,465,689
CalEEMod Out	80,245,235	80,245,235
Δ	220,454	220,454
%Δ	0.27%	0.27%

CalEEMod Input Summary - Land Use & Vehicular Trips

File Name: With Proj 2020.xls

Project: El Camino College Operational Emissions-With Proj 2020

Trip Generation

Trip Rate		
Weekday:	1.2 / Student	
Saturday:	0.42 / Student	
Sunday:	0.04 / Student	
Daily Trips:		**Total**
Weekday:	24,030	24,030
Saturday:	8,411	8,411
Sunday:	801	801
Average:	18,480	18,480

Trip Type

Trip Purpose	
Primary:	92%
Diverted:	7%
Pass By:	1%
Origin-Destination	
Home-Work:	0%
Home-School:	0%
Home-Office:	0%
Comm-Cust:	89%
Comm-Work:	6%
Comm-NonWork:	5%

Trip Length

Trip Length Basis	
Home-Work:	0.00
Home-School:	0.00
Home-Office	0.00
Comm-Cust	13.30
Comm-Work	8.90
Comm-NonWork	7.40
Modeled Trip Length	
Home-Work:	0.00
Home-School:	0.00
Home-Office:	0.00
Comm-Cust:	12.47
Comm-Work:	8.34
Comm-NonWork:	6.94

CalEEMod Input Summary - Operational Emissions

File Name: With Proj 2020.xls
Project: El Camino College Operational Emissions-With Proj 202
With Proj 2020.xls

Electicity and Natural Gas

	Junior College (2Yr)	0
Electrical Use (kWhr/size/year)		
Title 24:	6	0
Non-Title 24:	3	0
Lighting:	5	0
Total:	**14**	**0**
Natural Gas (kBTU/size/year)		
Title 24:	11	0
Non-Title 24:	5	0
Total:	**16**	**0**

Water & Wastewater

	Junior College (2Yr)	0
Water Use (gal/yr)		
Indoor:	42,875,528	0
Outdoor:	67,061,723	0
Total:	**109,937,250**	**0**
Electricity Intensity (kWhr/Mgal)		
Supply:	9,727	0
Supply Treat:	111	0
Distribute:	1,272	0
Waste Treat:	1,911	0
Total:	**11,638**	**0**
Waste Disposal		
Septic Tank:	10.0%	0.0%
Aerobic:	84.7%	0.0%
Anerobic		
Lagoon:	*2.1%*	*0.0%*
w/ Combust:	*3.2%*	*0.0%*
w/ Cogen:	*0.0%*	*0.0%*

Architectural Coatings

	Interior	Exterior
Residential		
Size:	0 sq. ft.	0 sq. ft.
Rate:	50 g/L	100 g/L
Commercial		
Square Feet:	1,971,900 sq. ft.	657,300 sq. ft.
Emission Factor:	250 g/L	250 g/L
	Reapplication Rate	**10.0%**

CalEEMod Input Summary - Operational Emissions

File Name: With Proj 2020.xls
Project: El Camino College Operational Emissions-With Proj 202
With Proj 2020.xls

Fireplace

	Junior College (2Yr)	0
Number of Units With:		
Wood:	0	0
Gas:	0	0
Propane:	0	0
None:	0	0
Use		
Hrs/day:	0.00	0.00
Days/Year:	0	0
Wood Mass:	0	0

Wood Stoves

	Junior College (2Yr)	0
Number of Units With:		
Conventional:	0	0
Catalytic:	0	0
Non-Catalytic:	0	0
Pellet:	0	0
Use		
Days/Year:	0.00	0.00
Wood Mass:	0	0

Consumer Products

Emission Factor:	1.98E-05 g VOC/sqr ft

Landscape Equipment

	Snow Days	Summer Days
	0	365

CalEEMod Input Summary - Operational Mitigation

File With Proj 2020.xls

Project: El Camino College Operational Emissions-With Proj 2020

Land Use Mitigation

Project Setting		
	0	
Land Use		
--	**Increased Density**	
	--	DU Per Acre
	--	Jobs/Acre
--	**Increase Diversity**	
--	**Improve Walkability**	
	--	Intersections/Square Mile
--	**Improve Destination Accessibility**	
	--	Dist. To Downtown Job Center (mi)
--	**Increase Transit Accessibility**	
	--	Dist. To Transit Station (mi)
--	**Integrate Below Market Rate Housing**	
	--	# of Units Below Market Rate
Neighborhood Enhancements		
--	**Improve Pedestrian Network**	
	--	
--	**Provide Traffic Calming Measures**	
	--	% of Streets With Improvement
	--	% Intersections With Improvement
--	**Implement NEV Network**	
Parking Policy/Pricing		
	Limit Parking Supply	
	--	% Reduction in Spaces
--	**Unbundle Parking Costs**	
	--	Monthly Parking Cost ($)
--	**On-Street Market Pricing**	
	--	% Increase in Price
Transit Improvement		
--	**Provide BRT System**	
	--	% Lines BRT
--	**Expand Transit Network**	
	--	% Increase in Transit Coverage
--	**Increase Transit Frequency**	
	--	Implementation Level
	--	% Reduction in Headway

Energy Mitigation

Building Energy		
--	**Exceed Title 24**	
	--	% Improvement
--	**Install Energy Efficient Lighting**	
	--	% Improvement
Alternative Energy		
--	**Onsite Renewable Energy**	
	--	Total kWH
	--	kWH Generated
	--	% of Use Generated
	--	% of Use

Appliance Mitigation

30%	Clothes Washer
15%	Dish Washer
50%	Fan
15%	Refrigerator

CalEEMod Input Summary - Operational Mitigation

File With Proj 2020.xls

Project: El Camino College Operational Emissions-With Proj 2020

Commute Mitigation

Commute Trips

- **-- Implement Trip Reduction Program**
  - -- % Employees Eligible
  - -- Type
- **-- Implement Transit Subsidy**
  - -- % Employees Eligible
  - -- Daily Subsidy Amount($)
- **-- Implement Employee Parking "Cash Out"**
  - -- % Employees Eligible
- **-- Workplace Parking Charge**
  - -- % Employees Eligible
  - -- Daily Parking Charge ($)
- **-- Encourage Telecommute & Alt Schedules**
  - -- % Employees Work 9/80
  - -- % Employees Work 4/40
  - -- % Employees Telecommute 1.5 days
- **-- Market Commute Trip Reduction Program**
  - -- % Employees Eligible
- **-- Employee Vanpool/Shuttle**
  - -- % Employees Eligible
  - -- % Vanpool Mode Share
- **-- Provide Ride Sharing Program**
  - -- % Employees Eligible

School Trips

- **-- Implement School Bus Program**
  - -- % Families Using

Water Mitigation

Water Conservation Strategy

- **-- Apply Water Conservation Strategy**
  - -- % Reduction Indoor
  - -- % Reduction Outdoor

Water Supply

- **-- Use Reclaimed Water**
  - -- % Indoor Water use
  - -- % Outdoor Water Use
- **-- Use Grey Water**
  - -- % Indoor Water use
  - -- % Outdoor Water Use

Indoor Water Use

- **-- Install Low Flow Bathroom Faucet**
  - -- % Reduction in Flow
- **-- Install Low Flow Kitchen Faucet**
  - -- % Reduction in Flow
- **-- Install Low Flow Toilet Faucet**
  - -- % Reduction in Flow
- **-- Install Low Flow Shower**
  - -- % Reduction in Flow

Outdoor Water Use

- **-- Turf Reduction**
  - -- Turf Reduction Area (acres)
  - -- % Reduction in Turf
- **-- Use Water Efficient Irrigation Systems**
  - -- % Reduction
- **-- Water Efficient Landscape**
  - -- MAWA (gal/yr)
  - -- ETWU (gal/yr)

Municipal Waste Mitigation

- **-- Institute Recycling and Composting Services**
  - -- % Reduction in Waste Disposed