

Appendix E:

Traffic Study

TRAFFIC ANALYSIS

HEALTH CLUB WITHIN THE SHOPS AT ROSSMOOR
CITY OF SEAL BEACH
COUNTY OF ORANGE, CALIFORNIA

This Traffic Impact Analysis has been prepared under the supervision of
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Signed 



LSA

March 2017

TRAFFIC ANALYSIS

HEALTH CLUB WITHIN THE SHOPS AT ROSSMOOR

CITY OF SEAL BEACH

COUNTY OF ORANGE, CALIFORNIA

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March 2017

TRAFFIC ANALYSIS

HEALTH CLUB WITHIN THE SHOPS AT ROSSMOOR

LSA has prepared this updated traffic/circulation analysis within a study area along Seal Beach Boulevard north of the Interstate 405 (I-405) freeway in the City of Seal Beach in order to identify any potential traffic impacts resulting from the development of the proposed project. This traffic/circulation analysis serves as an update to the *Health Club within the Shops at Rossmoor Traffic Analysis* (LSA, October 2015) and accompanying *Revised Health Club within the Shops at Rossmoor Expanded Queuing Assessment* (LSA, April 2016), referred to collectively as Previous Analyses. This update was performed as the Previous Analyses were based on traffic counts collected in November 2014 and are not considered current. This update is based on traffic counts collected in October 2016. The project description, which includes the construction of a 37,000-square-foot (sf) health club within the existing Shops at Rossmoor, remains the same as previously analyzed.

Through the identification of various community concerns collected during the preparation of the Previous Analyses, the project includes two off-site improvements to access facilities. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Drive to 250 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard.

The study area is consistent with the Previous Analyses, which were developed in coordination with City staff. This study area includes intersections and roadway segments along Seal Beach Boulevard and local access roads adjacent to the proposed project. Per previous direction from the City, LSA also evaluated recent accident and pedestrian data in the study area. The traffic analysis has been prepared consistent with the City Traffic Impact Study Guidelines (March 2010) and the City's General Plan (December 2003).

EXECUTIVE SUMMARY

The purpose of this analysis is to determine short-term and long-term traffic impacts resulting from the development of a 37,000 sf health club within the existing Shops at Rossmoor retail center along the south side of Rossmoor Center Way between West Road and Sprouts Farmers Market.

The traffic analysis reviewed the weekday a.m., p.m., and weekend peak-hour levels of service (LOS) at study intersections and roadway segments for the following scenarios:

1. Existing (2016) conditions with current occupancy of the Shops at Rossmoor retail center.
2. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
3. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.

4. Project Completion Year (2018) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
5. Project Completion Year (2018) conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.
6. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center.
7. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.

Based on the results of this TIA, the proposed project can be implemented without impacting the design or the operation of the surrounding intersections and roadways with the implementation of project off-site improvements. The evaluation of intersection and roadway LOS shows that the addition of project traffic to existing, Project Completion Year (2018), and Future (2035) General Plan Buildout traffic volumes would not significantly impact the study area intersections or roadways according to City performance criteria.

Project access circulation and queuing were also analyzed based on coordination with City staff on the Previous Analyses. Based on the circulation and queuing analysis, the addition of project traffic will contribute to the northbound left-turn queue at the intersection of Seal Beach Boulevard and Rossmoor Center Way, which currently exceeds the provided storage lane. The extension of this northbound left-turn pocket is a project off-site improvement. This improvement is consistent with recommendations made in the Previous Analyses. Additionally, project off-site improvements to access the facilities will include the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. At the community's request, an optional improvement was evaluated for the construction of an additional inbound-only driveway and right-turn deceleration lane on Seal Beach Boulevard south of Rossmoor Center Way. This improvement, however, was determined to be infeasible based on several factors. The proposed Rossmoor Center Way improvement, in conjunction with the extension of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way will improve vehicular access to both the project site and the Shops at Rossmoor.

These project off-site improvements are not required by the City or California Environmental Quality Act (CEQA) guidelines but have been evaluated to investigate concerns raised by the local community.

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- A: EXISTING TRAFFIC COUNTS
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INTRODUCTION

LSA has prepared this updated traffic/circulation analysis within a study area along Seal Beach Boulevard north of I-405 in the City of Seal Beach in order to identify any potential traffic impacts resulting from the development of the proposed project. This traffic/circulation analysis serves as an update to the Previous Analyses, which were based on traffic counts collected in November 2014 and are not considered current. This update is based on traffic counts collected in October 2016. The project description includes the construction of a 37,000-square-foot (sf) health club within the existing Shops at Rossmoor.

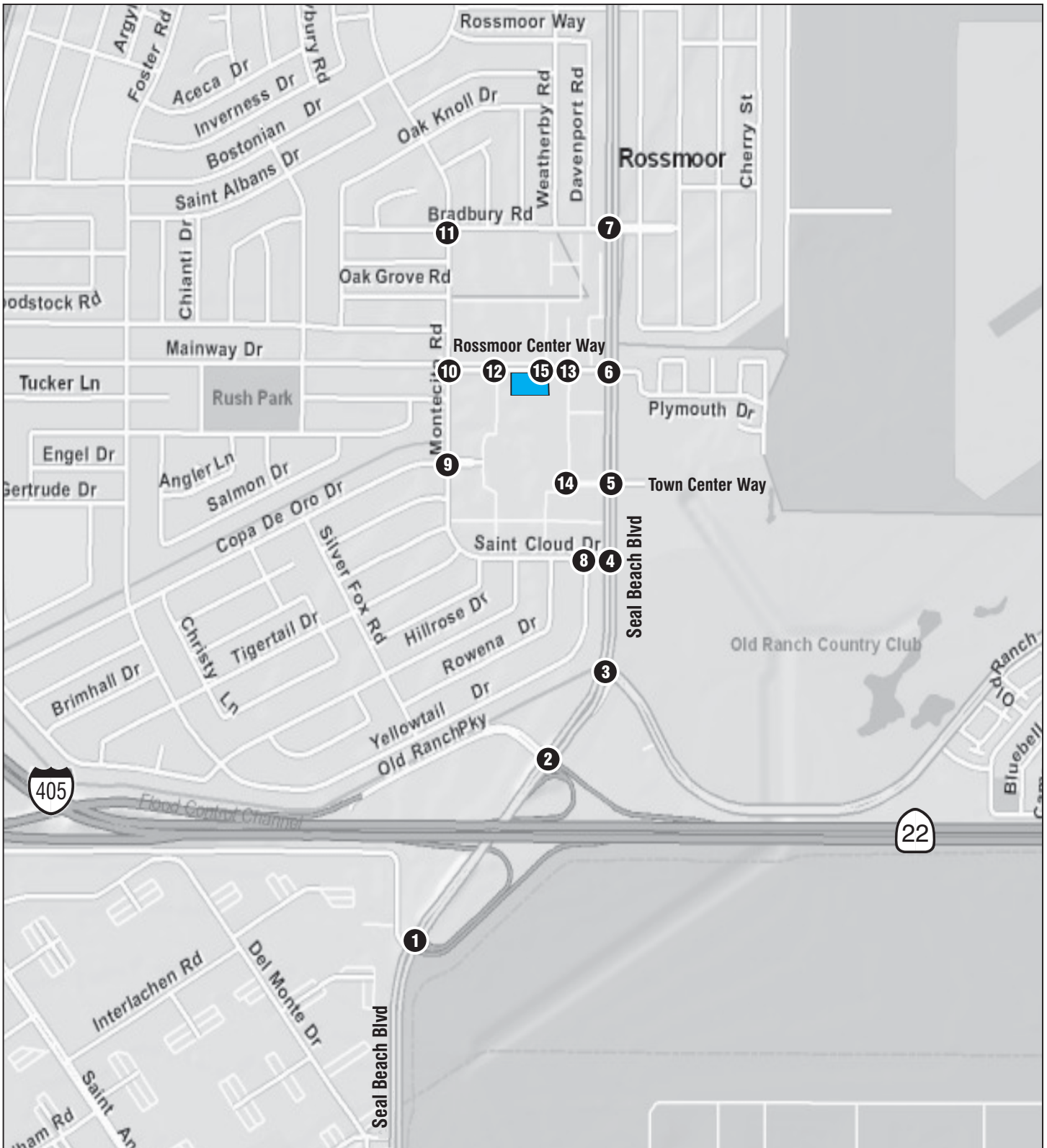
The study area is consistent with the Previous Analyses, which were developed in coordination with the City staff. This study area includes intersections and roadway segments along Seal Beach Boulevard and local access roads adjacent to the proposed project. Per previous direction from the City, LSA also evaluated recent accident data in the study area. The traffic analysis has been prepared consistent with the City Traffic Impact Study Guidelines (March 2010) and the City's General Plan (December 2003).

The traffic analysis reviewed the weekday a.m., p.m., and weekend peak-hour LOS at study intersections and roadway segments for the following scenarios:

1. Existing (2016) conditions with current occupancy of the Shops at Rossmoor retail center.
2. Existing (2016) conditions with estimated full occupancy of the Shops at Rossmoor retail center.
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7. Future (2035) General Plan Buildout conditions with estimated full occupancy of the Shops at Rossmoor retail center plus the proposed project.

Project Description

The proposed project consists of 37,000 sf of health club uses to be developed on surface parking within the existing Shops at Rossmoor retail center along the south side of Rossmoor Center Way between West Road and Sprouts Farmers Market as shown on Figure 1. The project site is bound by residential uses to the north and west. Access to the project will be provided by the site-adjacent intersections of West Road at Rossmoor Center Way and Project Driveway at Rossmoor Center Way. As part of the proposed project, two off-site improvements to access facilities will be implemented. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way to 250 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. These project off-site improvements will be fully funded by the project applicant.



LSA



LEGEND

- Project Site
- 8 - Study Area Intersection

FIGURE 1

Health Club within The Shops at Rossmoor
 Project Location and
 Study Area Intersections

SOURCE: ESRI

I:\MPA1401\G\Location & Study Ints.cdr (12/13/2016)

STUDY AREA

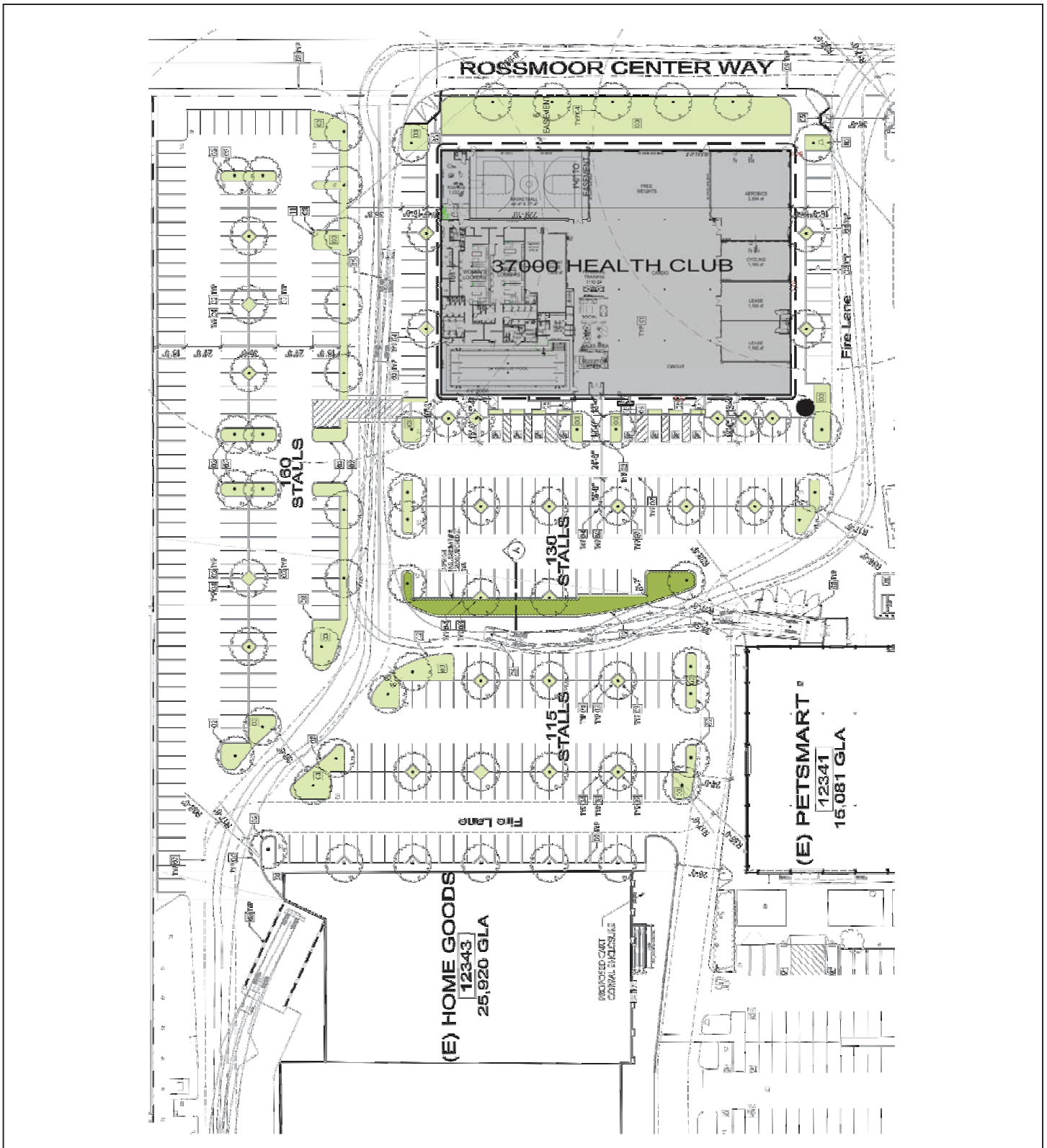
As Figure 2 shows, Seal Beach Boulevard is a north-south arterial that provides access to both residential and commercial (retail) uses within the City of Seal Beach. Seal Beach Boulevard is a six-lane Major Arterial per the City's General Plan, which provides connection to the I-405 freeway as well as the Interstate 605 (I-605) freeway (via Katella Avenue). The 1.2-mile (mi) section of Seal Beach Boulevard between I-405 and Bradbury Road provides connection to commercial uses such as office, retail, and hotel, and residential uses (both east and west of Seal Beach Boulevard) via local collector streets such as Bradbury Road, Lampson Avenue, Rossmoor Center Way, Town Center Drive, and St. Cloud Drive. There are retail/commercial uses on either side of Seal Beach Boulevard between St. Cloud Drive and Bradbury Road. The Shops at Rossmoor retail/commercial center west of Seal Beach Boulevard recently underwent modifications and changes at several locations and is close to full occupancy with only one unoccupied restaurant space of 8,827 sf (former Marie Callender's). The existing traffic along Seal Beach Boulevard includes the traffic from the occupied retail and restaurant space within the Shops at Rossmoor as well as residential traffic from the Rossmoor community, but does not include traffic generated by the restaurant space that is currently unoccupied.

In order to analyze the traffic conditions along Seal Beach Boulevard when the Shops at Rossmoor is fully occupied, traffic for the unoccupied restaurant space was added to existing traffic volumes.

Based on discussion with City staff and the criteria provided in the City's Traffic Impact Study Guidelines, the following roadway segments and intersections are analyzed for the study:

Roadway Segments

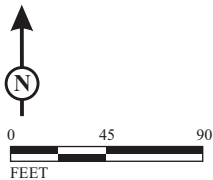
- Seal Beach Boulevard between:
 - Rossmoor Way and Bradbury Road;
 - Bradbury Road and Rossmoor Center Way;
 - Rossmoor Center Way and Town Center Drive;
 - Town Center Drive and St. Cloud Drive;
 - St. Cloud Drive and Lampson Avenue; and
 - Lampson Avenue and I-405 Northbound ramps.
- St. Cloud Drive between:
 - Seal Beach Boulevard and Yellowtail Drive.
- Montecito Road between:
 - Yellowtail Drive and Copa De Oro Drive;
 - Copa De Oro Drive and Mainway Drive; and
 - Mainway Drive and Bradbury Road.
- Rossmoor Center Way between:
 - Montecito Road and Seal Beach Boulevard.



L S A

LEGEND
 - Project Site

FIGURE 2



SOURCE: robinson hill architecture, inc.
 I:\MPA1401\G\Site Plan.cdr (12/13/2016)

Health Club within The Shops at Rossmoor
 Site Plan

Intersections

1. Seal Beach Boulevard/I-405 Southbound ramps;
2. Seal Beach Boulevard/I-405 Northbound ramps;
3. Seal Beach Boulevard/Lampson Avenue;
4. Seal Beach Boulevard/St. Cloud Drive;
5. Seal Beach Boulevard/Town Center Drive;
6. Seal Beach Boulevard/Rossmoor Center Way;
7. Seal Beach Boulevard-Los Alamitos Boulevard/Bradbury Road;
8. Yellowtail Drive/St. Cloud Drive (unsignalized);
9. Montecito Road/Copa De Oro Drive (unsignalized);
10. Montecito Road/Mainway Drive-Rossmoor Center Way (unsignalized);
11. Montecito Road/Bradbury Road (unsignalized);
12. West Road/Rossmoor Center Way (unsignalized);
13. Internal Driveway (Eastern)/Rossmoor Center Way (unsignalized);
14. Internal Driveway/Towne Center Drive (unsignalized); and
15. Internal Driveway (Western)/Rossmoor Center Way (unsignalized).

Figure 3 shows the existing intersection lane geometrics at all 15 intersections.

METHODOLOGY

To determine the peak hour intersection operations at signalized intersections within the study area, intersection capacity utilization (ICU) methodology was used per City of Seal Beach Traffic Study Guidelines. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. The ICUs were developed for this study using the Traffix (Version 8.0) software.

According to the City of Seal Beach Traffic Impact Study Guidelines, LOS at an intersection is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). As such, improvements are recommended at locations that operate at LOS E or F. The relationship of ICU (v/c ratio) to LOS is demonstrated in the following table:

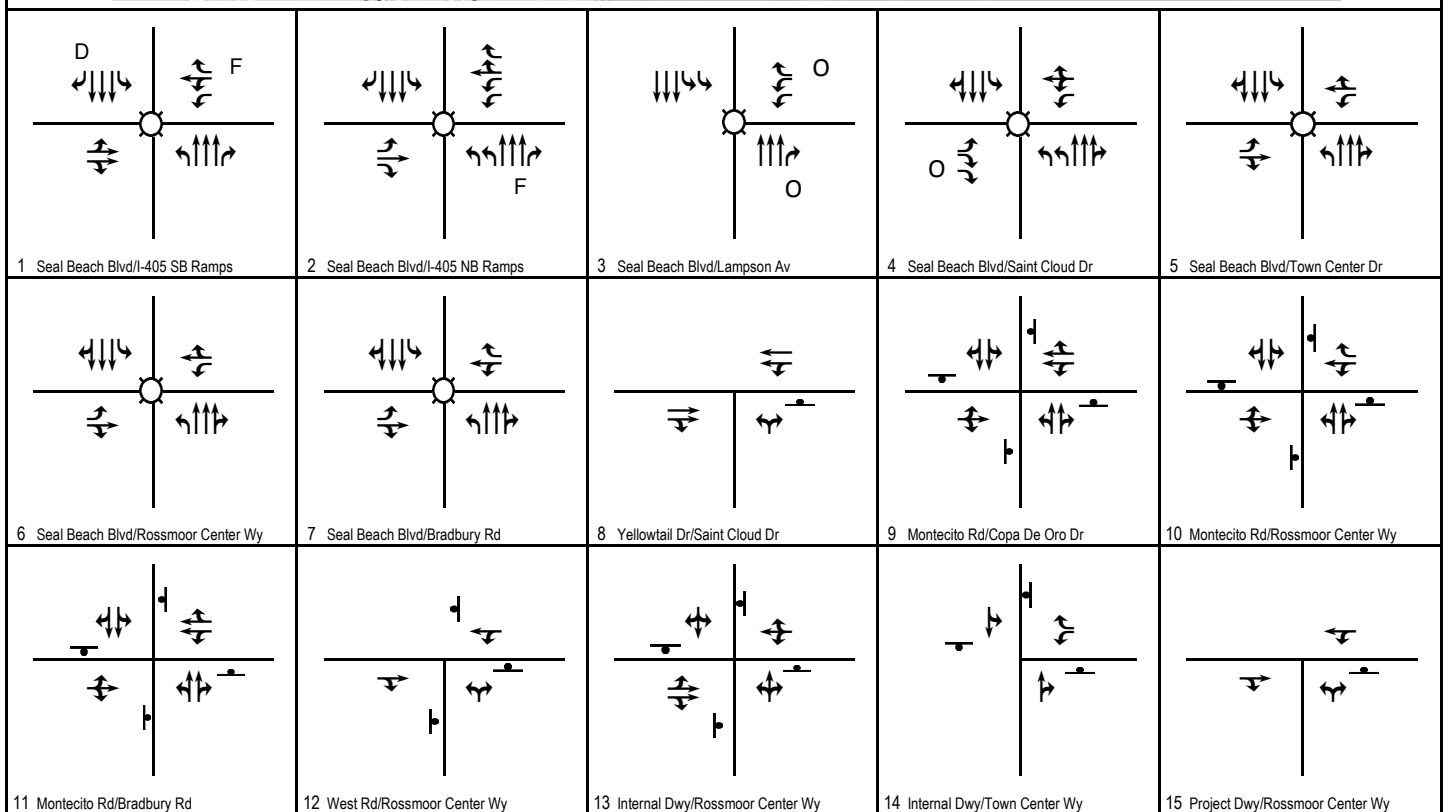
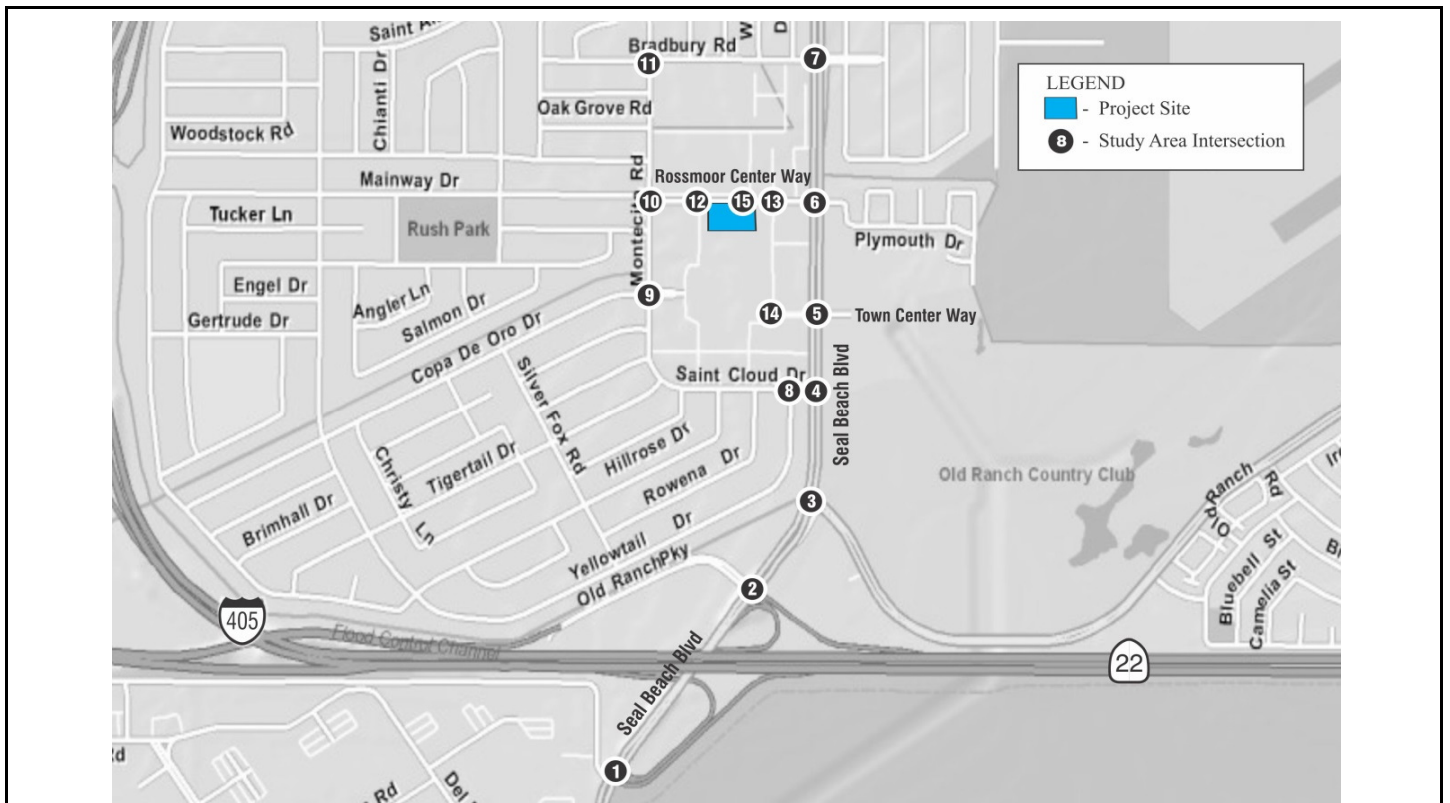


FIGURE 3

Legend

- Signal
- Stop Sign
- F Free Right Turn
- Right Turn Overlap
- D Defacto Right Turn Lane

Health Club within The Shops at Rossmoor

Existing (2016) Lane Geometrics and Traffic Control Devices

LOS	Operating Condition	ICU (v/c ratio)
A	Free flowing, virtually no delay. Minimal traffic	<0.60
B	Free flow and choice of lanes. Delays are minimal. All cars clear intersection easily.	0.60–0.69
C	State flow. Queue at signal starting to get relatively long. Delays starting to become a factor but still within “acceptable” limits.	0.70–0.79
D	Approaching unstable flow. Queues at intersection are quite long but most cars clear intersection on their green signal. Occasionally, several vehicles must wait for a second green signal. Congestion is moderate.	0.80–0.89
E	Severe congestion and delay. Most of the available capacity is used. Many cars must wait through a complete signal cycle to clear the intersection.	0.90–0.99
F	Excessive delay and congestion. Most cars must wait through more than one on one signal cycle. Queues are very long and drivers are obviously irritated.	>1.00

ICU = Intersection Capacity Utilization

LOS = level of service

v/c = volume-to-capacity

Per City guidelines, the following project-related increases in intersection ICU shall be deemed as “significant” and require mitigation:

Existing ICU	Project-Related Increase in ICU
0.00–0.69	0.06
0.70–0.79	0.04
0.80–0.89	0.02
0.90+	0.01

ICU = Intersection Capacity Utilization

In addition to the ICU methodology of calculating signalized intersection LOS, the *Highway Capacity Manual* (HCM 2010) methodology was used to determine the LOS at the signalized ramp intersections that are governed by California Department of Transportation (Caltrans) and at unsignalized study area intersections. The HCM 2010 unsignalized intersection methodology presents LOS in terms of control delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, as in the ICU methodology. The relationship of delay to LOS is demonstrated in the following table:

LOS	Signalized Intersection Delay (seconds)	Unsignalized Intersection Delay (seconds)
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Highway Capacity Manual* (2010), Exhibits 18-4, 19-1, and 20-2.

LOS = level of service

It should be noted that this study focuses on capacity (i.e., ICU). The HCM method is another method to evaluate operational conditions at signalized intersections, such as signal timing and queue lengths at turn lanes. While briefly discussed, this operational tool is not the focus of this impact study,

although it is used to evaluate the operations (queuing) at intersections as discussed later in this report. All HCM analysis for this study has been developed utilizing the Synchro (Version 9.1) software.

For roadway segments situated between intersections, LOS is described via a “mid-block roadway link” analysis. The Highway Capacity Software Version 5.2 (HCS) was utilized to analyze roadway segments in the study area consistent with Chapter 21 of the HCM. The basic input data for conducting a roadway analysis include the number of lanes and peak-hour volumes along the segments.

Roadway segments have uniform traffic conditions and roadway characteristics. The measure used to provide an estimate of LOS is density, where density is calculated from the average vehicle flow rate per lane and the average speed. The following shows the correlation between LOS and flow density:

LOS	Density (pc/mi/ln)
A	≤11
B	>11–18
C	>18–26
D	>26–35
E	>35–45
F	>45

LOS = level of service

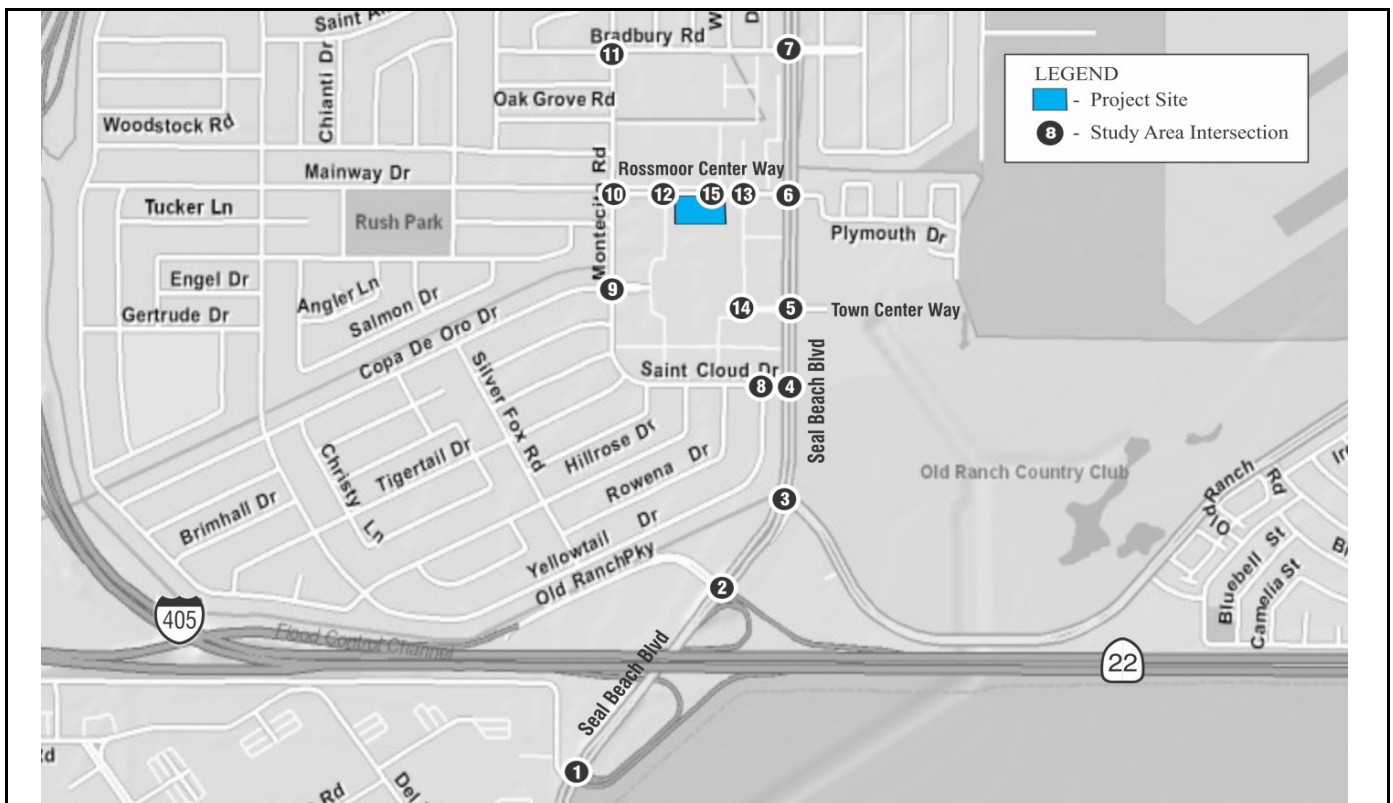
pc/mi/ln = passenger cars per mile per lane

For the purposes of this study, LOS D is considered satisfactory on all study area roadway segments.

EXISTING CONDITIONS

Existing weekday a.m., p.m., and weekend midday peak-hour traffic conditions and LOS were analyzed for Existing (2016) conditions.

LSA obtained intersection turn-movement counts at the 15 study area intersections for the weekday a.m. peak hour (7:00 a.m.–9:00 a.m.), the p.m. peak hour (4:00 p.m.–6:00 p.m.), and a weekend (Saturday) midday peak hour (11:00 a.m.–1:00 p.m.). Daily 24-hour counts were conducted for the 11 study area roadway segments in between the study area intersections. The counts were conducted by an independent car count company (National Data & Surveying Services [NDS]) for a weekday and weekend (Saturday) in October 2016. The traffic counts are included in Appendix A. The trips generated from surrounding existing land uses, which consist of residential and retail uses east and west of Seal Beach Boulevard, are included in the counts. Count data were collected before the week of the Thanksgiving holiday. LSA collected geometric, traffic control, and posted speed limit data at all study area locations. Figures 4 and 5 show the Existing (2016) peak-hour volumes at the study area intersections for weekday and weekend conditions, respectively.



1 Seal Beach Blvd/I-405 SB Ramps <pre> 72 / 127 1449 / 1066 428 / 1516 525 / 517 44 / 35 696 / 321 87 / 166 28 / 30 16 / 20 14 / 11 1051 / 1445 166 / 361 1051 / 1445 166 / 361 </pre>	2 Seal Beach Blvd/I-405NB Ramps <pre> 463 / 370 1565 / 1439 328 / 313 549 / 664 53 / 15 367 / 195 7 / 75 11 / 72 5 / 87 110 / 41 1196 / 1536 348 / 555 </pre>	3 Seal Beach Blvd/Lampson Av <pre> 1653 / 1591 296 / 630 605 / 454 702 / 540 1445 / 1691 305 / 544 </pre>	4 Seal Beach Blvd/Saint Cloud Dr <pre> 46 / 66 1301 / 1649 4 / 5 2 / 5 13 / 31 65 / 193 106 / 86 3 / 0 567 / 385 377 / 406 1633 / 1617 47 / 132 </pre>	5 Seal Beach Blvd/Town Center Dr <pre> 13 / 83 1345 / 1370 21 / 78 21 / 59 2 / 47 24 / 139 3 / 85 4 / 28 14 / 185 30 / 180 1627 / 1415 31 / 84 </pre>
6 Seal Beach Blvd/Rossmoor Center Wy <pre> 70 / 190 1349 / 1554 19 / 36 39 / 16 10 / 1 17 / 15 77 / 184 7 / 1 78 / 130 65 / 159 1581 / 1520 15 / 24 </pre>	7 Seal Beach Blvd/Bradbury Rd <pre> 155 / 170 1307 / 1676 14 / 19 23 / 11 22 / 3 70 / 48 270 / 162 18 / 9 97 / 88 146 / 130 1503 / 1489 26 / 57 </pre>	8 Yellowtail Dr/Saint Cloud Dr <pre> 403 / 453 28 / 53 605 / 443 4 / 7 8 / 3 70 / 49 </pre>	9 Montecito Rd/Copa De Oro Dr <pre> 27 / 44 283 / 231 0 / 7 1 / 10 3 / 5 2 / 2 54 / 30 6 / 4 124 / 45 107 / 66 165 / 212 2 / 3 </pre>	10 Montecito Rd/Rossmoor Center Wy <pre> 65 / 40 202 / 180 24 / 44 31 / 71 42 / 39 13 / 36 97 / 42 61 / 35 86 / 53 38 / 29 180 / 131 21 / 26 </pre>
11 Montecito Rd/Bradbury Rd <pre> 2 / 3 131 / 123 74 / 41 146 / 64 18 / 25 135 / 148 5 / 1 24 / 17 2 / 2 0 / 5 138 / 102 219 / 106 </pre>	12 West Rd/Rossmoor Center Wy <pre> 86 / 136 6 / 22 99 / 90 7 / 17 4 / 26 12 / 11 </pre>	13 Internal Dwy/Rossmoor Center Wy <pre> 15 / 30 16 / 34 59 / 75 51 / 84 58 / 106 73 / 183 35 / 22 98 / 72 14 / 27 13 / 43 16 / 44 31 / 178 </pre>	14 Internal Dwy/Town Center Dr <pre> 15 / 54 28 / 231 37 / 292 33 / 49 16 / 43 14 / 50 </pre>	15 Project Dwy/Rossmoor Center Wy <pre> 95 / 165 9 / 20 110 / 88 0 / 1 0 / 4 11 / 20 </pre>

FIGURE 4

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
 Existing (2016) Peak Hour Volumes (AM/PM)

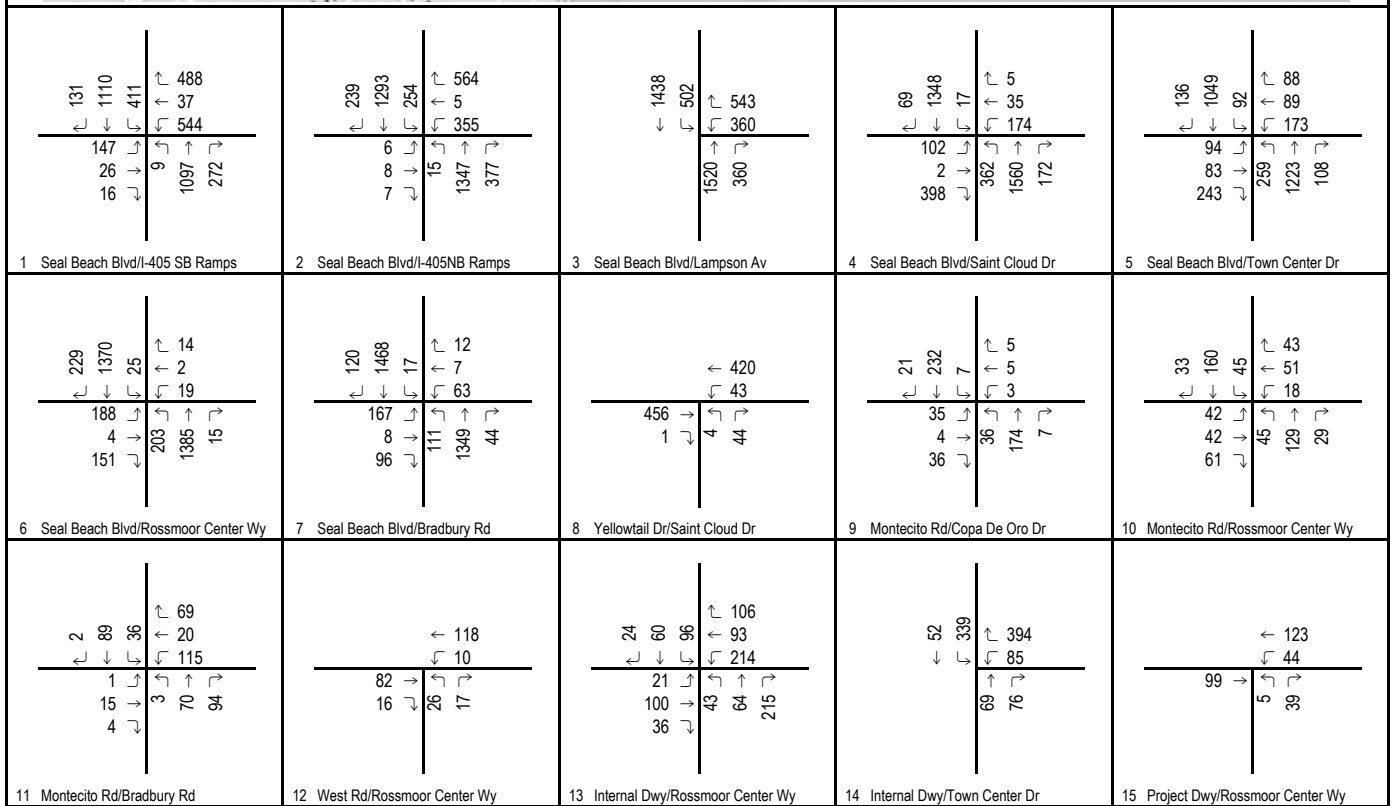
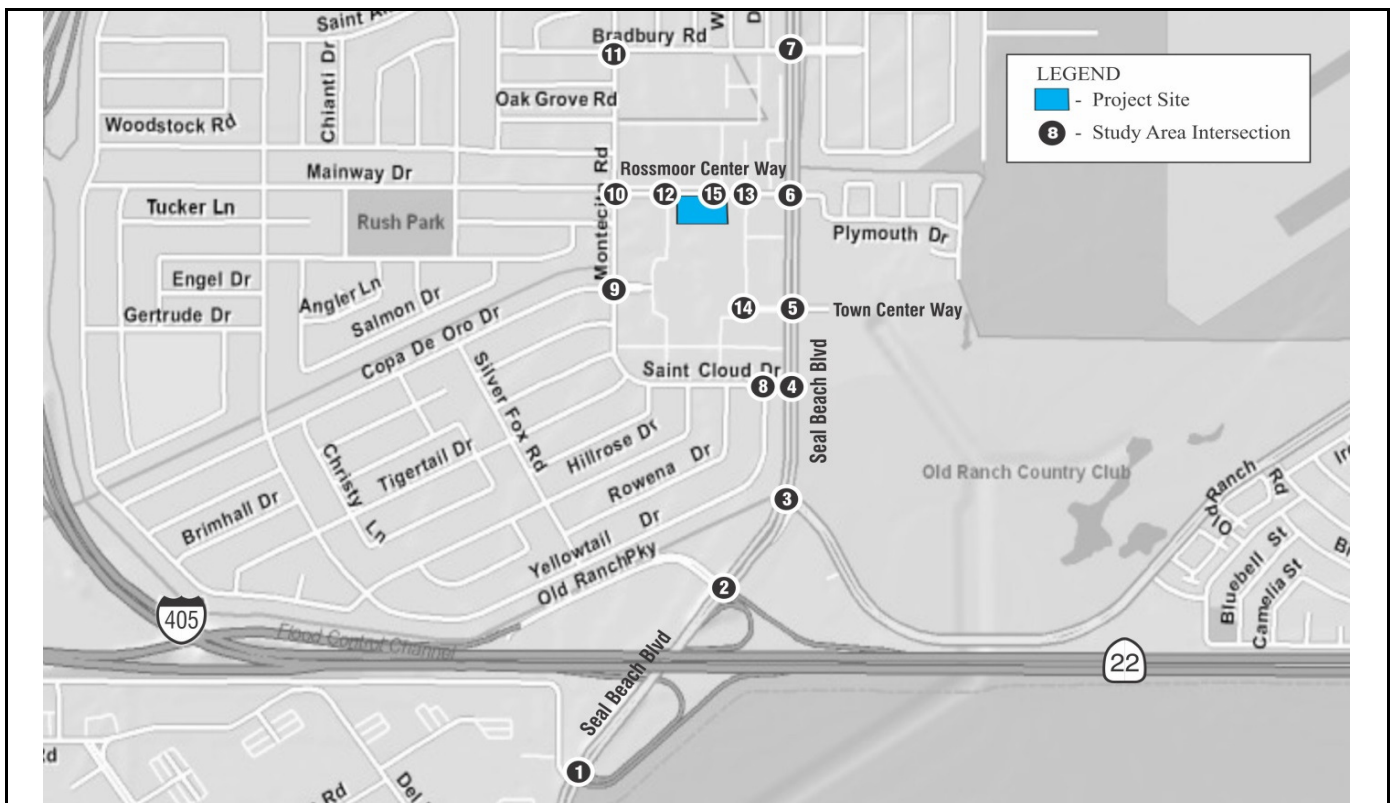


FIGURE 5

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor
Existing (2016) Peak Hour Volumes (Saturday)

Summaries of Existing (2016) LOS for intersections and roadway segments are presented in Tables A and B, respectively. Intersection LOS worksheets are included in Appendix B while roadway LOS worksheets are included in Appendix C. As Tables A and B indicate, all study area intersections and roadway segments are currently operating at satisfactory LOS (LOS D or better).

Accident History

The City's Traffic Impact Study Guidelines require the identification and analysis of intersections or roadway segments having five or more reported accidents within the most recent 12-month period. Five accidents is a generalized figure used by City staff as an indication of potential problems that could require improvements. The accident data provided by the City are included in Appendix D.

The City of Seal Beach Police Department provided accident data for the years of 2015 and 2016 in the City of Seal Beach. It should be noted that the 2016 data represents only 11 months. As such, this study will focus on the accidents within the study area identified in 2015.

Table C provides the total number of accidents reported within the study area each year. As this table indicates, five accidents or more have occurred in 2015 in the vicinity of the intersections of Seal Beach Boulevard at the I-405 southbound on/off ramps, I-405 northbound on/off ramps, and Lampson Avenue. Table D shows a detailed description of the primary collision factor, type of accident, and number of injuries reported at each of these three locations. The most common factor at the intersections of Seal Beach Boulevard at the I-405 southbound on/off ramps and Seal Beach Boulevard at the I-405 northbound on/off ramps was unsafe speed.

As Table C shows, the number of accidents at these two Caltrans-controlled intersections increased from 2015 through the first 11 months of 2016.

The intersection of Seal Beach Boulevard and Lampson Avenue experienced five accidents in 2015 and four accidents within the first 11 months of 2016. Improvements were implemented in this location in 2011. Based on the operational analysis provided in this report, this intersection operates at an acceptable LOS and no additional improvements are recommended at this time.

Based on weekday average daily traffic (ADT) counts taken in October 2016, the segment of Seal Beach Boulevard between the I-405 northbound on/off ramps and Lampson Avenue currently experiences approximately 53,000 vehicles per day. The project is anticipated to add 451 vehicles per day to this same segment. The project's anticipated traffic contribution would increase daily traffic on this section of Seal Beach Boulevard by 0.8 percent. The segment of Seal Beach Boulevard between Lampson Avenue and St. Cloud Drive would experience a similar 1.2 percent growth in daily traffic from the development of the project (existing ADT of approximately 49,900 with an anticipated project ADT of 597 vehicles). This increase in daily traffic due to project traffic would not significantly alter existing traffic volumes. The effect of this magnitude of traffic growth on accident rates would be nominal and is not considered significant.

It is recommended that the City and Caltrans continue to monitor the operation and safety of all intersections and roadway segments within their respective jurisdictions and make the necessary improvements to reduce potential accidents in the future.

Table A: Existing (2016) Peak Hour Intersection Level of Service Summary

Intersection		AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS
1	Seal Beach Boulevard/I-405 SB On/Off Ramps ¹	42.8	D	42.7	D	40.1	D
2	Seal Beach Boulevard/I-405 NB On/Off Ramps ¹	43.2	D	49.2	D	34.1	C
3	Seal Beach Boulevard/Lampson Avenue	0.804	D	0.792	C	0.764	C
4	Seal Beach Boulevard/Saint Cloud Drive	0.626	B	0.717	C	0.648	B
5	Seal Beach Boulevard/Town Center Drive	0.501	A	0.732	C	0.815	D
6	Seal Beach Boulevard/Rossmoor Center Way	0.535	A	0.686	B	0.668	B
7	Seal Beach Boulevard/Bradbury Road	0.726	C	0.679	B	0.627	B
8	Yellow Tail Drive/Saint Cloud Drive*	13.4	B	10.8	B	10.8	B
9	Montecito Road/Copa De Oro Drive*	11.3	B	9.5	A	8.8	A
10	Montecito Road/Rossmoor Center Way*	11.9	B	10.2	B	9.6	A
11	Montecito Road/Bradbury Road*	12.8	B	10.1	B	8.9	A
12	West Road/Rossmoor Center Way*	7.7	A	8.0	A	7.8	A
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.0	B	18.0	C
14	Internal Driveway/Town Center Drive*	7.4	A	11.5	B	15.5	C
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.1	A	9.2	A

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

 (Shade) = Exceeds City level of service criteria (LOS D)

¹ HCM Methodology-consistent with Caltrans requirements

Table B: Existing (2016) Peak Hour Roadway Level of Service Summary

Roadway	Segment	Direction	AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	Northbound	45.0	16.6	B	45.0	18.0	B*	45.0	15.4	B
		Southbound	45.0	18.0	B*	45.0	16.4	B	45.0	14.0	B
	Lampson Avenue and Saint Cloud Drive	Northbound	45.0	19.5	C	45.0	18.3	C	45.0	17.7	B
		Southbound	45.0	16.7	B	45.0	17.0	B	45.0	14.9	B
	Saint Cloud Drive and Town Center Drive	Northbound	45.0	14.6	B	45.0	14.6	B	45.0	14.0	B
		Southbound	45.0	11.1	B	45.0	12.9	B	45.0	11.3	B
	Town Center Drive and Rossmoor Center Way	Northbound	45.0	13.5	B	45.0	13.1	B	45.0	12.4	B
		Southbound	45.0	11.2	B	45.0	12.3	B	45.0	11.2	B
	Rossmoor Center Way and Bradbury Road	Northbound	45.0	13.1	B	45.0	13.1	B	45.0	12.6	B
		Southbound	45.0	11.6	B	45.0	14.0	B	45.0	12.8	B
	Bradbury Road and Rossmoor Way	Northbound	45.0	14.7	B	45.0	13.8	B	45.0	12.4	B
		Southbound	45.0	12.4	B	45.0	14.9	B	45.0	12.8	B
	Saint Cloud Drive*	Seal Beach Boulevard and Yellowtail Drive	22.8	-	D	26.5	-	C	26.7	-	C
Montecito Road*	Yellowtail Drive and Copa De Oro Drive		26.0	-	C	28.8	-	B	29.3	-	B
	Copa De Oro Drive and Mainway Drive		30.1	-	B	30.2	-	B	31.1	-	A
	Mainway Drive and Bradbury Road		29.1	-	B	30.3	-	B	31.2	-	A
Rossmoor Center Way**	Montecito Road and Seal Beach Boulevard		27.6	-	A	25.7	-	A	25.2	-	B

* Analyzed as Two Lane Roadways with a speed limit of 35 MPH

** Analyzed as Two Lane Roadway with a speed limit of 30 MPH

Table C - North Seal Beach Total Accident History Summary

Location	Year	
	2016 ¹	2015
Seal Beach Boulevard/I-405 SB On/Off Ramps	7	5
Seal Beach Boulevard/I-405 NB On/Off Ramps	10	7
Seal Beach Boulevard/Lampson Avenue	2	5
Seal Beach Boulevard/St. Cloud Drive	3	2
Seal Beach Boulevard/Town Center Drive	4	3
Seal Beach Boulevard/Rossmoor Center Way-Plymouth Drive	1	2
Seal Beach Boulevard/Bradbury Road	4	3
Yellowtail Drive/St. Cloud Drive	1	0
Internal Driveway/Rossmoor Center Way	1	0
Internal Driveway/Town Center Way	1	1

Data is presented in total number of accidents per location

¹ 2016 Data represents January - November only

= Location will be further analyzed in the traffic study

Table D - North Seal Beach High Accident Location Details (2015)

Location	Primary Collision Factor	Type	Injury	Fatality
Seal Beach Boulevard/I-405 SB On/Off Ramps	Unsafe Speed	Rear End	0	0
	Unsafe Speed	Rear End	0	0
(5 Total Accidents)	Unsafe Speed	Rear End	0	0
	Unsafe Speed	Not Specified	1	0
	Lane Change	Sideswipe	0	0
		Total:	1	0
Seal Beach Boulevard/I-405 NB On/Off Ramps	Unsafe Speed	Not Specified	1	0
	Unsafe Speed	Rear End	0	0
(7 Total Accidents)	Unsafe Speed	Rear End	0	0
	Improper Turn	Broadside	0	0
	Unsafe Speed	Broadside	0	0
	Unsafe Speed	Rear End	0	0
	Signage	Broadside	0	0
		Total:	1	0
Seal Beach Boulevard/Lampson Avenue	Improper Turn	Broadside	0	0
	Unsafe Speed	Rear End	2	0
(5 Total Accidents)	Unsafe Speed	Not Specified	0	0
	Signage	Broadside	2	0
	Grand Theft Auto	Not Specified	0	0
		Total:	4	0

Pedestrian Conditions

In an effort to address concerns regarding pedestrian safety that were expressed by local residents, this analysis conducted a pedestrian and cyclist survey of the surrounding residential area. Specifically, five intersections along Montecito Road and St. Cloud Drive between Bradbury Road and Seal Beach Boulevard were counted as the most utilized pedestrian crossing points due to the presence of crosswalks. This survey revealed that there is the presence of pedestrian activity during the peak hours. As shown on Figure 6, the highest number of peak hour pedestrians observed to cross Montecito Road or Saint Cloud Drive are at the marked crosswalk on the south side of the intersection of Montecito Road and Rossmoor Center Way with 15 pedestrians in the weekday p.m. peak hour. These pedestrians are most likely nearby residents traveling to and from the Shops at Rossmoor for shopping or dining in the afternoon and do not occur during periods of school travel activity. This would suggest that these pedestrians are not students. As this intersection, along with all other study intersections along Montecito Road and Saint Cloud Drive, is a low delay intersection (LOS A or B in all analysis scenarios), pedestrian and traffic conditions along Montecito Road and Saint Cloud drive are anticipated to remain largely the same. The pedestrian and cyclist counts are included in Appendix A.

In an effort to illustrate the project's effect on local traffic adjacent to the pedestrians identified, weekday counts taken in October 2016 for segments of St. Cloud Drive and Montecito Road are shown below alongside the anticipated project traffic. As vehicular traffic during times of school-related pedestrian activity are of particular concern, the a.m. and p.m. peak hours shown correspond with the peak morning drop-off and afternoon pick-up hours of the surrounding schools.

Roadway	Segment	Analysis Period ¹	Existing Trips	Project Trips	Percent Increase
Saint Cloud Drive	Seal Beach Boulevard and Yellowtail Drive	AM Peak	966	2	0.2%
		Midday Peak	929	7	0.8%
		ADT	12,295	61	0.5%
Montecito Road	Yellowtail Drive and Copa De Oro Drive	AM Peak	552	2	0.3%
		Midday Peak	555	7	1.3%
		ADT	6,275	49	0.8%
	Copa De Oro Drive and Mainway Drive	AM Peak	427	2	0.5%
		Midday Peak	511	5	1.0%
		ADT	5,895	37	0.6%
	Mainway Drive and Bradbury Road	AM Peak	536	2	0.4%
		Midday Peak	540	4	0.7%
		ADT	5,647	37	0.7%

¹ Analysis Period: AM Peak (7:00 a.m. – 8:00 a.m.); Midday Peak (2:00 p.m. – 3:00 p.m.); ADT = Average Daily Traffic

As shown above, the project related traffic increase during both peak school traffic hours and the whole day are anticipated to result in a growth of about one percent or less. The increases in peak school activity hours and daily traffic due to project traffic would not alter existing traffic volumes in any noticeable way. The effect of this magnitude of traffic growth on the pedestrian experience would be nominal.

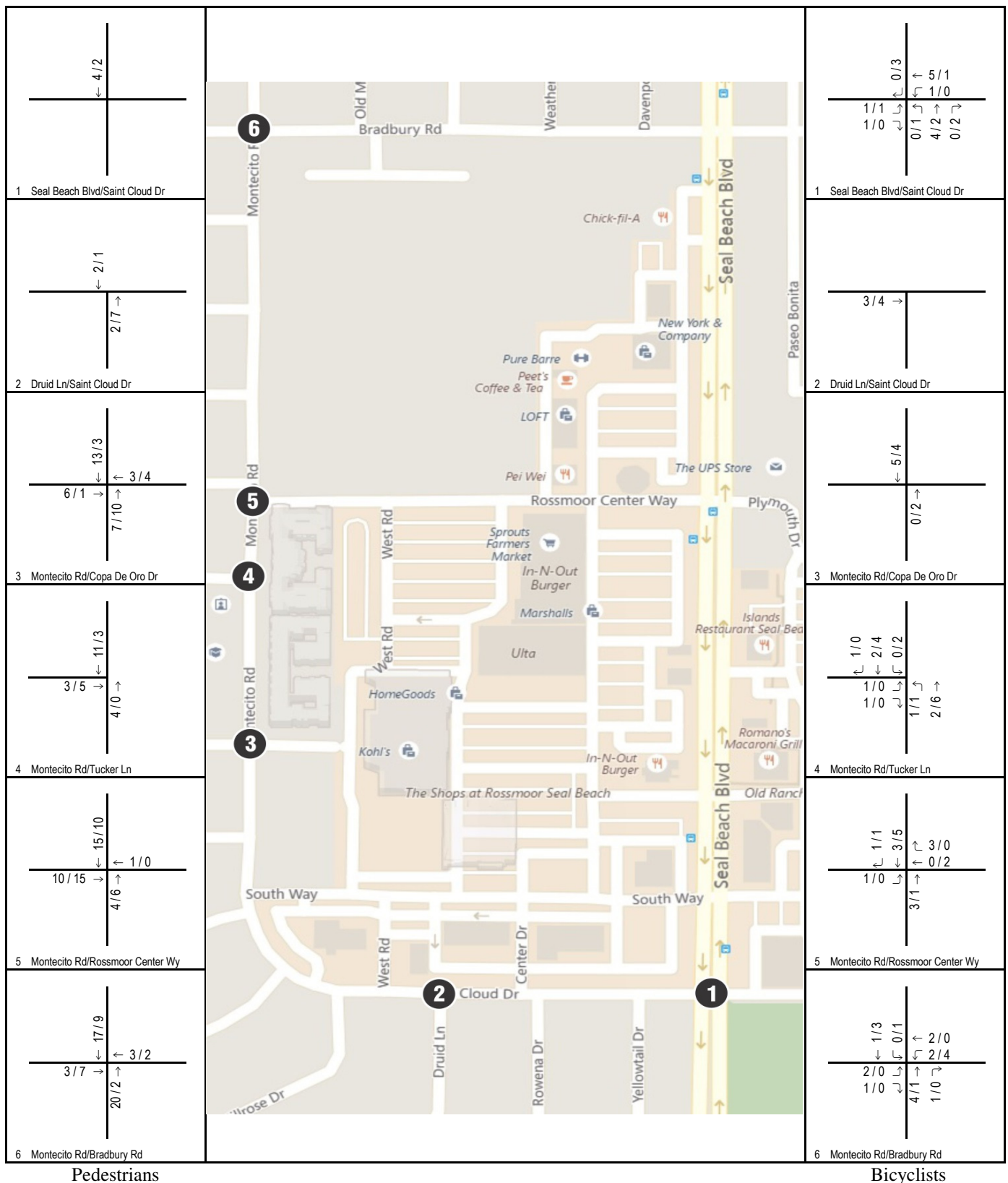


FIGURE 6

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
Pedestrian and Bicyclist Peak Hour Volumes (AM/PM)

HEALTH CLUB

The proposed project will consist of 37,000 sf of health/fitness club uses and is bounded on the north by Rossmoor Center Drive, on the west by West Road, and on the east by Sprouts Farmers Market. The project site is located in the northwest parking lot of The Shops at Rossmoor retail center. This parking lot serves as an employee/overflow lot behind all of the existing adjacent stores and does not provide direct access to Sprouts, Marshalls, or PetSmart. The main access points to the project site are located on either side of the proposed building at West Road, and the existing driveway along the south side of Rossmoor Center Drive west of Sprouts Farmers Market. As part of the proposed project, two off-site improvements to access facilities will be implemented. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way to 205 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard.

Trip Generation and Distribution

The generation and distribution of trips associated with the proposed project site are discussed below.

Trip Generation. Trip generation for the proposed project is calculated based on rates contained in the Institute of Transportation Engineers' (ITE) *Trip Generation* (Ninth Edition), which is a standard reference used by jurisdictions throughout the country for estimating the trip generation potential of new developments. The project is classified as Health/Fitness club use (ITE Land Use 492). The project's potential trip generation was calculated using the average rates (per 1,000 sf).

As indicated in Table E, the proposed project is estimated to generate 1,218 daily trips, 52 weekday a.m. peak hour trips, 131 weekday p.m. peak hour trips, and 103 Saturday midday peak hour trips.

Table E: Project Trip Generation

	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Trip Rate ¹												
Health Fitness Club		TSF	32.93	0.71	0.71	1.41	2.01	1.52	3.53	1.25	1.53	2.78
Trip Generation												
Health Fitness Club	37.000	TSF	1,218	26	26	52	74	56	131	46	57	103

¹ Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation*, Ninth Edition (2012).

ADT = average daily traffic

TSF = thousand square feet

Trip Distribution and Trip Assignment. The project trips were distributed throughout the study area using information from the County's current travel demand model (Orange County Transportation Analysis Model [OCTAM]). Using the travel demand model, a process known as "select zone assignment" is applied to distribute and assign trips from a specific zone through the circulation network to an origin.

The travel demand model goes through several iterations to develop the most likely distribution pattern that takes into account several factors such as the shortest distance between origin and destination, availability of capacity, and type of uses, etc., before assigning the trips. The trips were distributed manually based on a select zone assignment from OCTAM. Based on the select zone assignments and further manual refinements, the project traffic is distributed as follows: 43 percent of traffic will travel north along Seal Beach Boulevard, 49 percent will travel south along Seal Beach Boulevard, of which 3 percent will travel west on the State Route 22 (SR-22) freeway into Long Beach, 12 percent will travel east along Lampson Avenue, 10 percent northwest along northbound I-405, 15 percent southeast along the I-405 southbound, and the remaining 9 percent would continue to travel south along Seal Beach Boulevard. A total of 8 percent will have destinations within close proximity to the retail site. Figures 7 and 8 illustrate the health club trip assignment for weekday and weekend conditions based on the trip generation and the trip distribution identified above.

UNOCCUPIED SPACE WITHIN THE SHOPS AT ROSSMOOR

In order to evaluate the adjacent Shops at Rossmoor retail center at full occupancy, traffic from the former Marie Callender's restaurant in the southern part of the retail center has been developed. The unoccupied restaurant consists of 8,827 sf of restaurant use just west of Seal Beach Boulevard. Figure 9 shows the location of the unoccupied restaurant in relation to the rest of the retail center.

Retail Trip Generation and Distribution

The generation and distribution of trips associated with this unoccupied space are discussed below.

Trip Generation. Trip generation for the unoccupied space is calculated based on rates contained in the ITE *Trip Generation* (Ninth Edition).

The former restaurant has been conservatively classified as a high-turnover restaurant use (ITE Land Use 932) as it most closely represents the use of the former Marie Callender's. As indicated in Table F, the unoccupied restaurant is estimated to generate 1,122 daily trips, 96 weekday a.m. peak hour trips, 87 weekday p.m. peak hour trips, and 124 Saturday midday peak hour trips.

Table F: Unoccupied Space within the Shops at Rossmoor Trip Generation

	Size	Unit	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Trip Rate ¹												
High-Turnover Restaurant		TSF	127.15	5.95	4.86	10.81	5.91	3.94	9.85	7.46	6.61	14.07
Trip Generation												
High-Turnover Restaurant	8.827	TSF	1,122	53	43	96	52	35	87	66	58	124

¹ Trip rates from the Institute of Transportation Engineers (ITE), *Trip Generation*, Ninth Edition (2012).

ADT = average daily traffic

TSF = thousand square feet

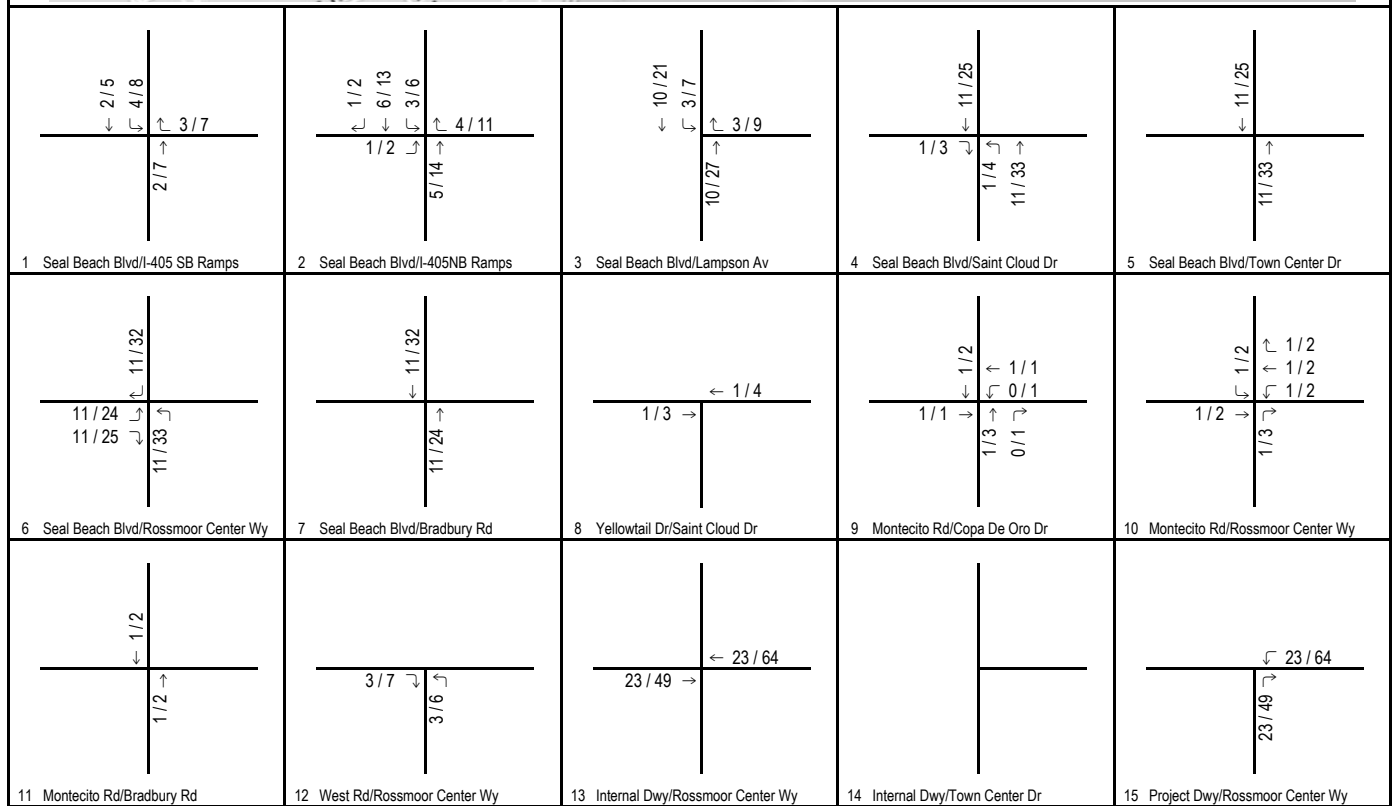
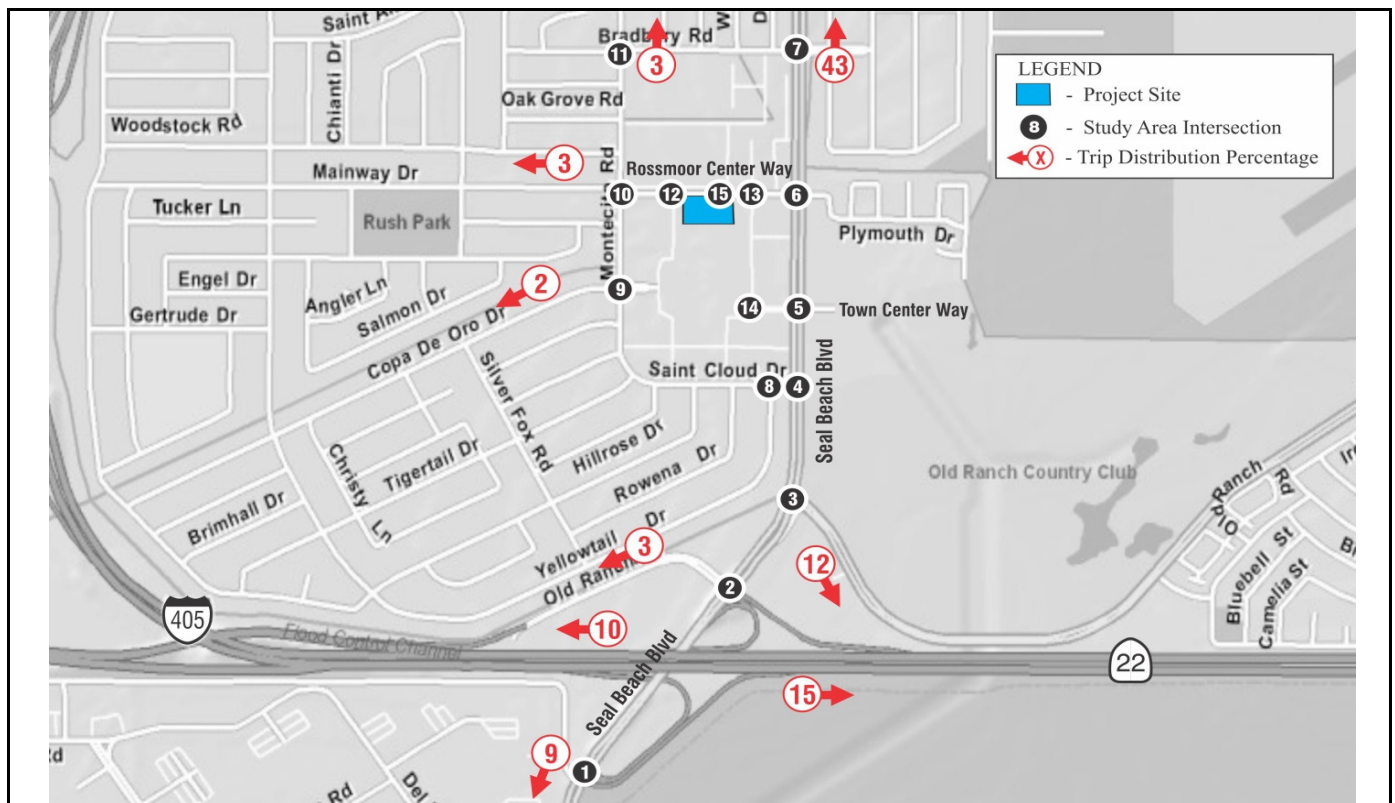


FIGURE 7

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
Project Peak Hour Volumes (AM/PM)

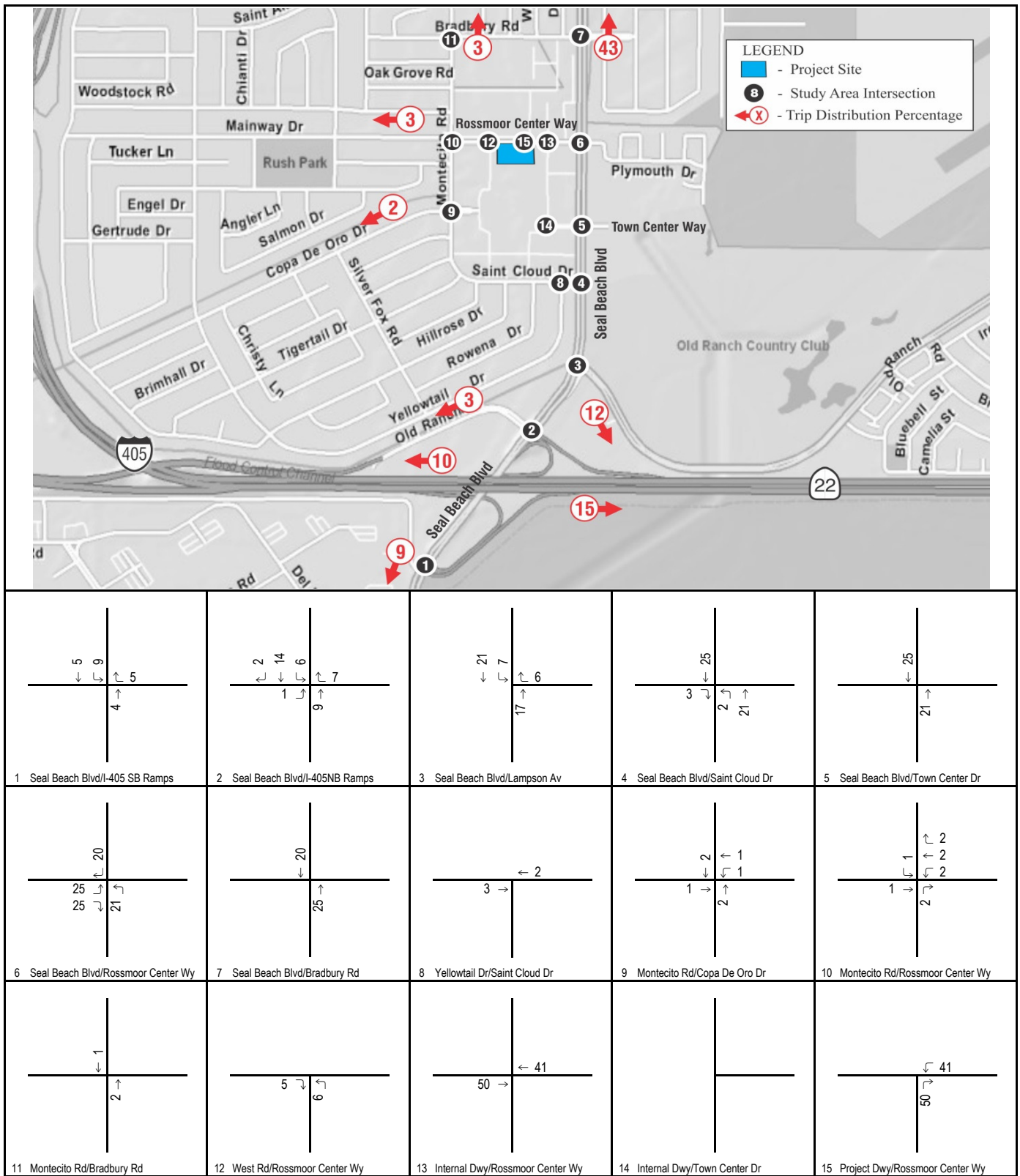
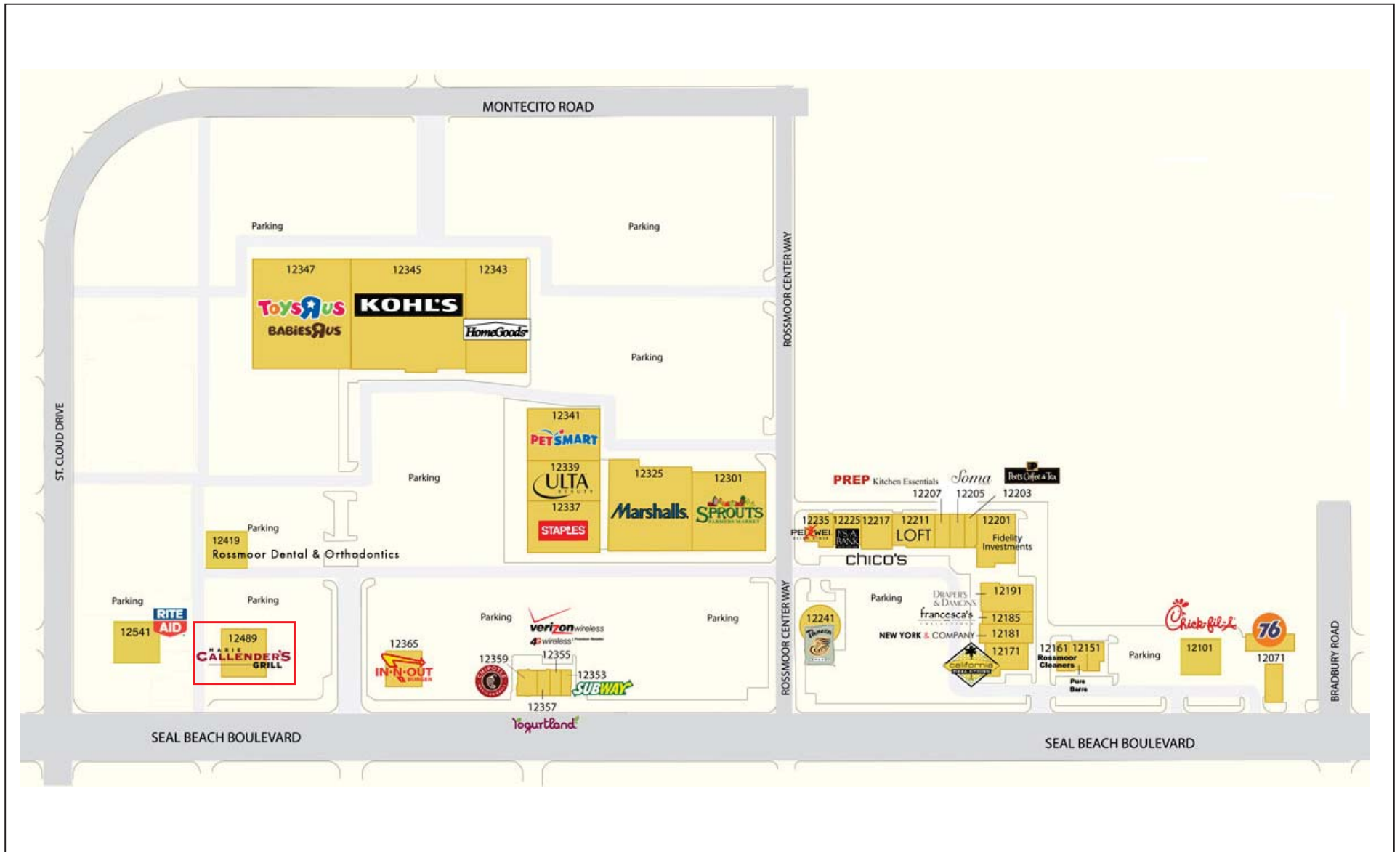


FIGURE 8

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor
Project Peak Hour Volumes (Saturday)



LSA

LEGEND

- Unoccupied Parcel

FIGURE 9

Trip Distribution and Trip Assignment. The unoccupied restaurant trips were distributed throughout the study area using the same information from OCTAM that was utilized for the proposed project.

Figures 10 and 11 illustrate the trip assignment for weekday and weekend conditions based on the trip generation and the trip distribution identified previously. Trips generated by the unoccupied restaurant were added to the base traffic volumes to develop “with Full Occupancy” traffic volumes.

EXISTING (2016) WITH FULL OCCUPANCY CONDITIONS

To represent the full potential of traffic that could traverse Seal Beach Boulevard and the study area in the existing condition, existing weekday a.m., p.m., and weekend midday peak-hour traffic conditions were modified based on the additional traffic from the unoccupied restaurant for the Existing (2016) with Full Occupancy scenario.

The trip assignment of the unoccupied restaurant was added to the Existing (2016) counts to develop the volumes for the Existing (2016) with Full Occupancy conditions. Figures 12 and 13 show Existing (2016) with Full Occupancy condition peak-hour volumes at study area intersections for weekday and weekend conditions.

Tables G and H present summaries of Existing (2016) with Full Occupancy conditions LOS at study area intersections and roadway segments. Intersection LOS worksheets are included in Appendix B while roadway LOS worksheets are included in Appendix C. As the tables indicate, all study area intersections and roadway segments are anticipated to operate at satisfactory LOS (D or better).

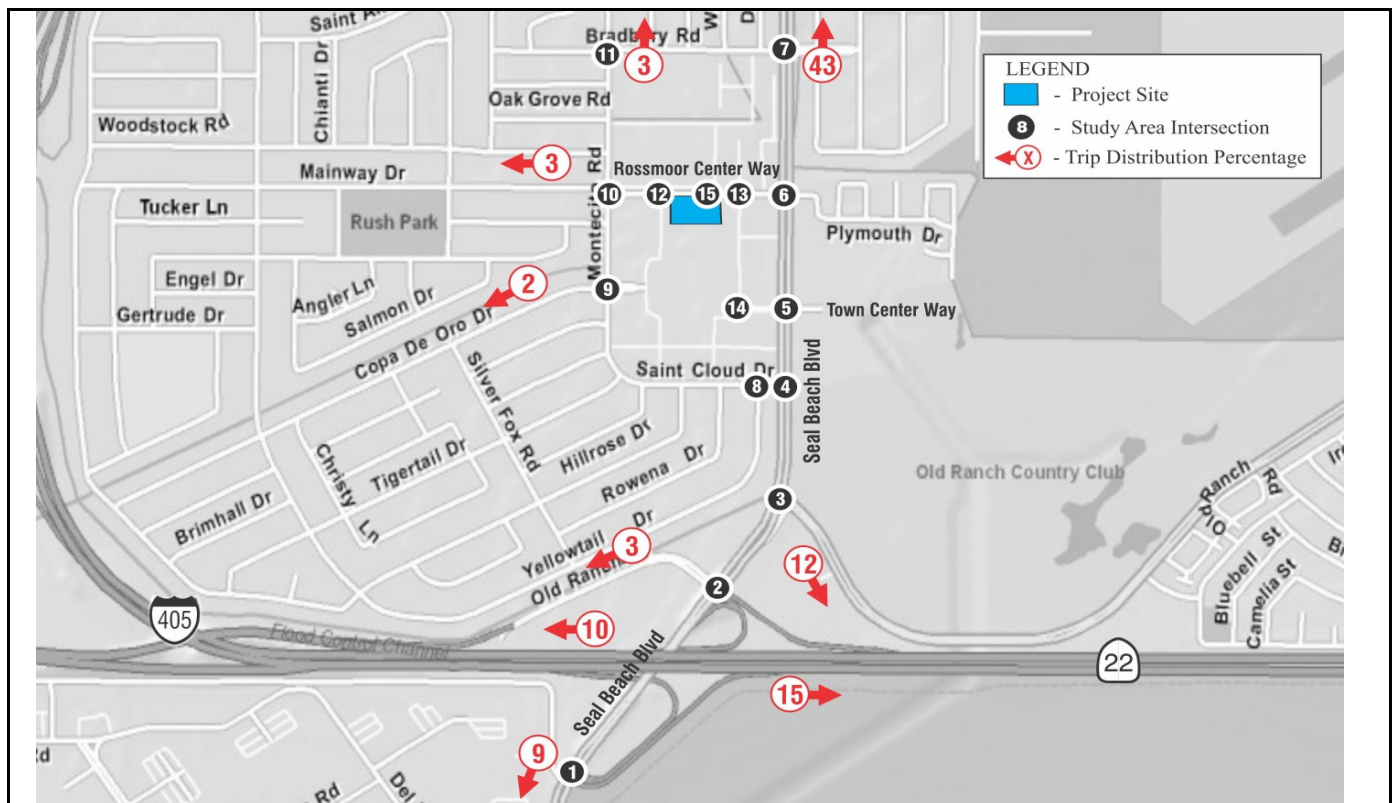
EXISTING (2016) WITH FULL OCCUPANCY PLUS PROJECT CONDITIONS

In order to identify any potential project impacts to traffic and circulation, project traffic was added to Existing (2016) with Full Occupancy traffic. Figures 14 and 15 show the resulting Existing (2016) with Full Occupancy plus Project conditions weekday a.m., p.m., and weekend midday peak-hour traffic volumes.

Tables G and H present summaries of Existing (2016) with Full Occupancy plus Project LOS for study area intersections and roadway segments. Intersection LOS worksheets are included in Appendix B while roadway LOS worksheets are included in Appendix C. As the tables indicate, all study area intersections and roadway segments are anticipated to continue to operate at satisfactory LOS (D or better) with the addition of project traffic.

PROJECT COMPLETION YEAR (2018) WITH FULL OCCUPANCY CONDITIONS

According to the project applicant, the proposed project will be completed in 2018. In order to present a near-term 2018 traffic condition, an ambient growth rate of 0.5 percent per year was added to existing traffic volumes along with traffic from the unoccupied parcel within The Shops at Rossmoor.



1 Seal Beach Blvd/I-405 SB Ramps	2 Seal Beach Blvd/I-405NB Ramps	3 Seal Beach Blvd/Lampson Av	4 Seal Beach Blvd/Saint Cloud Dr	5 Seal Beach Blvd/Town Center Dr
6 Seal Beach Blvd/Rossmoor Center Wy	7 Seal Beach Blvd/Bradbury Rd	8 Yellowtail Dr/Saint Cloud Dr	9 Montecito Rd/Copa De Oro Dr	10 Montecito Rd/Rossmoor Center Wy
11 Montecito Rd/Bradbury Rd	12 West Rd/Rossmoor Center Wy	13 Internal Dwy/Rossmoor Center Wy	14 Internal Dwy/Town Center Dr	15 Project Dwy/Rossmoor Center Wy

FIGURE 10

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
Unoccupied Uses Peak Hour Volumes (AM/PM)

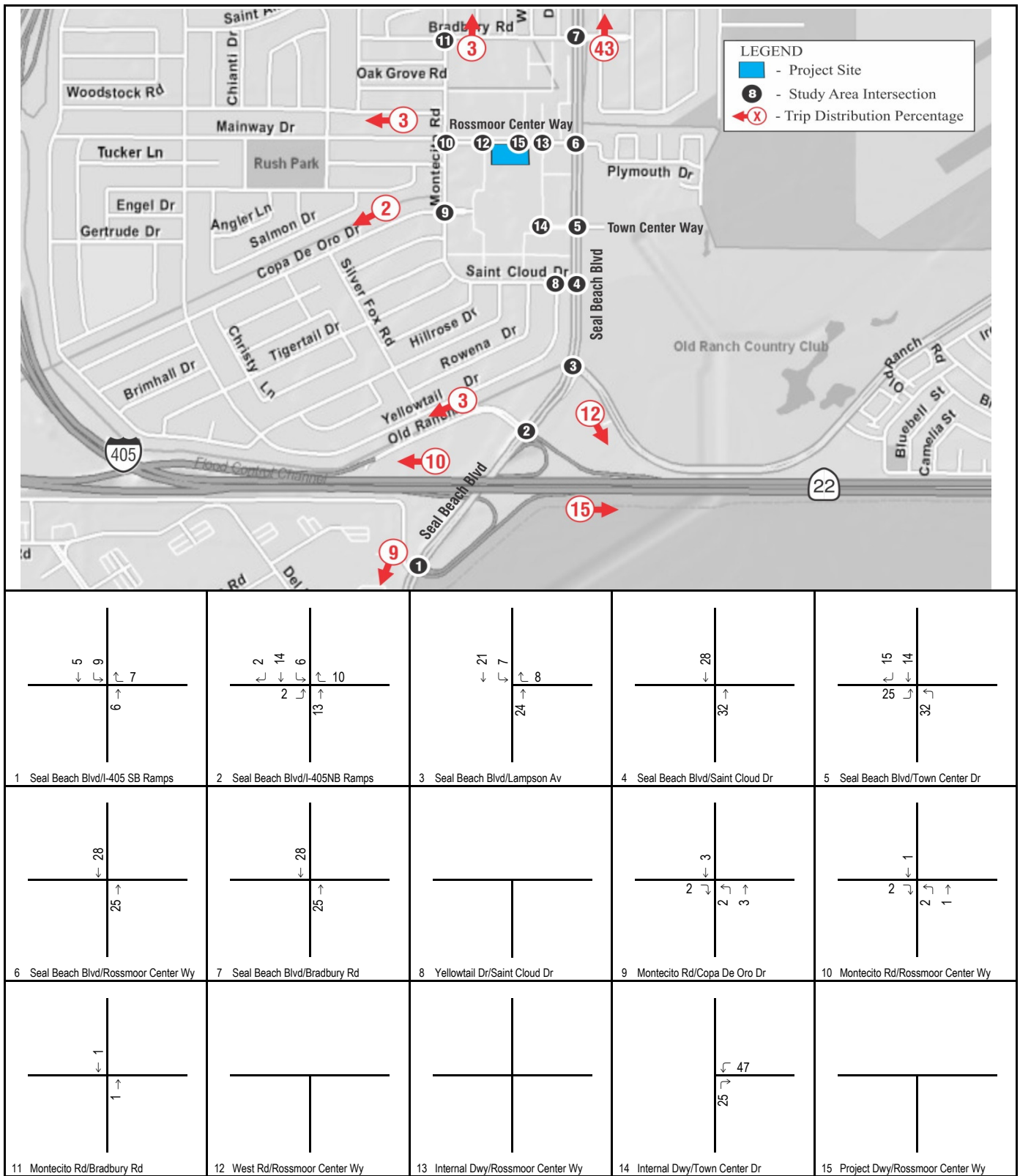
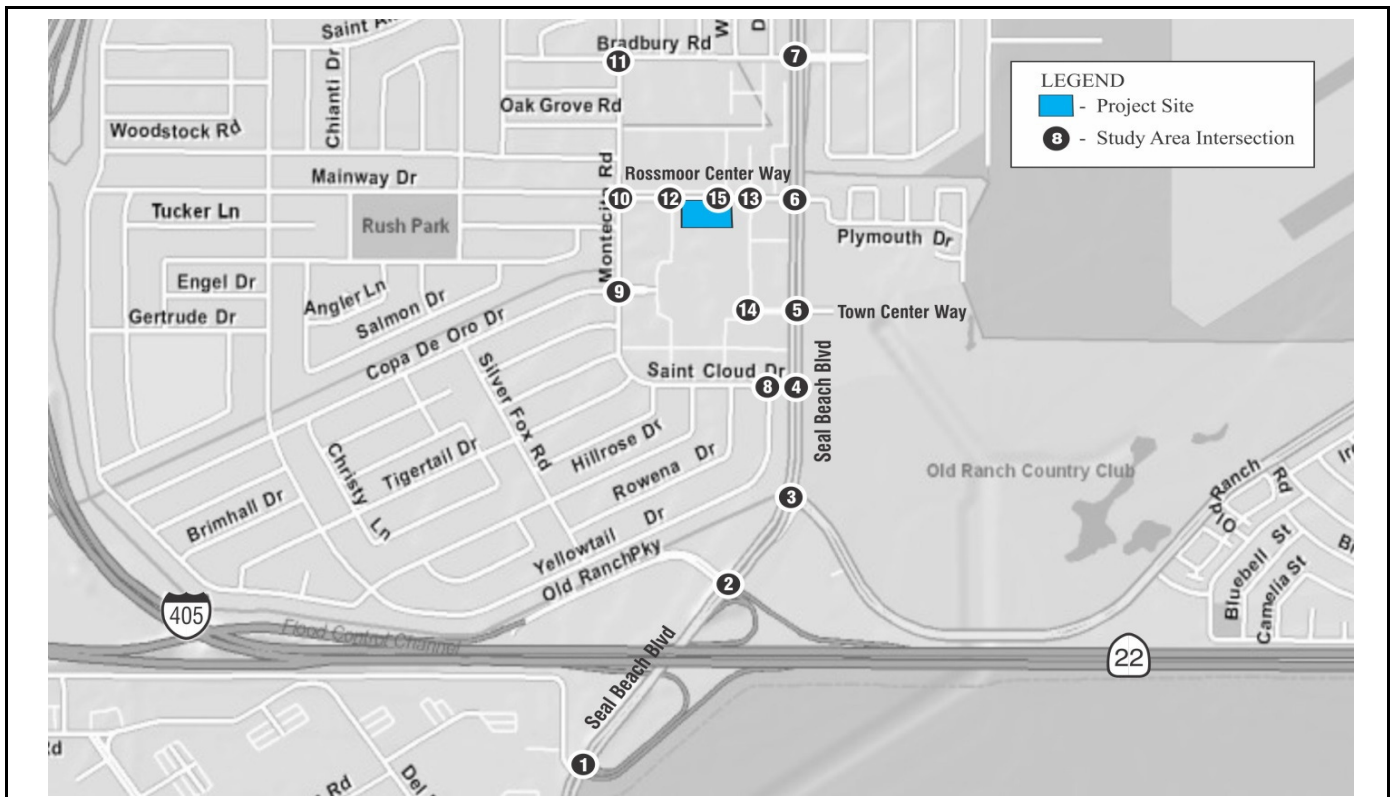


FIGURE 11

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor
Unoccupied Uses Peak Hour Volumes (Saturday)



1 Seal Beach Blvd/I-405 SB Ramps 72 / 127 87 / 166 28 / 30 16 / 20 1453 / 1069 434 / 1521 530 / 522 44 / 35 696 / 321	2 Seal Beach Blvd/I-405NB Ramps 464 / 371 9 / 77 11 / 72 5 / 87 1575 / 1447 332 / 317 110 / 41 1206 / 1546 348 / 555	3 Seal Beach Blvd/Lampson Av 1669 / 1604 301 / 634 611 / 460 702 / 540	4 Seal Beach Blvd/Saint Cloud Dr 46 / 66 106 / 86 3 / 0 567 / 385 1322 / 1666 4 / 5 2 / 5 13 / 31 65 / 193	5 Seal Beach Blvd/Town Center Dr 25 / 94 21 / 100 4 / 28 14 / 185 1356 / 1361 21 / 78 56 / 205 1627 / 1415 21 / 59 2 / 47 24 / 139 31 / 84
6 Seal Beach Blvd/Rossmoor Center Wy 70 / 190 77 / 184 7 / 1 78 / 130 1372 / 1576 19 / 36 39 / 16 10 / 1 17 / 15	7 Seal Beach Blvd/Bradbury Rd 155 / 170 270 / 162 18 / 9 97 / 88 1330 / 1698 14 / 19 23 / 11 22 / 3 70 / 48	8 Yellowtail Dr/Saint Cloud Dr 605 / 443 4 / 7 403 / 453 28 / 53	9 Montecito Rd/Copa De Oro Dr 27 / 44 54 / 30 6 / 4 126 / 47 286 / 234 0 / 7 1 / 10 3 / 5 2 / 2	10 Montecito Rd/Rossmoor Center Wy 65 / 40 97 / 42 61 / 35 88 / 55 203 / 181 24 / 44 31 / 71 42 / 39 13 / 36
11 Montecito Rd/Bradbury Rd 2 / 3 5 / 1 24 / 17 2 / 2 132 / 124 74 / 41 146 / 64 18 / 25 135 / 148	12 West Rd/Rossmoor Center Wy 99 / 90 7 / 17 86 / 136 6 / 22	13 Internal Dwy/Rossmoor Center Wy 15 / 30 16 / 34 35 / 22 98 / 72 14 / 27 59 / 75 51 / 84 58 / 106 73 / 183	14 Internal Dwy/Town Center Dr 15 / 54 16 / 43 28 / 231 37 / 292 71 / 86	15 Project Dwy/Rossmoor Center Wy 110 / 88 0 / 1 95 / 165 9 / 20

FIGURE 12

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
Existing (2016) with Full Occupancy Peak Hour Volumes (AM/PM)

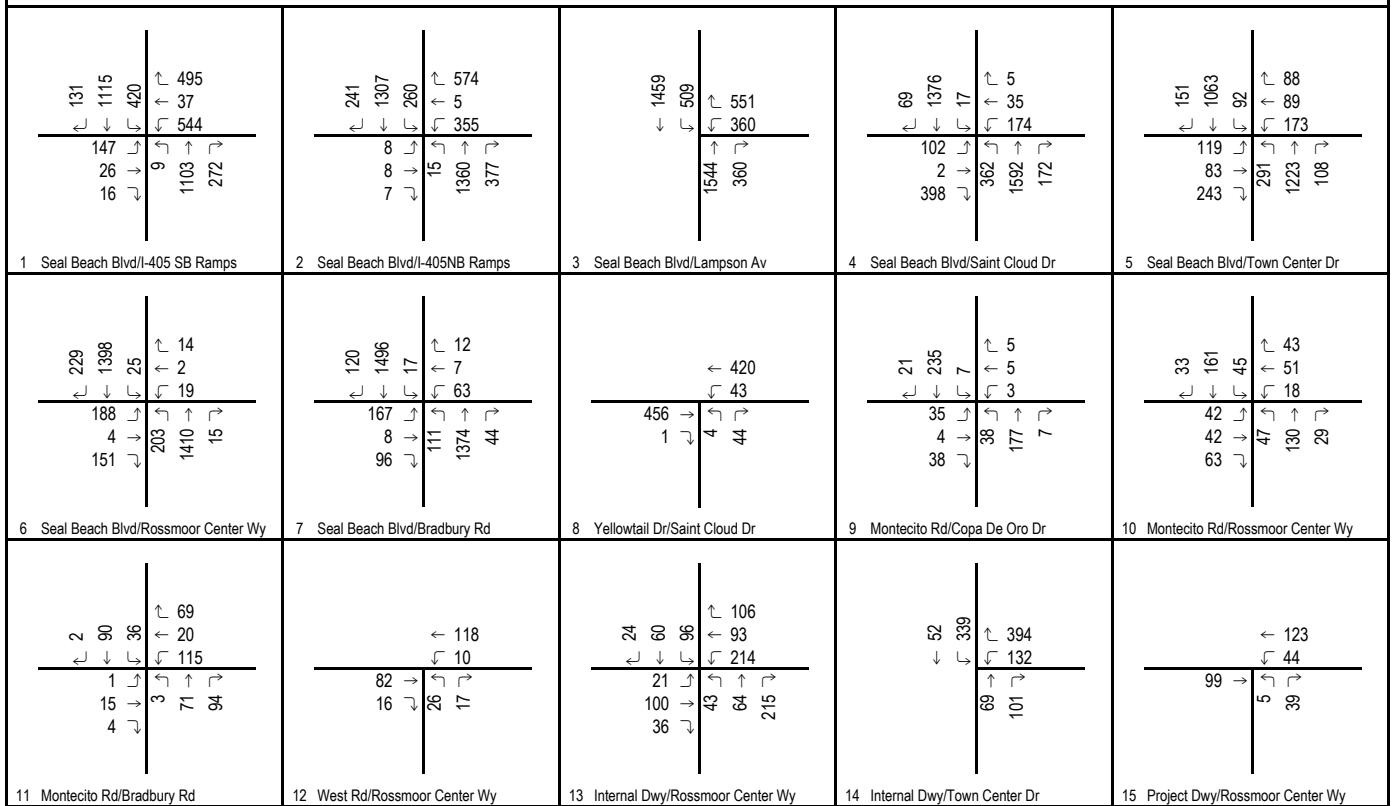
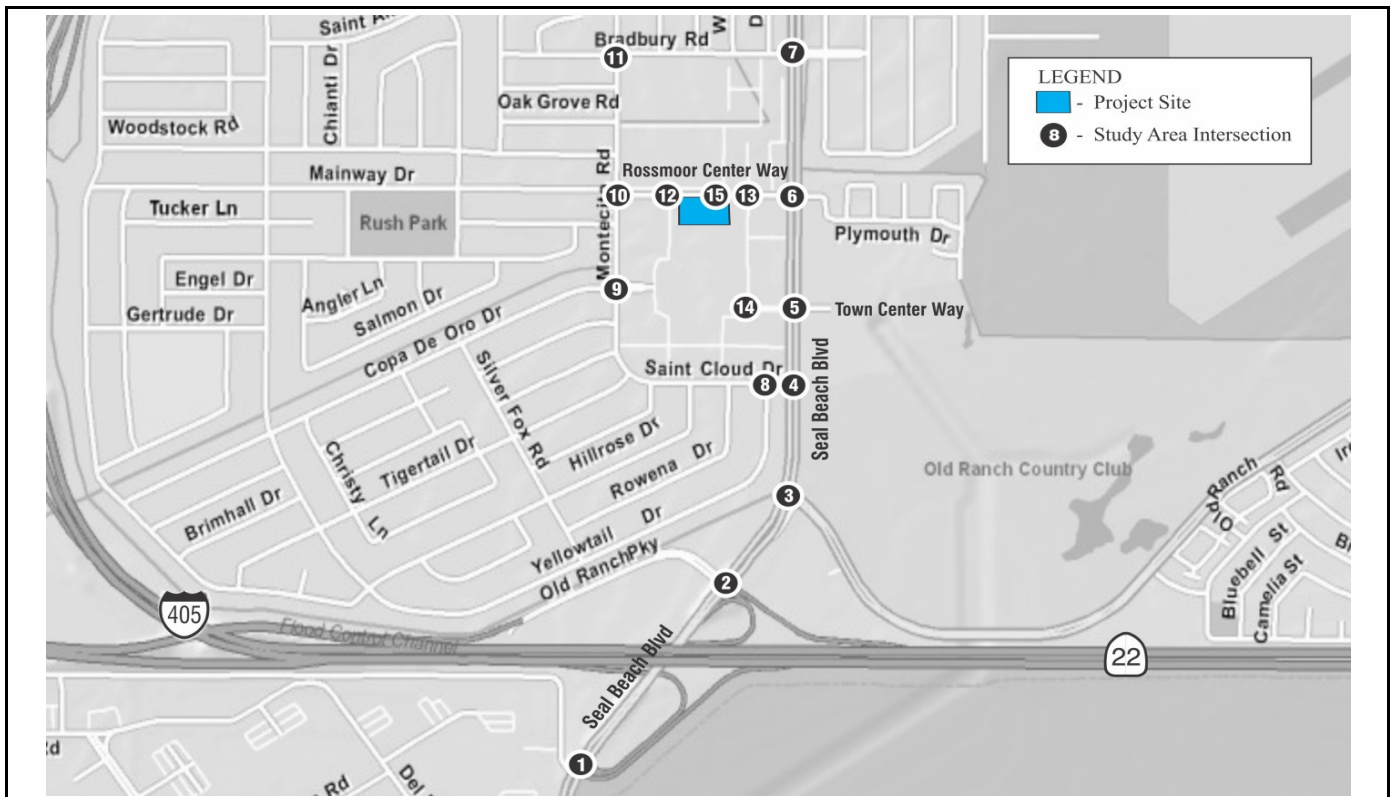


FIGURE 13

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor
Existing (2016) with Full Occupancy Peak Hour Volumes (Saturday)

Table G: Existing (2016) with Full Occupancy Peak Hour Intersection Level of Service Summary

Intersection		Existing (2016) + Full Occupancy						Existing (2016) + Full Occupancy + Project								
		AM		PM		Sat		AM			PM			Sat		
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU
1	Seal Beach Boulevard/I-405 SB On/Off Ramps ¹	42.1	D	42.6	D	40.4	D	41.7	D	-	42.4	D	-	40.7	D	-
2	Seal Beach Boulevard/I-405 NB On/Off Ramps ¹	44.0	D	50.0	D	34.9	C	44.5	D	-	51.2	D	-	35.7	D	-
3	Seal Beach Boulevard/Lampson Avenue	0.812	D	0.797	C	0.774	C	0.816	D	0.004	0.804	D	0.007	0.781	C	0.007
4	Seal Beach Boulevard/Saint Cloud Drive	0.631	B	0.720	C	0.654	C	0.634	B	0.003	0.727	C	0.007	0.660	B	0.006
5	Seal Beach Boulevard/Town Center Drive	0.501	A	0.752	C	0.841	C	0.503	A	0.002	0.757	C	0.005	0.846	D	0.005
6	Seal Beach Boulevard/Rossmoor Center Way	0.539	A	0.691	B	0.673	B	0.548	A	0.009	0.733	C	0.042	0.705	C	0.032
7	Seal Beach Boulevard/Bradbury Road	0.731	C	0.684	B	0.632	B	0.733	C	0.002	0.690	B	0.006	0.636	B	0.004
8	Yellow Tail Drive/Saint Cloud Drive*	13.9	B	10.9	B	10.8	B	13.9	B	-	10.9	B	-	11.0	B	-
9	Montecito Road/Copa De Oro Drive*	11.4	B	9.6	A	8.8	A	11.4	B	-	9.6	A	-	8.8	A	-
10	Montecito Road/Rossmoor Center Way*	11.9	B	10.2	B	9.7	A	12.0	B	-	10.3	B	-	9.8	A	-
11	Montecito Road/Bradbury Road*	12.8	B	10.1	B	8.9	A	12.8	B	-	10.1	B	-	8.9	A	-
12	West Road/Rossmoor Center Way*	7.7	A	8.0	A	7.8	A	7.7	A	-	8.1	A	-	7.8	A	-
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.0	B	18.0	C	8.9	A	-	15.8	C	-	22.9	C	-
14	Internal Driveway/Town Center Drive*	7.8	A	11.6	B	16.0	C	7.8	A	-	11.6	B	-	16.0	C	-
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.1	A	9.2	A	9.1	A	-	9.3	A	-	9.5	A	-

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

¹ HCM Methodology-consistent with Caltrans requirements

Table H: Existing (2016) With Full Occupancy Peak Hour Roadway Level of Service Summary

Roadway	Segment	Direction	Existing (2016) + Full Occupancy									Existing (2016) + Full Occupancy + Project								
			AM			PM			Saturday Mid-day			AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	NB	45.0	16.8	B	45.0	18.1	C	45.0	15.6	B	45.0	16.9	B	45.0	18.3	C	45.0	15.8	B
		SB	45.0	18.1	C	45.0	16.5	B	45.0	14.1	B	45.0	18.2	C	45.0	16.7	B	45.0	14.3	B
	Lampson Avenue and Saint Cloud Drive	NB	45.0	19.7	C	45.0	18.5	C	45.0	18.0	B*	45.0	19.9	C	45.0	18.8	C	45.0	18.2	C
		SB	45.0	16.9	B	45.0	17.1	B	45.0	15.1	B	45.0	17.0	B	45.0	17.3	B	45.0	15.3	B
	Saint Cloud Drive and Town Center Drive	NB	45.0	14.8	B	45.0	14.8	B	45.0	14.3	B	45.0	14.9	B	45.0	15.0	B	45.0	14.5	B
		SB	45.0	11.2	B	45.0	13.0	B	45.0	11.5	B	45.0	11.3	B	45.0	13.2	B	45.0	11.6	B
	Town Center Drive and Rossmoor Center Way	NB	45.0	13.6	B	45.0	13.2	B	45.0	12.6	B	45.0	13.7	B	45.0	13.5	B	45.0	12.8	B
		SB	45.0	11.4	B	45.0	12.5	B	45.0	11.4	B	45.0	11.5	B	45.0	12.7	B	45.0	11.6	B
	Rossmoor Center Way and Bradbury Road	NB	45.0	13.3	B	45.0	13.2	B	45.0	12.8	B	45.0	13.4	B	45.0	13.4	B	45.0	13.0	B
		SB	45.0	11.8	B	45.0	14.2	B	45.0	13.0	B	45.0	11.9	B	45.0	14.4	B	45.0	13.2	B
Saint Cloud Drive*	Bradbury Road and Rossmoor Way	NB	45.0	14.9	B	45.0	13.9	B	45.0	12.6	B	45.0	15.0	B	45.0	14.1	B	45.0	12.8	B
		SB	45.0	12.6	B	45.0	15.1	B	45.0	13.0	B	45.0	12.7	B	45.0	15.4	B	45.0	13.2	B
Saint Cloud Drive*	Seal Beach Boulevard and Yellowtail Drive		22.8	-	D	26.5	-	C	26.7	-	C	22.8	-	D	26.5	-	C	26.7	-	C
Montecito Road*	Yellowtail Drive and Copa De Oro Drive		26.0	-	C	28.8	-	B	29.2	-	B	25.9	-	C	28.7	-	B	29.2	-	B
	Copa De Oro Drive and Mainway Drive		30.0	-	B	30.1	-	B	31.1	-	A	30.0	-	B	30.1	-	B	31.0	-	A
	Mainway Drive and Bradbury Road		29.1	-	B	30.3	-	B	31.2	-	A	29.1	-	B	30.2	-	B	31.2	-	A
Rossmoor Center Way**																				
	Montecito Road and Seal Beach Boulevard		27.6	-	A	25.7	-	A	25.2	-	B	27.4	-	A	25.1	-	B	24.7	-	B

NB = Northbound, SB = Southbound

*Analyzed as Two Lane Roadways with a speed limit of 35 MPH

**Analyzed as Two Lane Roadway with a speed limit of 30 MPH

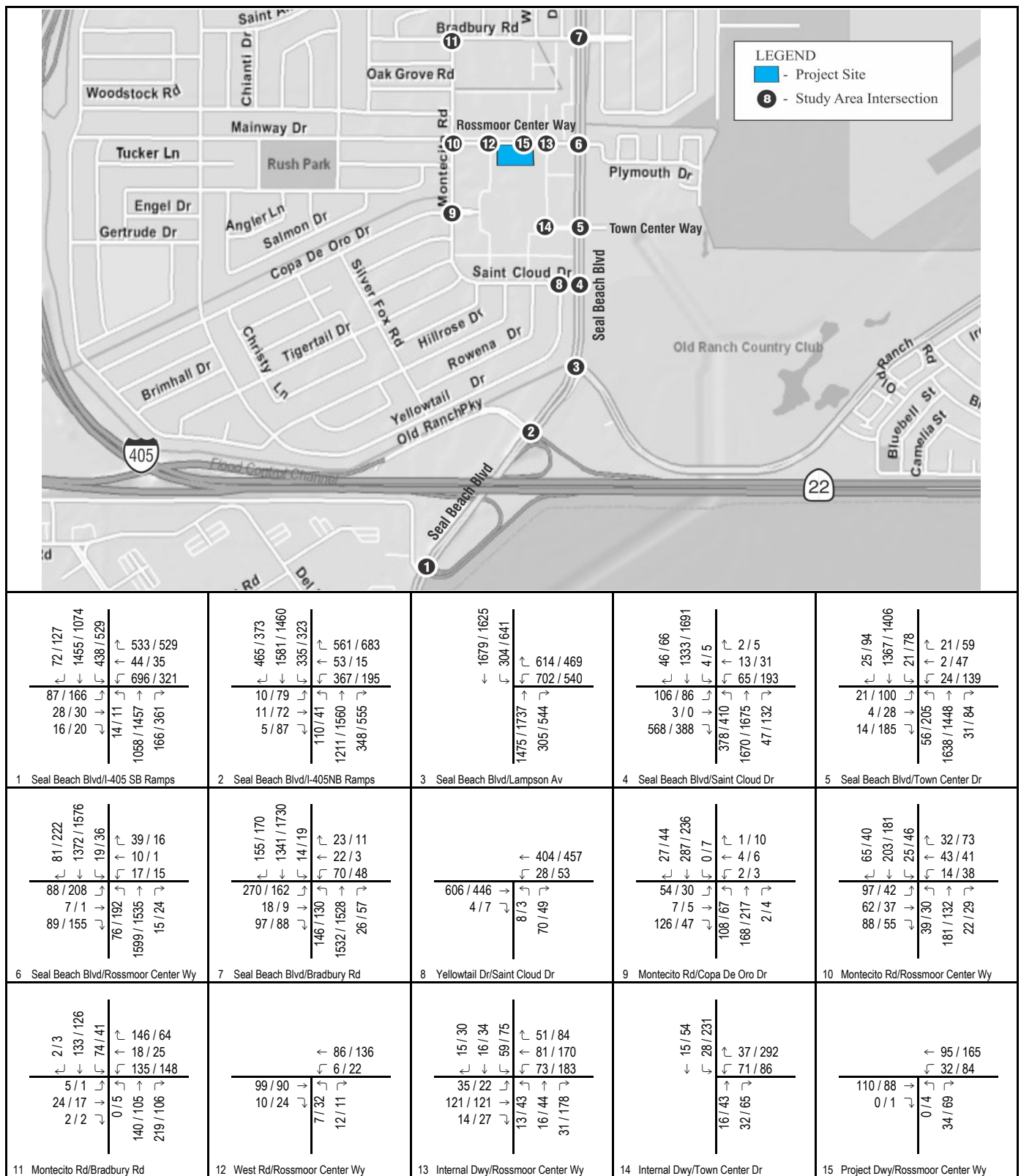


FIGURE 14

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
Existing (2016) with Full Occupancy plus Project Peak Hour Volumes (AM/PM)

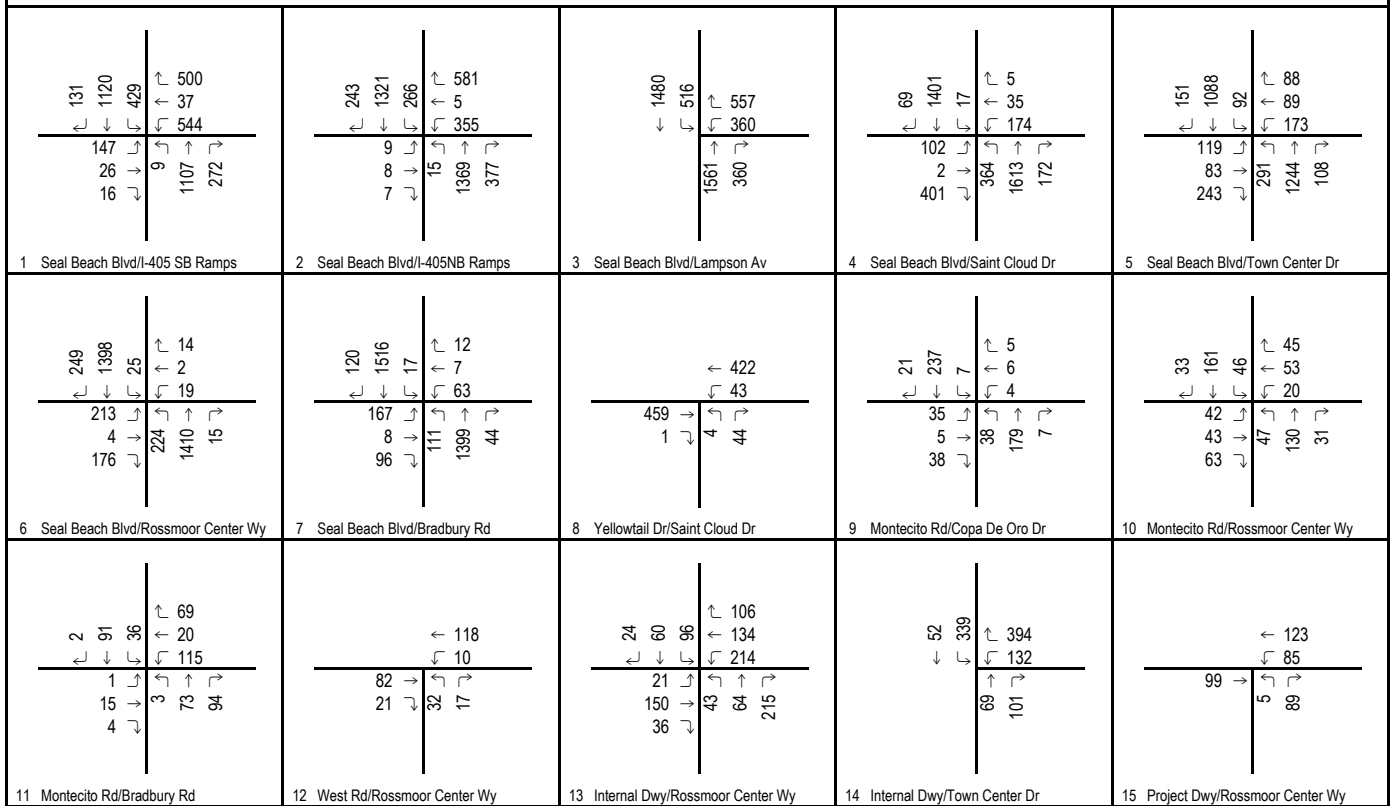
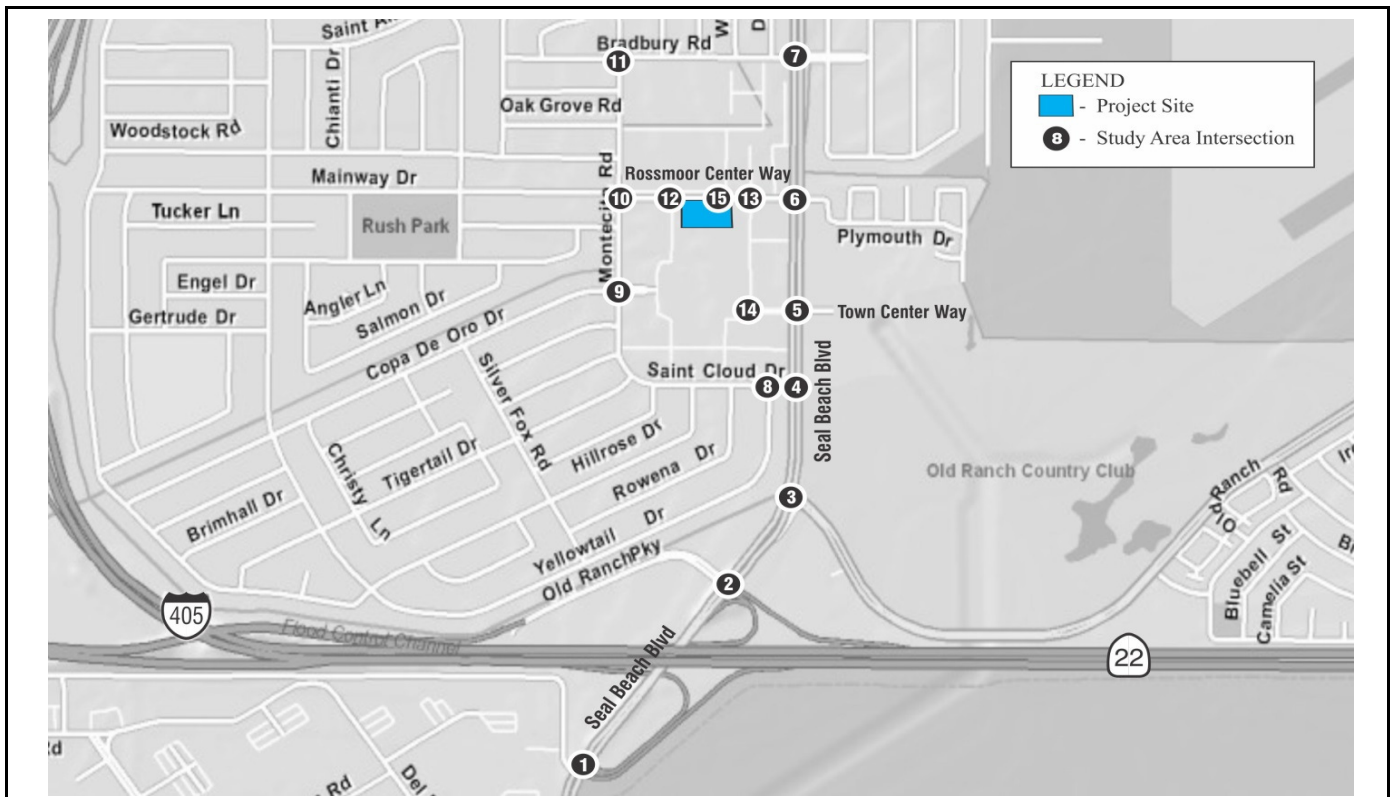


FIGURE 15

Legend

123 Saturday Volume

Health Club within The Shops at Rossmoor
Existing (2016) with Full Occupancy plus Project Peak Hour Volumes (Saturday)

This growth rate is consistent with the growth rate utilized in the Previous Analyses, which was reached through consultation with City staff.

In addition to the inclusion of an ambient growth rate, anticipated traffic from nearby planned developments that may utilize the study area roadway facilities by the time the project is planned to be built and operational was considered in this analysis. At the time the Previous Analyses was conducted, City staff provided information on one nearby cumulative development of a new car wash within the Mobil gas station on the northeast corner of Seal Beach Boulevard and Rossmoor Center Way/Plymouth Drive. Additional traffic from this development was not included in this analysis as the traffic counts taken in October 2016 have taken into account the now existing car wash within the Mobil gas station. The neighboring City of Los Alamitos was also contacted for information on anticipated developments that may contribute traffic to study area facilities. Based on information provided by City of Los Alamitos staff, traffic from the following cumulative projects in the City of Los Alamitos was included in this analysis:

- Village 605 – 3131 Katella Avenue
 - Replacement of existing office use with the construction of a 113,800 sf neighborhood retail center within seven buildings.
- Fairfield Inn & Suites – 10650 Los Alamitos Boulevard
 - Construction of a 108-room hotel.

Specific traffic information from these cumulative projects was provided by City of Los Alamitos staff. Figures 16 and 17 show the resulting Project Completion Year (2018) with Full Occupancy conditions weekday a.m., p.m., and weekend midday peak hour traffic volumes.

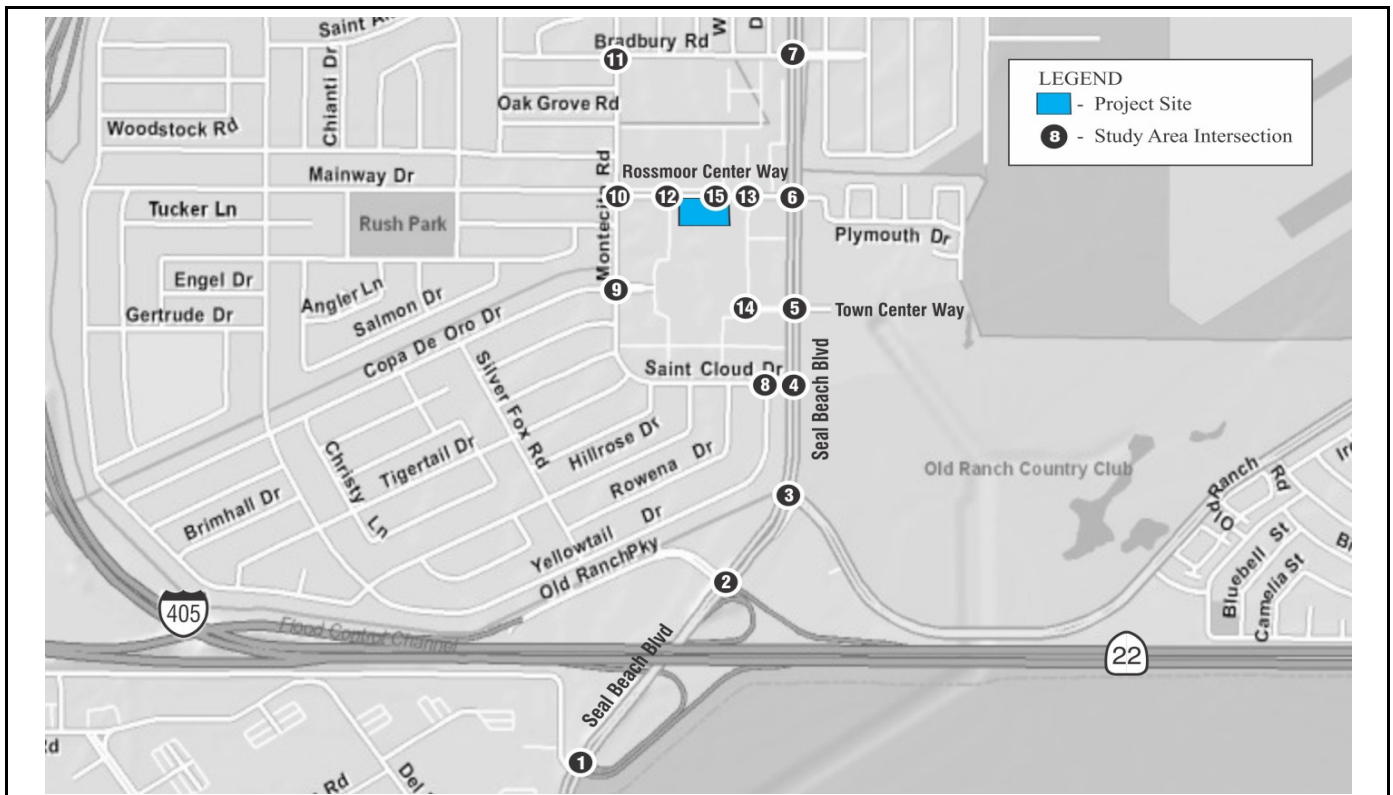
Traffic from the proposed project was then added to assess any near-term deficiencies. Figures 18 and 19 show Project Completion Year (2018) with Full Occupancy plus Project conditions weekday a.m., p.m., and weekend midday peak hour traffic volumes.

Summaries of Project Completion Year (2018) with Full Occupancy without and with Project traffic LOS for study area intersections and roadway segments are presented in Tables I and J, respectively. As the tables show, all study area intersections and roadway segments are anticipated to operate at satisfactory LOS (D or better) under Project Completion Year (2018) with Full Occupancy conditions, without and with the proposed project.

Intersection LOS worksheets for Project Completion Year (2018) with Full Occupancy without and with Project scenarios are included in Appendix B while roadway LOS worksheets are included in Appendix C.

FUTURE (2035) GENERAL PLAN BUILDOUT CONDITIONS

Traffic conditions for the future long-range condition, corresponding to the buildout of the City's General Plan, were analyzed in the study. The traffic volumes for Future (2035) General Plan Buildout traffic conditions were developed based on an annual growth rate applied to the Existing (2016) weekday a.m., p.m., and weekend peak-hour traffic volumes at study intersections and



73 / 128 1467 / 1080 440 / 529 88 / 168 28 / 30 16 / 20 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 539 / 530 44 / 35 703 / 324 14 / 11 1067 / 1464 168 / 365 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 1 Seal Beach Blvd/I-405 SB Ramps	469 / 375 1593 / 1464 338 / 323 9 / 78 11 / 73 5 / 88 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 565 / 683 54 / 15 371 / 197 111 / 41 1222 / 1564 351 / 561 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 2 Seal Beach Blvd/I-405NB Ramps	1709 / 1628 336 / 640 1491 / 1744 308 / 549 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 617 / 481 709 / 545 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 3 Seal Beach Blvd/Lampson Av	53 / 70 1390 / 1690 4 / 5 107 / 95 3 / 0 573 / 389 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 2 / 5 13 / 31 66 / 195 381 / 410 1687 / 1691 47 / 133 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 4 Seal Beach Blvd/Saint Cloud Dr	32 / 95 1424 / 1406 21 / 79 21 / 101 4 / 28 14 / 187 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 21 / 60 2 / 47 24 / 140 56 / 207 1655 / 1470 31 / 85 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 5 Seal Beach Blvd/Town Center Dr
71 / 192 1447 / 1603 19 / 36 78 / 186 7 / 1 79 / 131 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 39 / 16 10 / 1 17 / 15 66 / 161 1627 / 1591 15 / 24 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 6 Seal Beach Blvd/Rossmoor Center Wy	172 / 177 1405 / 1726 29 / 24 282 / 173 18 / 9 98 / 89 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 29 / 20 22 / 3 71 / 48 147 / 131 1548 / 1560 26 / 58 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 7 Seal Beach Blvd/Bradbury Rd	611 / 447 4 / 7 8 / 3 71 / 49 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 407 / 458 28 / 54 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 8 Yellowtail Dr/Saint Cloud Dr	27 / 44 289 / 236 0 / 7 55 / 30 6 / 4 127 / 47 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 1 / 10 3 / 5 2 / 2 109 / 68 169 / 216 2 / 3 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 9 Montecito Rd/Copa De Oro Dr	66 / 40 205 / 183 24 / 44 98 / 42 62 / 35 89 / 56 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 31 / 72 42 / 39 13 / 36 39 / 30 183 / 133 21 / 26 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 10 Montecito Rd/Rossmoor Center Wy
2 / 3 133 / 125 75 / 41 5 / 1 24 / 17 2 / 2 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 147 / 65 18 / 25 136 / 149 0 / 5 140 / 104 221 / 107 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 11 Montecito Rd/Bradbury Rd	100 / 91 7 / 17 4 / 26 12 / 11 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 87 / 137 6 / 22 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 12 West Rd/Rossmoor Center Wy	15 / 30 16 / 34 60 / 76 35 / 22 99 / 73 14 / 27 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 52 / 85 59 / 107 74 / 185 13 / 43 16 / 44 31 / 180 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 13 Internal Dwy/Rossmoor Center Wy	15 / 55 28 / 233 16 / 43 32 / 66 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 37 / 295 71 / 86 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 14 Internal Dwy/Town Center Dr	111 / 89 0 / 1 0 / 4 11 / 20 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 96 / 167 9 / 20 ↑ ↓ ↔ ↑ ↓ ↔ ↑ ↓ ↔ 15 Project Dwy/Rossmoor Center Wy

FIGURE 16

Legend

123 / 456

AM / PM Volume

Health Club within The Shops at Rossmoor

Project Completion Year (2018) with Full Occupancy Peak Hour Volumes (AM/PM)

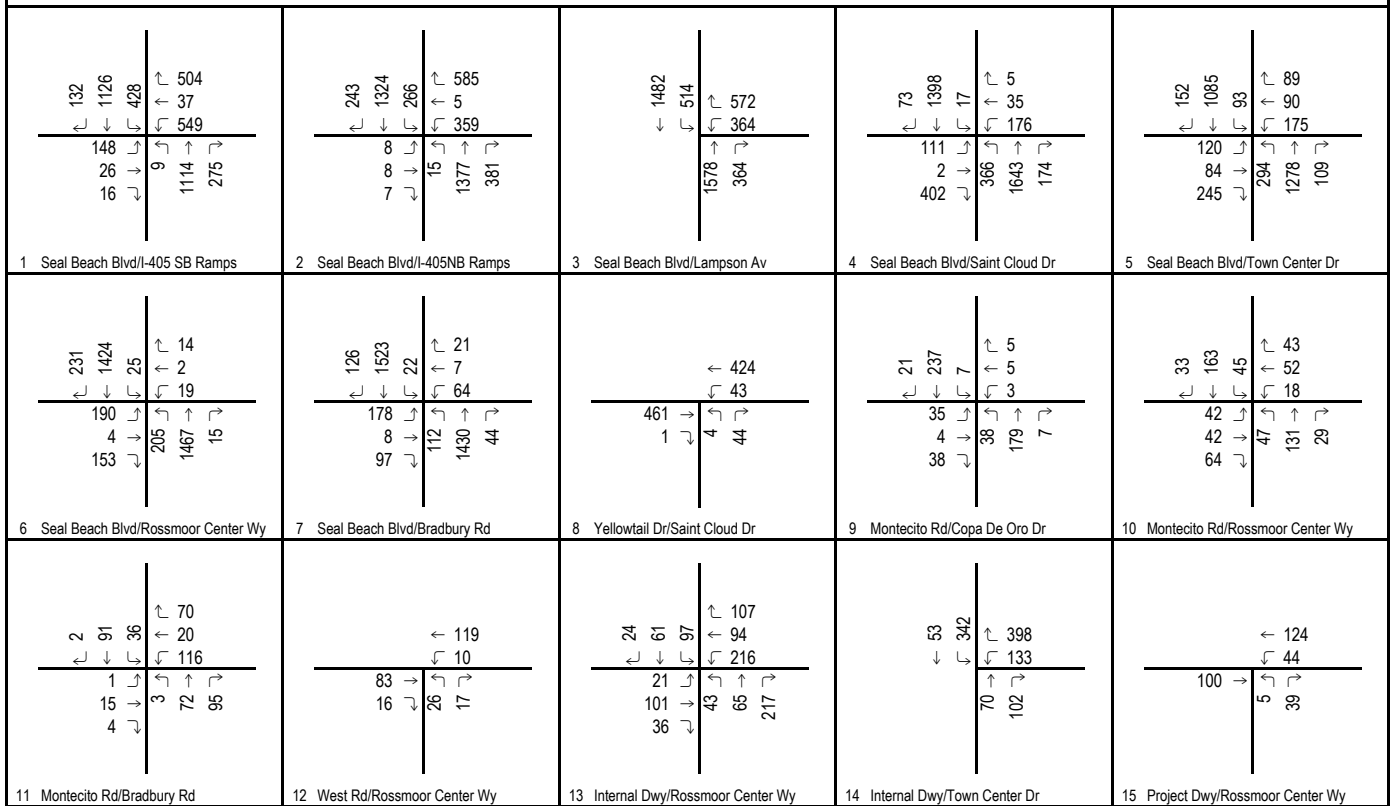
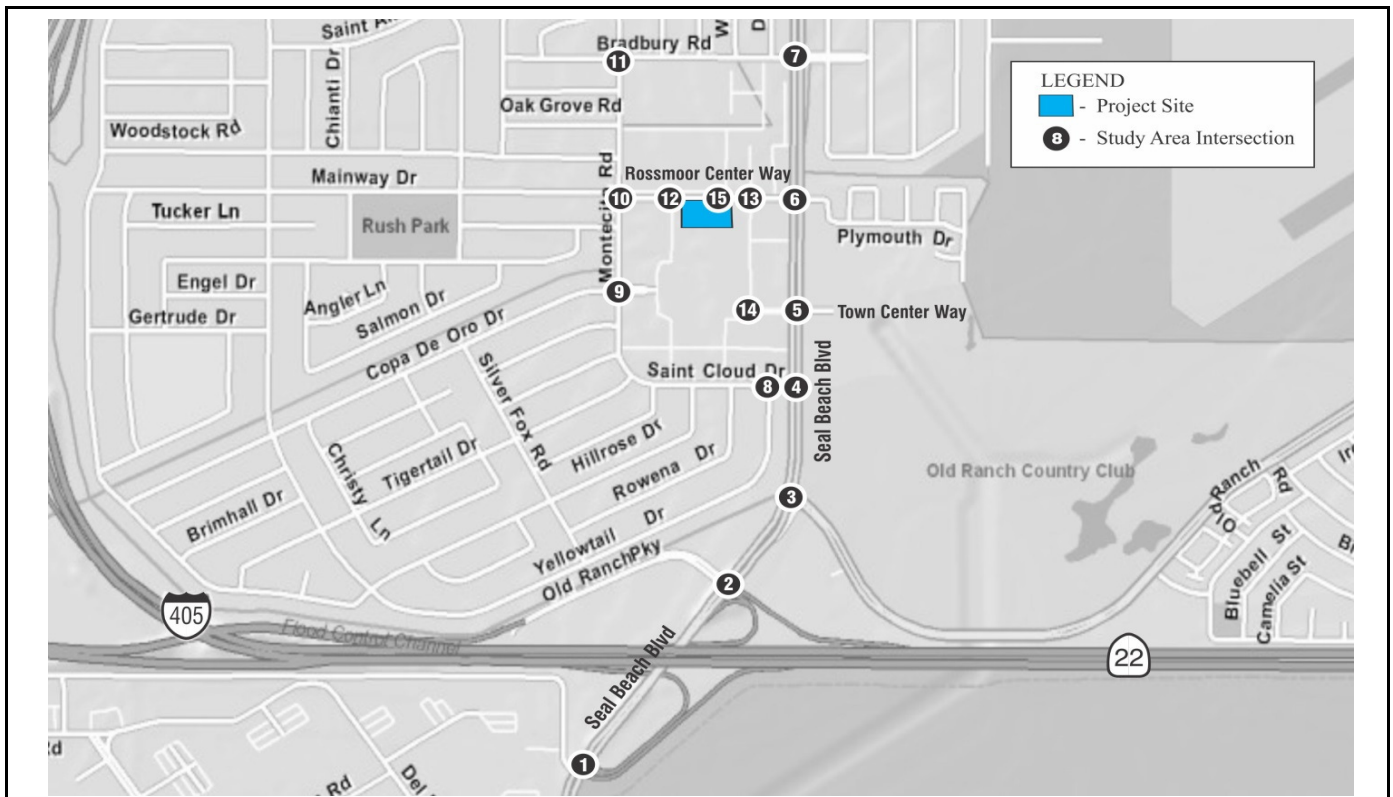
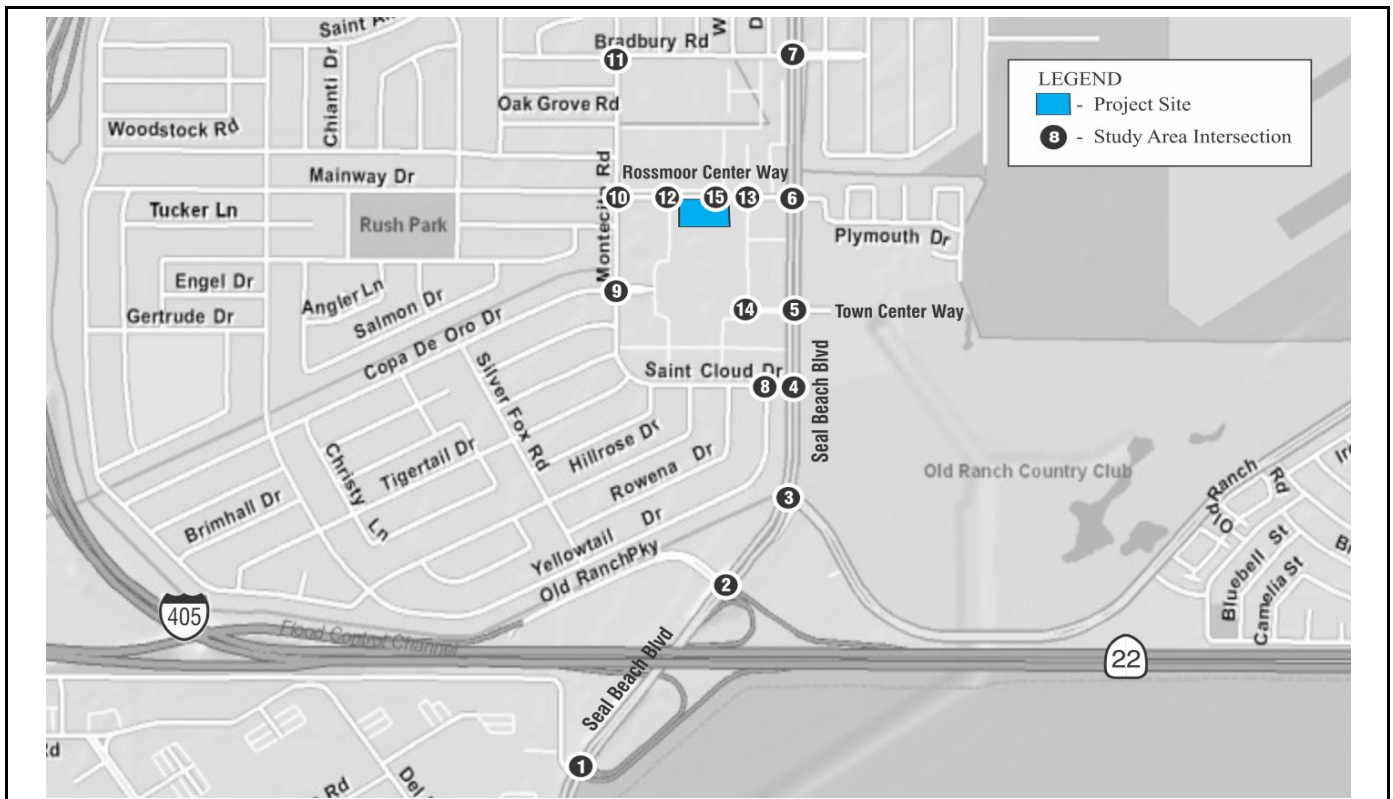


FIGURE 17

Legend

123 Saturday Volume Health Club within The Shops at Rossmoor
 Project Completion Year (2018) with Full Occupancy Peak Hour Volumes (Saturday)



1 Seal Beach Blvd/I-405 SB Ramps 73 / 128 88 / 168 28 / 30 16 / 20 542 / 537 44 / 35 703 / 324 1069 / 1471 168 / 365	2 Seal Beach Blvd/I-405NB Ramps 470 / 377 10 / 80 11 / 73 5 / 88 1599 / 1477 341 / 329 111 / 41 1227 / 1578 351 / 561	3 Seal Beach Blvd/Lampson Av 1719 / 1649 339 / 647 620 / 490 709 / 545 1501 / 1771 308 / 549	4 Seal Beach Blvd/Saint Cloud Dr 53 / 70 107 / 95 3 / 0 574 / 392 1401 / 1715 4 / 5 2 / 5 13 / 31 66 / 195	5 Seal Beach Blvd/Town Center Dr 32 / 95 21 / 101 4 / 28 14 / 187 1435 / 1431 21 / 79 56 / 207 1666 / 1503 21 / 60 2 / 47 24 / 140 31 / 85
6 Seal Beach Blvd/Rossmoor Center Wy 82 / 224 89 / 210 7 / 1 90 / 156 1447 / 1603 19 / 36 39 / 16 10 / 1 17 / 15	7 Seal Beach Blvd/Bradbury Rd 172 / 177 282 / 173 18 / 9 98 / 89 1416 / 1758 29 / 24 29 / 20 22 / 3 71 / 48	8 Yellowtail Dr/Saint Cloud Dr 612 / 450 4 / 7 408 / 462 28 / 54 8 / 3 71 / 49	9 Montecito Rd/Copa De Oro Dr 27 / 44 55 / 30 7 / 5 127 / 47 290 / 238 0 / 7 1 / 10 4 / 6 2 / 3	10 Montecito Rd/Rossmoor Center Wy 66 / 40 98 / 42 63 / 37 89 / 56 205 / 183 25 / 46 32 / 74 43 / 41 14 / 38
11 Montecito Rd/Bradbury Rd 2 / 3 5 / 1 24 / 17 2 / 2 134 / 127 75 / 41 147 / 65 18 / 25 136 / 149	12 West Rd/Rossmoor Center Wy 100 / 91 10 / 24 87 / 137 6 / 22 7 / 32 12 / 11	13 Internal Dwy/Rossmoor Center Wy 15 / 30 35 / 22 122 / 122 14 / 27 16 / 34 60 / 76 52 / 85 82 / 171 74 / 185	14 Internal Dwy/Town Center Dr 15 / 55 16 / 43 28 / 233 37 / 295 71 / 86 32 / 66	15 Project Dwy/Rossmoor Center Wy 111 / 89 0 / 1 96 / 167 32 / 84 0 / 4 34 / 89

FIGURE 18

Legend

123 / 456

AM / PM Volume

Project Completion Year (2018) with Full Occupancy plus Project Peak Hour Volumes (AM/PM)

Health Club within The Shops at Rossmoor

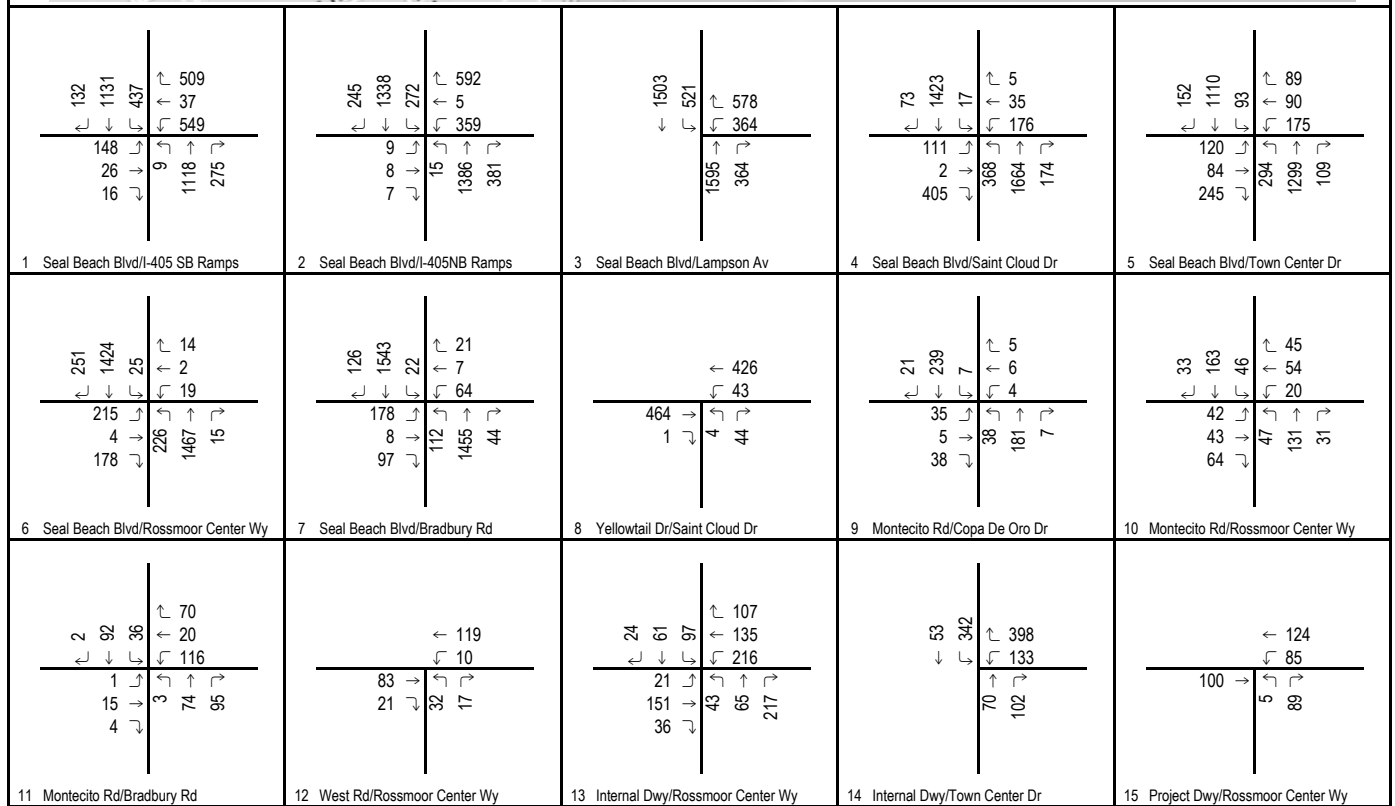
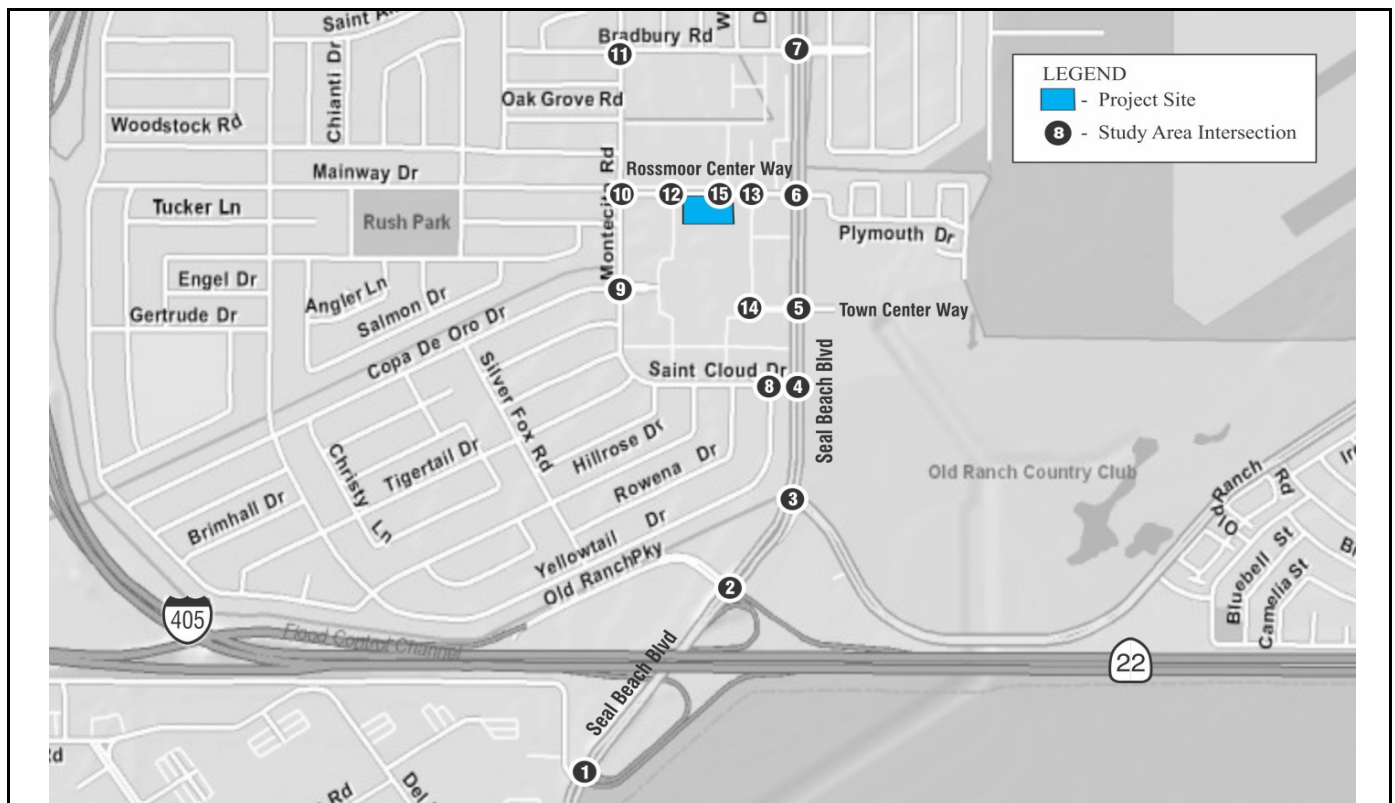


FIGURE 19

Legend

123 Saturday Volume
 Project Completion Year (2018) with Full Occupancy plus Project Peak Hour Volumes (Saturday)

Health Club within The Shops at Rossmoor

Table I: Project Completion Year (2018) Peak Hour Intersection Level of Service Summary

Intersection		Project Completion Year (2018)						Project Completion Year (2018) + Project								
		AM		PM		Sat		AM			PM			Sat		
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU
1	Seal Beach Boulevard/I-405 SB On/Off Ramps ¹	41.7	D	42.9	D	41.1	D	41.4	D	-	42.7	D	-	41.5	D	-
2	Seal Beach Boulevard/I-405 NB On/Off Ramps ¹	45.3	D	51.3	D	35.7	D	45.8	D	-	52.5	D	-	36.5	D	-
3	Seal Beach Boulevard/Lampson Avenue	0.822	D	0.807	D	0.794	D	0.826	D	0.004	0.814	D	0.007	0.802	D	0.008
4	Seal Beach Boulevard/Saint Cloud Drive	0.650	B	0.734	C	0.668	C	0.653	B	0.003	0.740	C	0.006	0.673	B	0.005
5	Seal Beach Boulevard/Town Center Drive	0.507	A	0.761	C	0.851	C	0.509	A	0.002	0.766	C	0.005	0.856	D	0.005
6	Seal Beach Boulevard/Rossmoor Center Way	0.549	A	0.699	B	0.681	B	0.566	A	0.017	0.741	C	0.042	0.713	C	0.032
7	Seal Beach Boulevard/Bradbury Road	0.759	C	0.698	B	0.647	B	0.761	C	0.002	0.705	C	0.007	0.651	B	0.004
8	Yellow Tail Drive/Saint Cloud Drive*	14.0	B	10.8	B	11.0	B	14.7	B	-	10.8	B	-	11.0	B	-
9	Montecito Road/Copa De Oro Drive*	11.5	B	9.6	A	8.8	A	11.6	B	-	9.6	A	-	8.8	A	-
10	Montecito Road/Rossmoor Center Way*	12.0	B	10.3	B	9.7	A	12.1	B	-	10.4	B	-	9.8	A	-
11	Montecito Road/Bradbury Road*	12.9	B	10.1	B	8.9	A	12.9	B	-	10.2	B	-	9.0	A	-
12	West Road/Rossmoor Center Way*	7.7	A	8.0	A	7.8	A	7.7	A	-	8.1	A	-	7.8	A	-
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.2	B	18.5	C	8.9	A	-	16.1	C	-	23.7	C	-
14	Internal Driveway/Town Center Drive*	7.8	A	11.8	B	16.3	C	7.8	A	-	11.8	B	-	16.3	C	-
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.2	A	9.2	A	9.1	A	-	9.3	A	-	9.5	A	-

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

¹ HCM Methodology-consistent with Caltrans requirements

Table J: Project Completion Year (2018) With Full Occupancy Peak Hour Roadway Level of Service Summary

Roadway	Segment	Direction	Project Completion Year (2018)									Project Completion Year (2018) + Project								
			AM			PM			Saturday Mid-day			AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	NB	45.0	17.1	B	45.0	18.4	C	45.0	15.9	B	45.0	17.2	B	45.0	18.6	C	45.0	16.1	B
		SB	45.0	18.4	C	45.0	16.7	B	45.0	14.3	B	45.0	18.5	C	45.0	16.9	B	45.0	14.5	B
	Lampson Avenue and Saint Cloud Drive	NB	45.0	20.0	C	45.0	19.0	C	45.0	18.4	C	45.0	20.2	C	45.0	19.3	C	45.0	18.6	C
		SB	45.0	17.5	B	45.0	17.3	B	45.0	15.3	B	45.0	17.6	B	45.0	17.6	B	45.0	15.5	B
	Saint Cloud Drive and Town Center Drive	NB	45.0	15.1	B	45.0	15.2	B	45.0	14.7	B	45.0	15.2	B	45.0	15.4	B	45.0	14.9	B
		SB	45.0	11.8	B	45.0	13.2	B	45.0	11.7	B	45.0	11.9	B	45.0	13.4	B	45.0	11.9	B
	Town Center Drive and Rossmoor Center Way	NB	45.0	13.8	B	45.0	13.7	B	45.0	13.0	B	45.0	13.9	B	45.0	14.0	B	45.0	13.2	B
		SB	45.0	12.0	B	45.0	12.7	B	45.0	11.6	B	45.0	12.1	B	45.0	12.9	B	45.0	11.8	B
	Rossmoor Center Way and Bradbury Road	NB	45.0	13.5	B	45.0	13.6	B	45.0	13.2	B	45.0	13.6	B	45.0	13.8	B	45.0	13.4	B
		SB	45.0	12.4	B	45.0	14.4	B	45.0	13.2	B	45.0	12.5	B	45.0	14.6	B	45.0	13.4	B
Saint Cloud Drive *	Seal Beach Boulevard and Yellowtail Drive	NB	45.0	15.2	B	45.0	14.5	B	45.0	13.2	B	45.0	15.3	B	45.0	14.7	B	45.0	13.4	B
		SB	45.0	13.4	B	45.0	15.4	B	45.0	13.3	B	45.0	13.5	B	45.0	15.7	B	45.0	13.4	B
Montecito Road *	Seal Beach Boulevard and Yellowtail Drive		22.8	-	D	26.4	-	C	26.6	-	C	22.8	-	D	26.4	-	C	26.5	-	C
	Yellowtail Drive and Copa De Oro Drive		25.9	-	C	28.7	-	B	29.2	-	B	25.9	-	C	28.6	-	B	29.1	-	B
	Copa De Oro Drive and Mainway Drive		30.0	-	B	30.1	-	B	31.0	-	A	30.0	-	B	30.0	-	B	31.0	-	A
	Mainway Drive and Bradbury Road		29.0	-	B	30.2	-	B	31.2	-	A	29.0	-	B	30.2	-	B	31.1	-	A
Rossmoor Center Way **	Montecito Road and Seal Beach Boulevard		27.6	-	A	25.6	-	A	25.2	-	B	27.3	-	A	25.1	-	B	24.7	-	B

NB = Northbound, SB = Southbound

* Analyzed as Two Lane Roadways with a speed limit of 35 MPH

** Analyzed as Two Lane Roadway with a speed limit of 30 MPH

roadway segments to represent a 19-year horizon. In the Previous Analyses, the development of the Future (2035) General Plan Buildout baseline volumes were initially based on an estimated annual growth rate of 0.2 percent per year based on the growth along Seal Beach Boulevard using OCTAM. However, based on discussions with City staff, a growth rate of 0.5 percent per year was applied over the time frame between Existing and Future (2035) General Plan Buildout traffic conditions to provide a conservative traffic analysis. This analysis has forecast future volumes consistent with this previously agreed upon approach.

To account for the fully occupied retail center, the trip assignment generated earlier for the unoccupied restaurant was manually added to the Future (2035) General Plan Buildout traffic volumes to develop the volumes for the Future (2035) General Plan Buildout with Full Occupancy condition. The LOS at the study area intersections and roadway segments were identified based on these data. Figures 20 and 21 show the Future (2035) General Plan Buildout with Full Occupancy peak hour volumes at the study area intersections for weekday and weekend conditions, respectively. Intersection turning movement volumes resulting from the addition of the proposed project are shown in Figures 22 and 23 for weekday and weekend conditions, respectively.

Tables K and L present summaries of Future (2035) General Plan Buildout with Full Occupancy without and with Project LOS for study area intersections and roadway segments. As Tables K and L demonstrate, all study area intersections and roadway segments are anticipated to operate at satisfactory LOS (D or better) under Future (2035) General Plan Buildout with Full Occupancy without and with Project conditions. Intersection LOS worksheets for Future (2035) General Plan Buildout without and with Project scenarios are included in Appendix B while roadway LOS worksheets are included in Appendix C.

As Table K shows, the addition of project traffic at the intersection of Seal Beach Boulevard and Rossmoor Center Way results in an ICU increase that meets the City's threshold of significance of 0.040 during the weekday p.m. peak hour. It should be noted this intersection is anticipated to operate at an acceptable LOS C or better under all peak hours in the Future (2035) General Plan Buildout with Full Occupancy with Project conditions. As all study area intersections and roadway facilities are anticipated to operate at satisfactory LOS from Existing (2016) to Future (2035) General Plan Buildout with Full Occupancy plus Project traffic conditions, operational improvements aimed at alleviating LOS deficiencies are not warranted and have not been recommended.

Existing queuing issues that occur in the northbound left-turn lane at the intersection of Seal Beach Boulevard and Rossmoor Center Way are anticipated to be alleviated by the project's proposed improvement to the northbound left-turn lane. Although this northbound left-turn queuing is an existing concern, the project will improve the stacking distance to alleviate existing and anticipated queues.

ON-SITE CIRCULATION AND QUEUING

This section presents the results of the site access assessment conducted for Existing (2016) with Full Occupancy without and with Project conditions. As presented previously in this report, both project driveways and site-adjacent intersections are anticipated to operate at satisfactory LOS for all analysis scenarios.

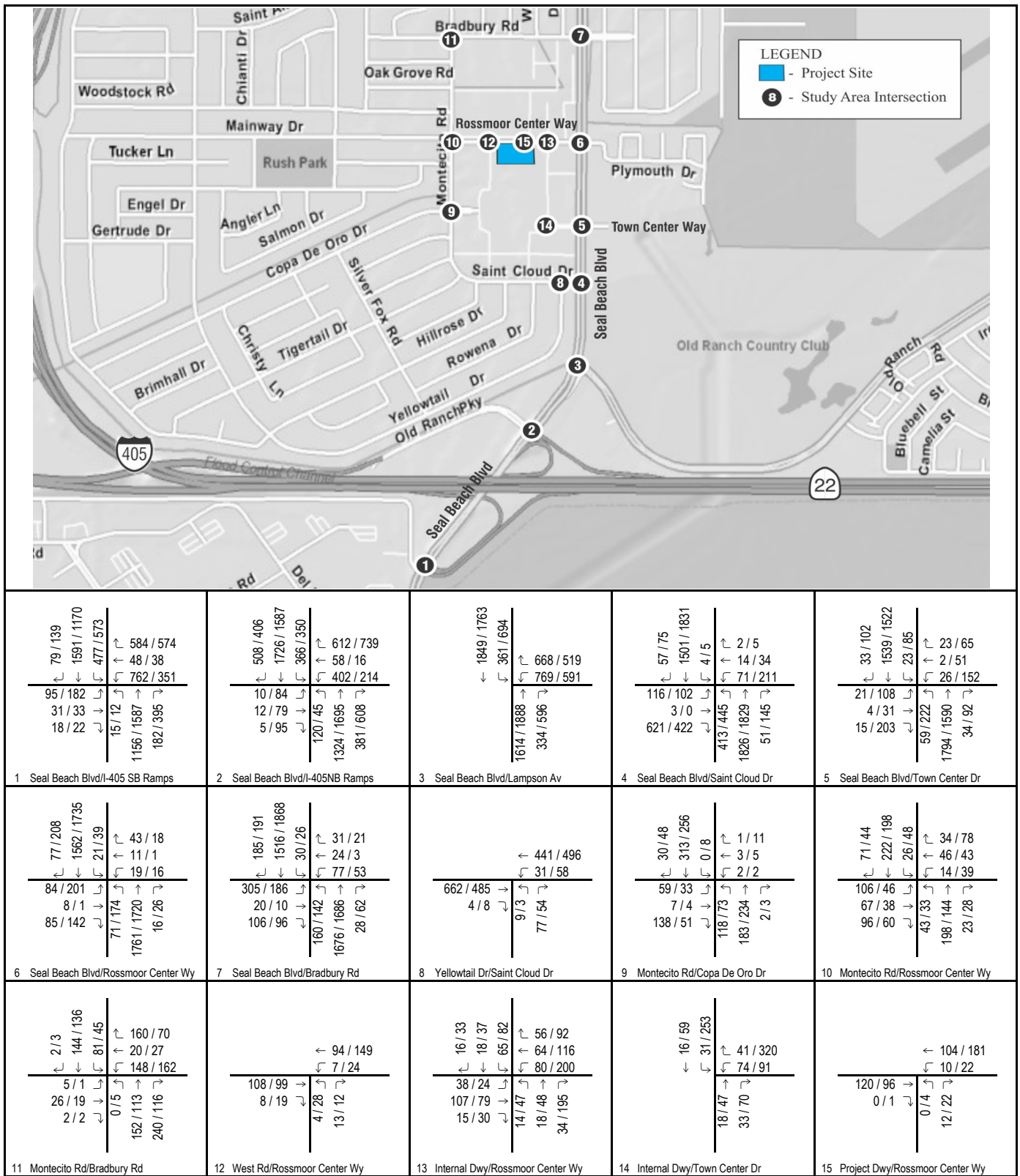


FIGURE 20

Legend

123 / 456

AM / PM Volume

Health Club within The Shops at Rossmoor

Future (2035) General Plan Buildout with Full Occupancy Peak Hour Volumes (AM/PM)

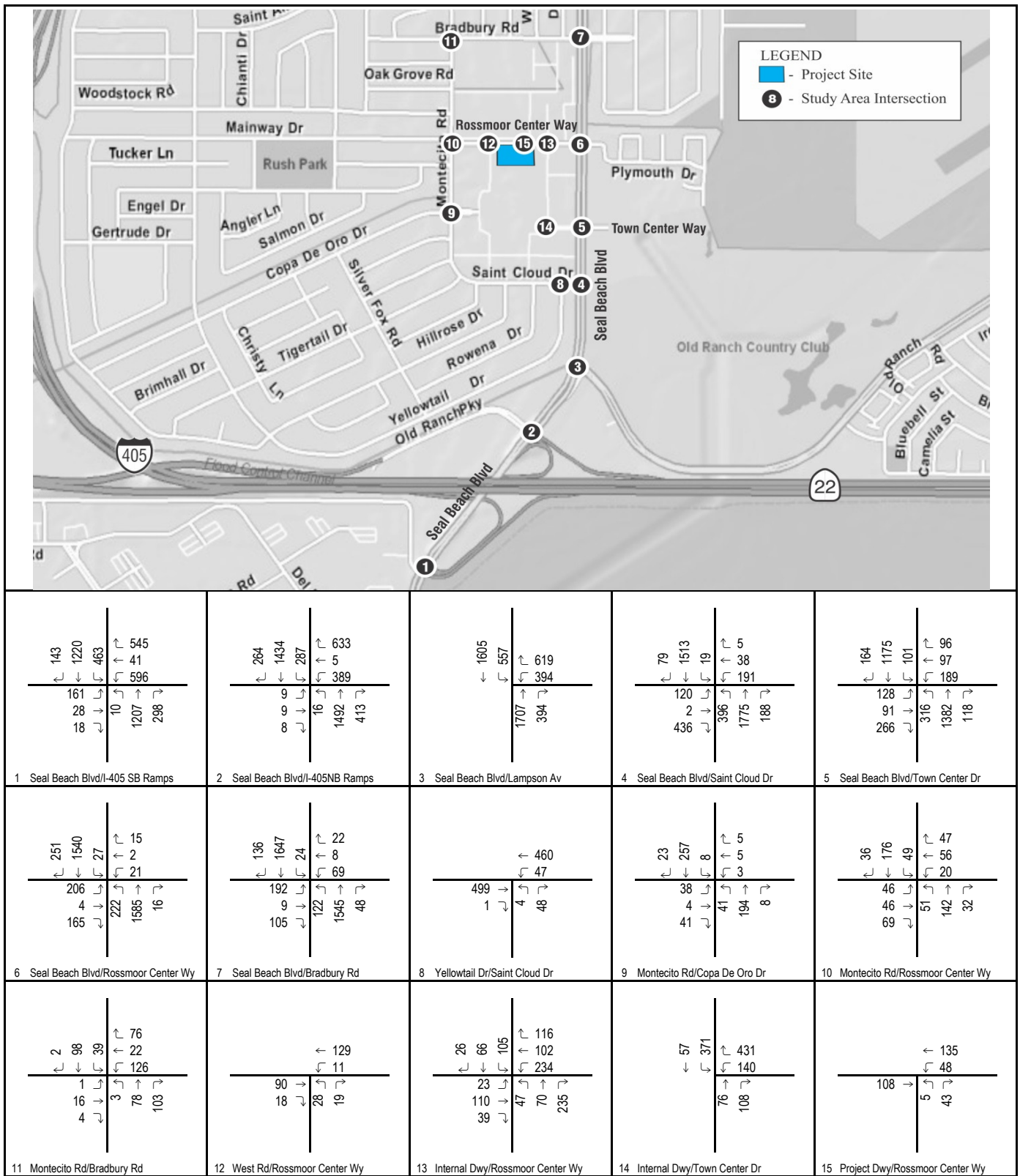
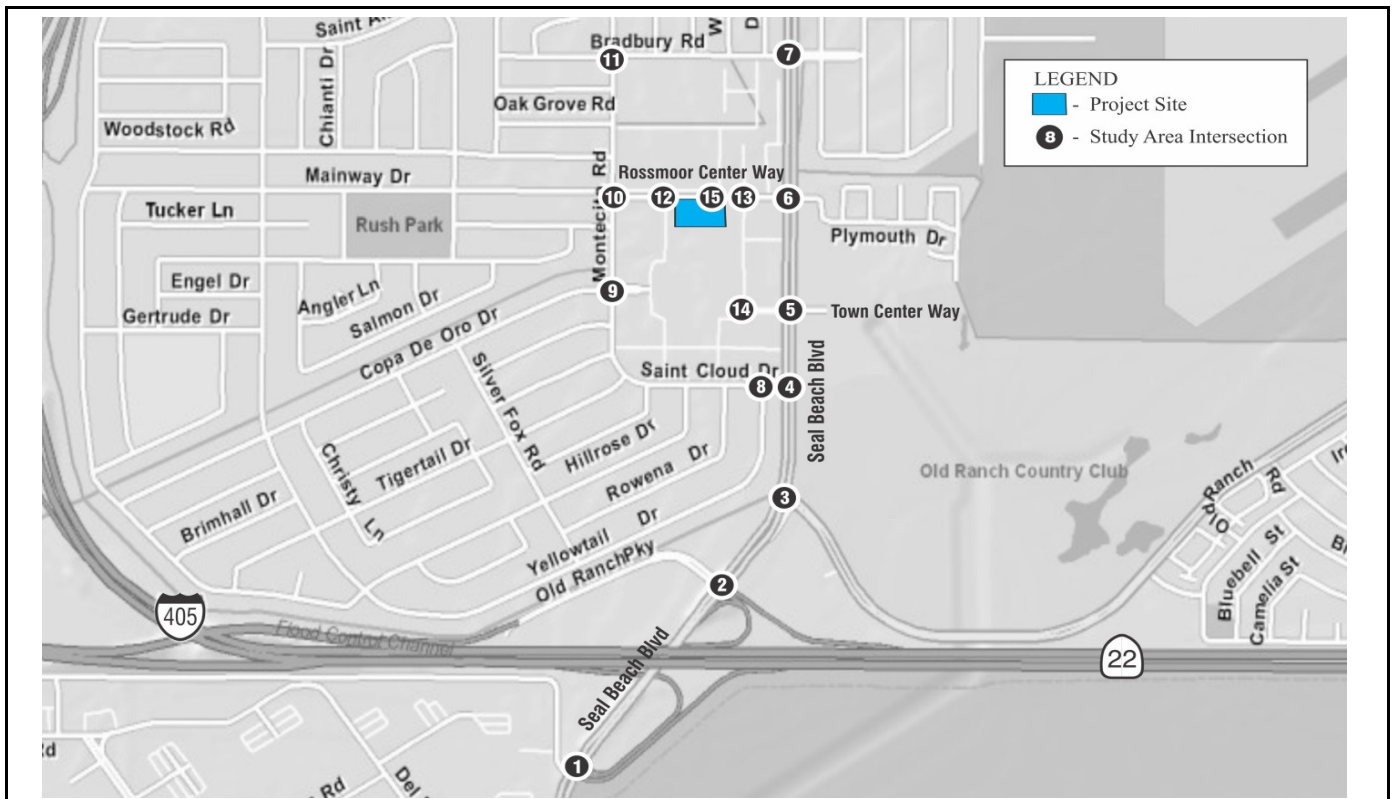


FIGURE 21

Legend

123 Saturday Volume *Health Club within The Shops at Rossmoor*
 Future (2035) General Plan Buildout with Full Occupancy Peak Hour Volumes (Saturday)



1 Seal Beach Blvd/I-405 SB Ramps 79 / 139 1593 / 1175 481 / 581 587 / 581 48 / 38 762 / 351 95 / 182 31 / 33 18 / 22 15 / 12 158 / 1594 182 / 395 1158 / 1594 182 / 395	2 Seal Beach Blvd/I-405NB Ramps 509 / 408 1732 / 1600 369 / 356 616 / 750 58 / 16 402 / 214 11 / 86 12 / 79 5 / 95 120 / 45 1329 / 1709 381 / 608	3 Seal Beach Blvd/Lampson Av 1859 / 1784 364 / 701 671 / 528 769 / 591 1624 / 1915 334 / 596	4 Seal Beach Blvd/Saint Cloud Dr 57 / 75 1512 / 1856 4 / 5 2 / 5 14 / 34 71 / 211 116 / 102 3 / 0 622 / 425 414 / 449 1837 / 1862 51 / 145	5 Seal Beach Blvd/Town Center Dr 33 / 102 1550 / 1547 23 / 85 23 / 65 2 / 51 26 / 152 21 / 108 4 / 31 15 / 203 59 / 222 1805 / 1623 34 / 92
6 Seal Beach Blvd/Rossmoor Center Wy 88 / 240 1562 / 1735 21 / 39 43 / 18 11 / 1 19 / 16 95 / 225 8 / 1 96 / 167 82 / 207 1761 / 1720 16 / 26	7 Seal Beach Blvd/Bradbury Rd 185 / 191 1527 / 1900 30 / 26 31 / 21 24 / 3 77 / 53 305 / 186 20 / 10 106 / 96 160 / 142 1687 / 1710 28 / 62	8 Yellowtail Dr/Saint Cloud Dr 442 / 500 31 / 58 663 / 488 4 / 8 9 / 3 77 / 54	9 Montecito Rd/Copa De Oro Dr 30 / 48 314 / 258 0 / 8 1 / 11 4 / 6 2 / 3 59 / 33 8 / 5 138 / 51 118 / 73 184 / 237 2 / 4	10 Montecito Rd/Rossmoor Center Wy 71 / 44 222 / 198 27 / 50 35 / 80 47 / 45 15 / 41 106 / 46 68 / 40 96 / 60 43 / 33 198 / 144 24 / 31
11 Montecito Rd/Bradbury Rd 2 / 3 145 / 138 81 / 45 160 / 70 20 / 27 148 / 162 5 / 1 26 / 19 2 / 2 0 / 5 153 / 115 240 / 116	12 West Rd/Rossmoor Center Wy 94 / 149 7 / 24 108 / 99 11 / 26 7 / 34 13 / 12	13 Internal Dwy/Rossmoor Center Wy 16 / 33 18 / 37 65 / 82 56 / 92 87 / 180 80 / 200 38 / 24 130 / 128 15 / 30 14 / 47 18 / 48 34 / 195	14 Internal Dwy/Town Center Dr 16 / 59 31 / 253 41 / 320 74 / 91 18 / 47 33 / 70	15 Project Dwy/Rossmoor Center Wy 104 / 181 33 / 86 120 / 96 0 / 1 0 / 4 35 / 71

FIGURE 22

Legend

123 / 456 AM / PM Volume

Health Club within The Shops at Rossmoor
Future (2035) General Plan Buildout with Full Occupancy plus Project Peak Hour Volumes (AM/PM)

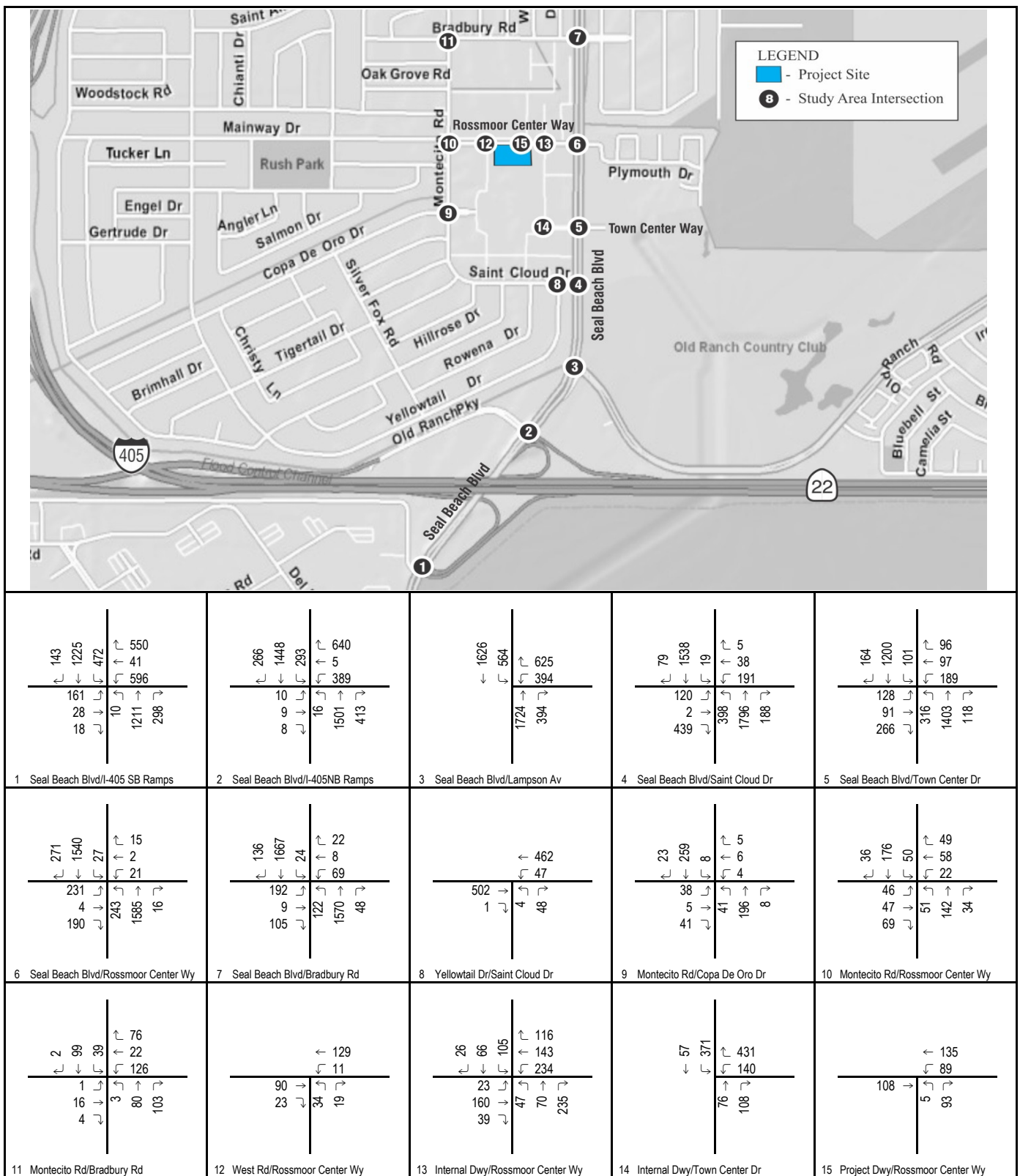


FIGURE 23

Legend

123 Saturday Volume
 Future (2035) General Plan Buildout with Full Occupancy plus Project Peak Hour Volumes (Saturday)

Table K: Future Buildout Year (2035) Peak Hour Intersection Level of Service Summary

Intersection		Future Buildout Year (2035)						Future Buildout Year (2035) + Project								
		AM		PM		Sat		AM			PM			Sat		
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU	ICU / Delay	LOS	Δ ICU
1	Seal Beach Boulevard/I-405 SB On/Off Ramps ¹	42.1	D	47.0	D	46.6	D	41.7	D	-	47.1	D	-	47.2	D	-
2	Seal Beach Boulevard/I-405 NB On/Off Ramps ¹	43.2	D	44.9	D	36.6	D	43.7	D	-	46.9	D	-	37.4	D	-
3	Seal Beach Boulevard/Lampson Avenue	0.809	D	0.848	D	0.799	D	0.813	D	0.004	0.855	D	0.007	0.806	D	0.007
4	Seal Beach Boulevard/Saint Cloud Drive	0.623	B	0.738	C	0.669	C	0.625	B	0.002	0.744	C	0.006	0.675	B	0.006
5	Seal Beach Boulevard/Town Center Drive	0.498	A	0.776	C	0.870	C	0.501	A	0.003	0.781	C	0.005	0.875	D	0.005
6	Seal Beach Boulevard/Rossmoor Center Way	0.544	A	0.713	C	0.713	C	0.559	A	0.015	0.753	C	0.040	0.744	C	0.031
7	Seal Beach Boulevard/Bradbury Road	0.766	C	0.730	C	0.680	C	0.769	C	0.003	0.736	C	0.006	0.684	B	0.004
8	Yellow Tail Drive/Saint Cloud Drive*	12.5	B	10.7	B	10.8	B	12.9	B	-	10.7	B	-	10.9	B	-
9	Montecito Road/Copa De Oro Drive*	10.4	B	9.3	A	8.8	A	10.4	B	-	9.3	A	-	8.8	A	-
10	Montecito Road/Rossmoor Center Way*	11.0	B	9.8	A	9.6	A	11.1	B	-	9.9	A	-	9.7	A	-
11	Montecito Road/Bradbury Road*	11.3	B	9.9	A	9.1	A	11.3	B	-	9.9	A	-	9.1	A	-
12	West Road/Rossmoor Center Way*	7.6	A	8.0	A	7.8	A	7.6	A	-	8.0	A	-	7.8	A	-
13	Internal Driveway/Rossmoor Center Way*	8.7	A	13.9	B	19.5	C	9.0	A	-	17.3	C	-	25.0	C	-
14	Internal Driveway/Town Center Drive*	7.7	A	11.4	B	17.9	C	7.7	A	-	11.4	B	-	17.9	C	-
15	Project Driveway/Rossmoor Center Way*	8.9	A	9.1	A	9.3	A	9.0	A	-	9.3	A	-	9.4	A	-

ICU V/C ratio is used for signalized intersections in the City of Seal Beach.

* Indicates unsignalized intersection. HCM delay in seconds is used for unsignalized intersections.

■ (Shade) = Exceeds City level of service criteria (LOS D)

¹ HCM Methodology-consistent with Caltrans requirements

Table L: Future (2035) Buildout with Full Occupancy Peak Hour Roadway Level of Service Summary

Roadway	Segment	Direction	Future Buildout Year (2035)									Future Buildout Year (2035) + Project								
			AM			PM			Saturday Mid-day			AM			PM			Saturday Mid-day		
			Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS	Speed (mph)	Density	LOS
Seal Beach Boulevard	I-405 Northbound On/Off Ramps and Lampson Avenue	NB	45.0	14.4	B	45.0	18.5	C	45.0	15.7	B	45.0	14.5	B	45.0	18.7	C	45.0	15.8	B
		SB	45.0	19.3	C	45.0	17.4	B	45.0	14.8	B	45.0	19.4	C	45.0	17.6	B	45.0	14.9	B
	Lampson Avenue and Saint Cloud Drive	NB	45.0	16.9	B	45.0	17.9	B	45.0	17.4	B	45.0	17.0	B	45.0	18.1	C	45.0	17.5	B
		SB	45.0	16.3	B	45.0	18.2	C	45.0	15.9	B	45.0	16.4	B	45.0	18.4	C	45.0	16.1	B
	Saint Cloud Drive and Town Center Drive	NB	45.0	14.2	B	45.0	14.1	B	45.0	13.7	B	45.0	14.3	B	45.0	14.4	B	45.0	13.8	B
		SB	45.0	11.6	B	45.0	14.0	B	45.0	12.0	B	45.0	11.7	B	45.0	14.2	B	45.0	12.2	B
	Town Center Drive and Rossmoor Center Way	NB	45.0	13.6	B	45.0	13.6	B	45.0	12.7	B	45.0	13.7	B	45.0	13.9	B	45.0	12.8	B
		SB	45.0	12.1	B	45.0	13.3	B	45.0	11.7	B	45.0	12.2	B	45.0	13.5	B	45.0	11.9	B
	Rossmoor Center Way and Bradbury Road	NB	45.0	13.9	B	45.0	14.2	B	45.0	13.0	B	45.0	14.0	B	45.0	14.4	B	45.0	13.2	B
		SB	45.0	12.4	B	45.0	14.8	B	45.0	13.5	B	45.0	12.5	B	45.0	15.0	B	45.0	13.6	B
Saint Cloud Drive *	Seal Beach Boulevard and Yellowtail Drive	NB	45.0	15.7	B	45.0	14.2	B	45.0	13.3	B	45.0	15.7	B	45.0	14.4	B	45.0	13.5	B
		SB	45.0	13.0	B	45.0	16.0	B	45.0	13.4	B	45.0	13.1	B	45.0	16.3	B	45.0	13.5	B
Montecito Road *	Seal Beach Boulevard and Yellowtail Drive		25.5	-	C	26.5	-	C	26.7	-	C	25.5	-	C	26.5	-	C	26.7	-	C
	Yellowtail Drive and Copa De Oro Drive		27.8	-	C	29.1	-	B	29.1	-	B	27.8	-	C	29.0	-	B	29.1	-	B
	Copa De Oro Drive and Mainway Drive		30.3	-	B	30.7	-	A	31.0	-	A	30.4	-	B	30.7	-	A	31.0	-	A
	Mainway Drive and Bradbury Road		29.8	-	B	30.7	-	A	31.4	-	A	29.7	-	B	30.7	-	A	31.4	-	A
Rossmoor Center Way **	Montecito Road and Seal Beach Boulevard		27.8	-	A	26.1	-	A	25.7	-	A	27.6	-	A	25.5	-	A	25.3	-	B

NB = Northbound, SB = Southbound

* Analyzed as Two Lane Roadways with a speed limit of 35 MPH

** Analyzed as Two Lane Roadway with a speed limit of 30 MPH

Site Adjacent Driveways and Circulation (Rossmoor Park)

Based on the intersection and roadway analysis and observations made by LSA staff, the section of Rossmoor Center Way adjacent to the project site between Montecito Road and the internal driveways into Pei Wei and Sprouts operate at desirable levels of traffic. The amount of traffic on this segment of Rossmoor Center Way is lower than the segment of Rossmoor Center Way just west of Seal Beach Boulevard. Specifically, 2,620 vehicles were counted in a 24 hour period on Tuesday, October 18, 2016 on Rossmoor Center Way between Montecito Road and the Sprouts and Pei Wei driveways while 8,267 vehicles were counted in the same period on Rossmoor Center Way between the Sprouts and Pei Wei driveways and Seal Beach Boulevard. In an effort to provide perspective on what these volumes mean for traffic, the City considers 12,500 vehicles per day to be the capacity for a two-lane undivided roadway like the segment of Rossmoor Center Way between Montecito Road and the Sprouts and Pei Wei driveways.

Additionally, weekday a.m., p.m., and weekend mid-day peak hour counts at the unsignalized Rossmoor Park outbound only driveway to the north of the site revealed a maximum of 46 peak hour vehicles leaving the residences during any peak hour. This translates to approximately 1 vehicle leaving the Rossmoor Park residential development every 78 seconds during the weekday p.m. peak hour. Combined with the daily volumes counted on Rossmoor Center Way directly in front of this driveway, which are within the 12,500 vehicles per day capacity, the operations at this location and along this segment are considered acceptable and would not result in unacceptable interruptions in vehicular movements because of traffic.

It needs to be clarified that this does not apply to the segment of Rossmoor Center Way between the Sprouts and Pei Wei driveways and Seal Beach Boulevard which see more than three times the daily traffic of the segment discussed above. Further analysis of the segment of Rossmoor Center Way between the Sprouts and Pei Wei driveways and Seal Beach Boulevard and the overall traffic operations at the intersection of Seal Beach Boulevard and Rossmoor Center Way are the focus of the following analysis.

Rossmoor Center Way and Shops at Rossmoor Access and Circulation

As part of the site access assessment, existing and potential turn-pocket queuing issues at site access points and site-adjacent intersections were analyzed using the SimTraffic (Version 9.1) software. SimTraffic is analysis software that provides a microscopic model that more accurately simulates real world conditions as compared to macroscopic analysis tools such as Traffix. SimTraffic tracks and collects measures of effectiveness for each vehicle in a traffic system during a simulation. Due to variability that arises from simulations of this nature, multiple simulation runs for each analysis scenario have been averaged in order to draw representative queuing results. This method more accurately measures the full impact of queuing and blocking of traffic.

Table M shows queuing results for Existing (2016) with Full Occupancy without and with Project traffic conditions and indicates all existing peak-hour queues at site access points and site-adjacent intersections are anticipated to be sufficiently stored by existing facilities with the exception of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way. The existing weekday p.m. and weekend midday 95th percentile peak-hour queues extend past the storage provided by the existing northbound left-turn pocket. The northbound left-turn pocket

Table M: Site Access Queuing Summary

Intersection		Movement	Storage Length	95th Percentile Queue (ft)		
				AM	PM	Sat Mid-day
Existing (2016) with Full Occupancy						
Existing Signal Timing						
6	Seal Beach Boulevard/Rossmoor Center Way					
		NBL	105	103	190	168
		EBL	230	113	213	185
		EBTR	230	78	81	87
13	Internal Driveway/Rossmoor Center Way					
		EBLT	190	51	48	56
		EBTR	190	51	50	52
		WBLTR	230	89	165	156
Existing (2016) with Full Occupancy plus Project						
Existing Signal Timing						
6	Seal Beach Boulevard/Rossmoor Center Way					
		NBL	250	107	198	176
		EBL	230	128	240	200
		EBTR	230	82	96	103
13	Internal Driveway/Rossmoor Center Way					
		EBLT	190	50	56	53
		EBTR	190	49	53	59
		WBLTR	230	96	200	172
Rossmoor Center Way Reconfiguration (Two Westbound Lanes, One Eastbound Lane and Dedicated Right-Turn Lane)						
6	Seal Beach Boulevard/Rossmoor Center Way					
		NBL	250	115	224	210
		EBLT	230	121	231	223
		EBR	150	58	168	168
13	Internal Driveway/Rossmoor Center Way					
		EBLTR	190	58	73	80
		WBLT	230	77	180	145
		WBR	230	55	58	64
Addition of Right-In Only Driveway on Seal Beach Boulevard						
13	Internal Driveway/Rossmoor Center Way					
		EBLT	190	50	50	55
		EBTR	190	50	50	56
		WBLTR	230	85	189	164

Storage Length = Storage length as measured from stop bar to the end of lane striping, ft = feet, NB = northbound, EB = eastbound, L = left, T = through, R = right

■ (Shade) = Exceeds existing storage length

currently provides 105 feet of storage with a 100-foot transition. However, as Table M shows, a potential queue of 190 feet (without the project) during the weekday p.m. peak hour could spill back into the adjacent through lane.

Because this northbound left-turn lane will be improved by the project applicant concurrent with project implementation, the added project traffic to this queue is not anticipated to spill back into the adjacent through lane. The addition of traffic associated with the project to this movement is anticipated to result in a 95th percentile queue of 198 feet during the weekday p.m. peak hour. It should be noted that anticipated queue lengths are not directly correlated to their associated volumes as queuing for a given movement is also dependent on traffic signal operations.

This existing queuing issue is anticipated to continue into future analysis scenarios if the northbound left-turn pocket is not lengthened. All other site access points and site-adjacent intersections are anticipated to be sufficiently served by existing facilities. SimTraffic queuing worksheets for both Existing (2016) with Full Occupancy without and with Project conditions are provided in Appendix E.

Eastbound and westbound queues on the segment of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard are shown as adequately accommodated in Table M for both Existing (2016) with Full Occupancy without and with Project conditions. However, field observations and experience with this segment reveal that vehicles on occasion fill up the 230 feet between the driveways to the Shops at Rossmoor and Seal Beach Boulevard. The lack of overflow shown in the analysis may be a function of vehicles staying in the upstream northbound left and southbound right movements on Seal Beach Boulevard in order to avoid illegally blocking the intersection. The queues in Table M show that anticipated inbound queues reach 200 feet in the weekday p.m. peak hour, a length that is less than 40 feet from filling up the entire available inbound lane. The operations of this segment of Rossmoor Center Way affect the upstream northbound left-turn queues, which have been identified in Table M as exceeding the currently available storage in without project conditions.

PROJECT OFF-SITE IMPROVEMENTS

As part of the proposed project, two off-site improvements to access facilities will be implemented. These include the lengthening of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way to 250 feet and the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. At the community's request, an optional improvement was evaluated to include the construction of an additional inbound-only driveway on Seal Beach Boulevard south of Rossmoor Center Way. This section provides details on these project off-site improvements.

Northbound Left-Turn Pocket Lengthening

The northbound left-turn movement is currently experiencing queues that could extend past the existing left-turn pocket during periods of peak demand. The provision of dual left-turn lanes is one possible solution to long queues. However, if an unequal utilization of the left-turn lanes were probable, the effectiveness of providing two lanes would be greatly diminished. In addition, right-of-

way may be necessary to implement dual left-turn lanes. In these circumstances, extending the queue available to the single lane may be a better option. As previously referenced Table M shows, the northbound left-turn pocket would require a storage length of approximately 190 feet (an extension of 85 feet) to accommodate Existing (2016) with Full Occupancy peak-hour queues and a storage length of approximately 198 feet (an extension of 93 feet) to accommodate Existing (2016) with Full Occupancy plus Project peak-hour queues. As illustrated in Figure 24, the existing landscaped median along Seal Beach Boulevard would require modification and possibly vacation in order to provide the recommended storage length. As shown in Figure 24, a storage length of 250 feet (an extension of 145 feet) would not reduce the existing 100-foot southbound left-turn pocket providing access to the adjacent Target shopping center, but may create a situation where the two adjacent left-turn pockets would effectively be “back to back.”

As shown in Table N, the proposed project’s contribution to this existing and future queuing deficiency is at most, 17 percent during any peak hour under Existing (2016) with Full Occupancy plus Project conditions.

Table N: Project Traffic Contribution

Intersection		Peak Hour	2016 FO+P NB Left- Turn Volume	Project NB Left-Turn Volume	Project % of NB Left- Turn Volume
6	Seal Beach Boulevard/Rossmoor Center Way	AM	76	11	14%
		PM	192	33	17%
		Saturday	224	21	9%

Bold = Highest peak-hour project percentage; NB = northbound; FO+P = Full Occupancy Plus Project

Reconfiguration of Rossmoor Center Way (Two Westbound Lanes and One Eastbound Lane plus Dedicated Right-Turn Lane)

As illustrated on Figure 25, an improvement to reduce the westbound queuing on Rossmoor Center Way between the internal driveway and Seal Beach Boulevard is to increase the capacity for vehicles entering the project site at Rossmoor Center Way/Seal Beach Boulevard. Providing two inbound lanes (460 feet) would increase the storage for incoming vehicles and reduce the chance that vehicles would back out onto Seal Beach Boulevard. As shown in previously referenced Table M, the addition of a second westbound lane along Rossmoor Center Way will reduce westbound (inbound) queue lengths to approximately 180 feet (from 200 feet) in the new westbound shared left-turn/through lane and approximately 64 feet in the new westbound right-turn lane. This would mean that the total queue in both lanes, 244 feet, would fit within the total capacity of both lanes (460 feet). However, the restriction of the eastbound lanes along Rossmoor Center Way is anticipated to lengthen eastbound (outbound) queues.

The constraint of this improvement is that the two outbound lanes, which provide 460 feet of storage (230 feet in each lane; from Sprouts/Pei Wei to Seal Beach Boulevard), would be reduced to 1 lane and a dedicated right-turn lane (approximately 380 feet of storage, 230 feet in the shared through left-turn lane and 150 feet in the right-turn lane).

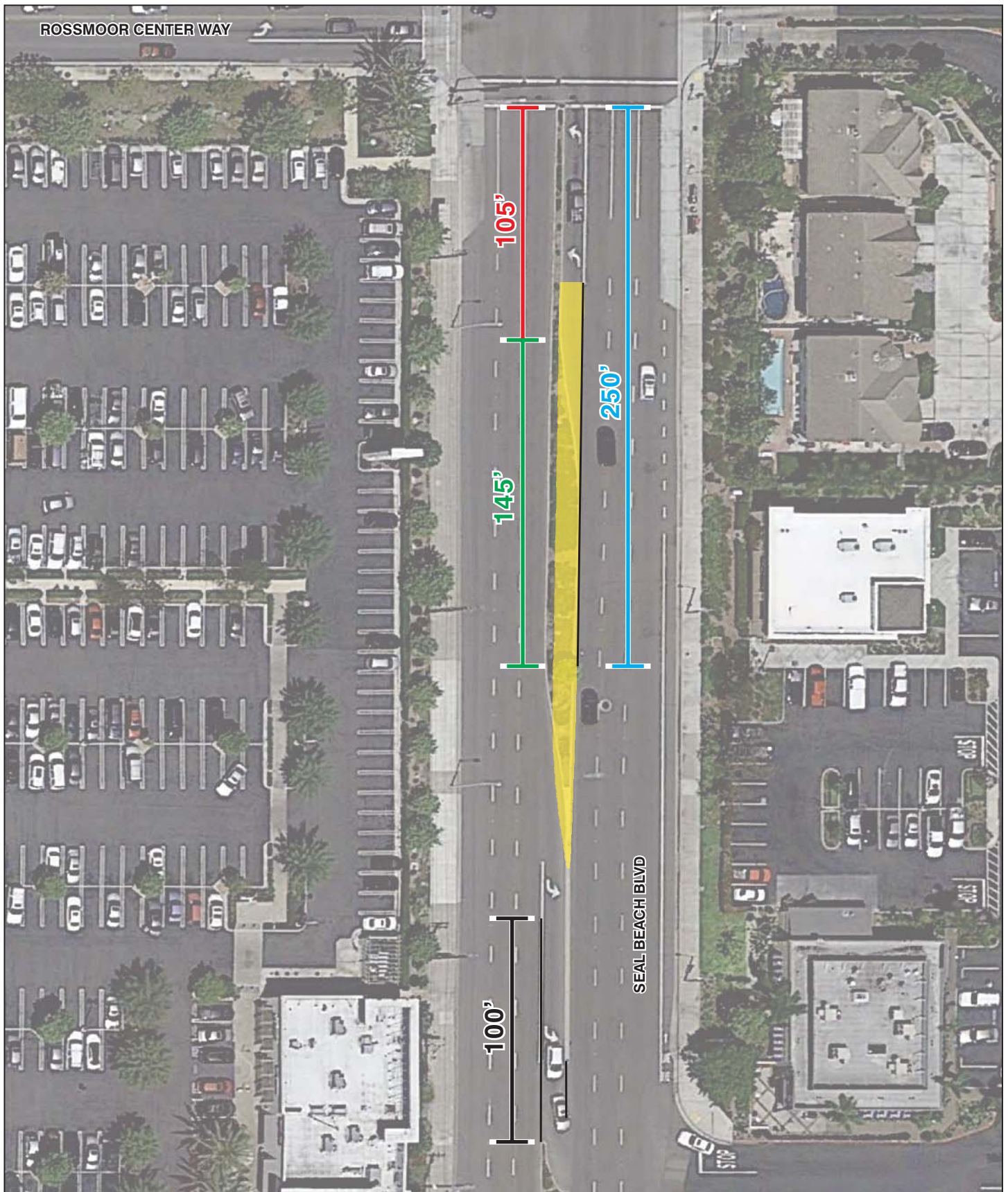
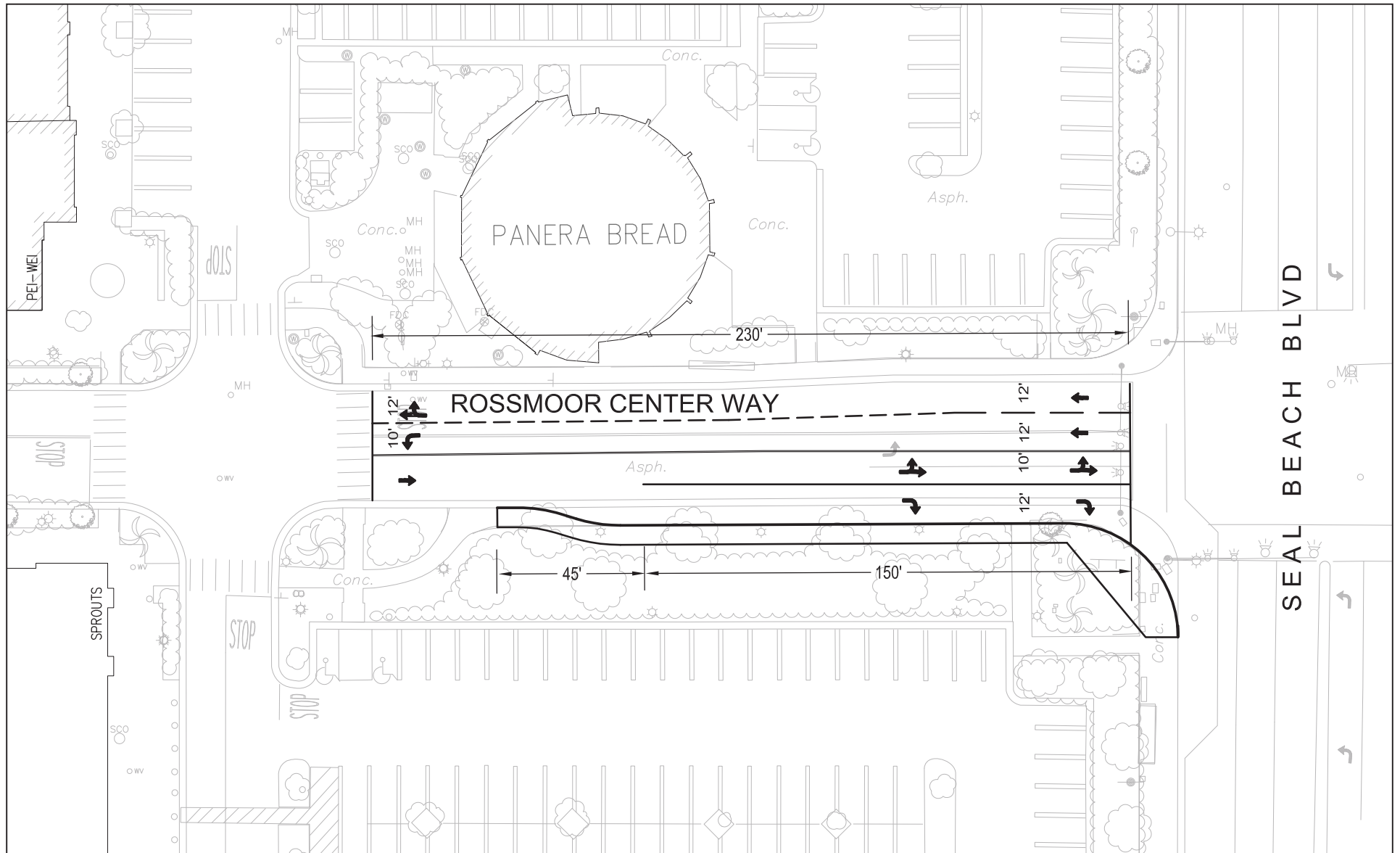


FIGURE 24

Health Club within The Shops at Rossmoor
Recommended Turn Pocket Extension



LSA

FIGURE 25



SOURCE: Avantec

F:\MPA1401\G\RCW Reconfig Alt.cdr (3/3/2017)

Health Club within The Shops at Rossmoor
Rossmoor Center Way Reconfiguration Alternative

As Table M shows, the eastbound (outbound) queues at the intersection of Seal Beach Boulevard and Rossmoor Center Way would be approximately 231 feet (from 240 feet) in the eastbound shared left-turn/through lane and approximately 168 feet (from 96 feet) in the eastbound right-turn lane. The traffic and queueing analysis describes how vehicles on occasion back up past the internal intersection due to the queue of vehicles waiting for the green light at Rossmoor Center Way/Seal Beach Boulevard. Based on our observations, the majority of vehicles turn left at the intersection.

Optional Improvement - Addition of Right-In Only Driveway on Seal Beach Boulevard

Based on community input, an alternative to improving the westbound queuing on the segment of Rossmoor Center Way was evaluated. An additional access point into the retail center would decrease the number of vehicles using this segment. This alternative proposes an inbound only driveway south of Rossmoor Center Way near the existing Subway restaurant, as illustrated on Figure 26. This improvement was evaluated as an alternative to the Rossmoor Center Way improvements discussed above.

Southbound vehicles attempting to reach the Sprouts side of the retail center would most likely use this access point. These vehicles have been singled out as they would be the most likely vehicles entering the retail center to benefit from an additional entry point as southbound vehicles attempting to reach the Pei Wei side of the retail center would most likely make a southbound right at the unsignalized driveway near the California Pizza Kitchen. Northbound left-turning vehicles would be less likely to benefit from an additional entry point to the retail center as there is already an unsignalized driveway into the retail center near the California Pizza Kitchen.

For the purposes of this analysis, half of the southbound right-turning vehicles that would ultimately make a westbound left into the Sprouts side of the retail center are thought to potentially utilize this driveway. The number of southbound right-turning vehicles that would ultimately make a westbound left into the Sprouts side of the retail center was calculated by multiplying the proportion of inbound vehicles making a left into Sprouts of all inbound vehicles by the number of southbound right-turning vehicles. This number was then divided in half in order to arrive at the number of vehicles that would utilize the new inbound only driveway. As shown on Figure 26, 15 weekday a.m., 46 weekday p.m., and 58 weekend midday peak-hour vehicles are anticipated to utilize this new inbound driveway.

As previously referenced Table M shows, this new driveway is anticipated to reduce the westbound queue on Rossmoor Center Way to 189 feet (from 200 feet) in the weekday p.m. peak-hour and 164 feet (from 172 feet) in the weekend midday peak-hour.

It should be noted that this SimTraffic analysis cannot take into account the number of additional southbound right-turning vehicles that may be diverted to the new entry to the south due to instances of peak congestion. The assumption of half of these southbound right-turning vehicles into Sprouts was arrived at based on anticipated travel patterns and does not take into consideration atypical traffic conditions of inbound vehicles while traveling southbound on Seal Beach Boulevard. Passing instances where the westbound queue on Rossmoor Center Way may be full may incentivize a larger proportion of such southbound right-turning vehicles to utilize the proposed inbound driveway to the south. All SimTraffic site access queuing worksheets and arterial coordination worksheets are included in Appendix E.

Based on the analysis described above, either off-site improvement alternative is anticipated to improve vehicular access to both the project site and the Shops at Rossmoor. However, upon discussions with City staff and the City's transportation consultant, further investigation of the feasibility of the alternative improvement was conducted. The City required a 120-foot deceleration lane on Seal Beach Boulevard in order to allow the new driveway. This investigation revealed the following challenges of implementing the new driveway and right-in only lane:

- Adding a deceleration lane could pose considerable conflicts with existing public utilities which would render this option financially infeasible;
- A new driveway would result in a reduction of onsite parking spaces;
- Several of the operating tenants will have to grant their approval for the design;
- The utilization of the new driveway is less than 50 inbound peak hour vehicles.

Due to these challenges associated with the Seal Beach Boulevard driveway and right-in only improvement, this alternative was not considered feasible. The Rossmoor Center Way widening alternative is considered to be the feasible and thus preferred improvement alternative.

CONCLUSIONS

This traffic/circulation analysis was prepared for a study area along Seal Beach Boulevard north of I-405 in order to identify any potential traffic impacts resulting from the development of the proposed health club within the Shops at Rossmoor. The study included analysis of intersections and roadway segments along Seal Beach Boulevard and local access roads adjacent to the proposed project.

The LOS at 15 intersections and 11 roadway segments within the study area for 7 scenarios were analyzed and physical and/or operational improvements were not recommended, as all facilities were found to meet the City's LOS standards.

A queuing analysis of site-access points and site-adjacent intersections found that all peak-hour queues are anticipated to be sufficiently stored by existing facilities with the exception of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way. The extension of the existing northbound left-turn pocket from 105 feet to 250 feet by the project applicant is anticipated to alleviate this existing and anticipated queuing deficiency. Additionally, project off-site improvements to access facilities will include the widening of Rossmoor Center Way between the internal driveway and Seal Beach Boulevard. At the community's request, an optional improvement was evaluated for the construction of an additional inbound-only driveway and right turn deceleration lane on Seal Beach Boulevard south of Rossmoor Center Way. This improvement, however, was determined to be infeasible based on several factors. The proposed Rossmoor Center Way improvement, in conjunction with the extension of the northbound left-turn pocket at the intersection of Seal Beach Boulevard and Rossmoor Center Way, will improve vehicular access to both the project site and the Shops at Rossmoor.

APPENDIX A

EXISTING TRAFFIC COUNTS

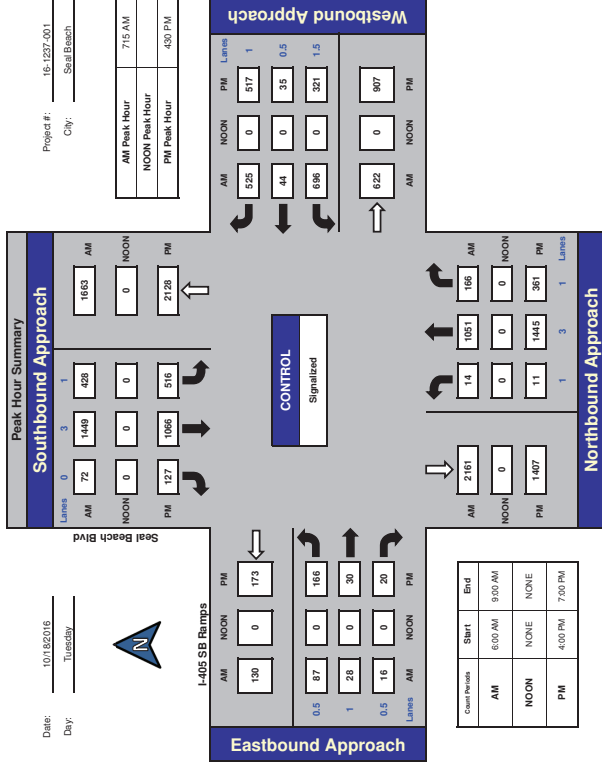
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

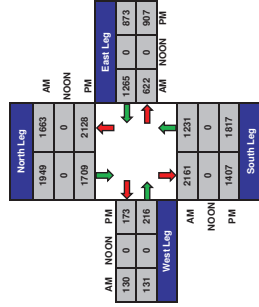
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Date: 10/18/2016
Day: Tuesday

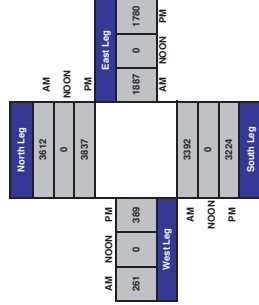
Project #: 16-1237-001
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



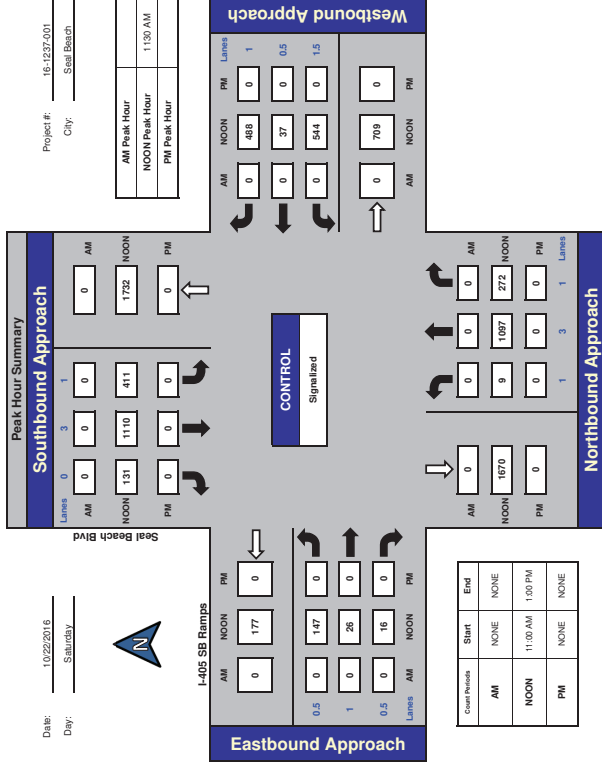
ITM Peak Hour Summary

Prepared by:
NDS
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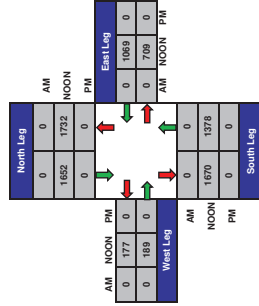
Seal Beach Blvd and I-405 SB Ramps, Seal Beach

Date: 10/22/2016
Day: Saturday

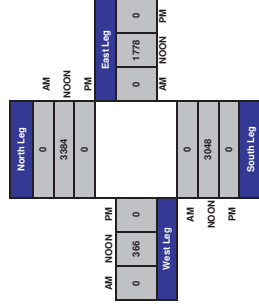
Project #: 16-1237-001
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



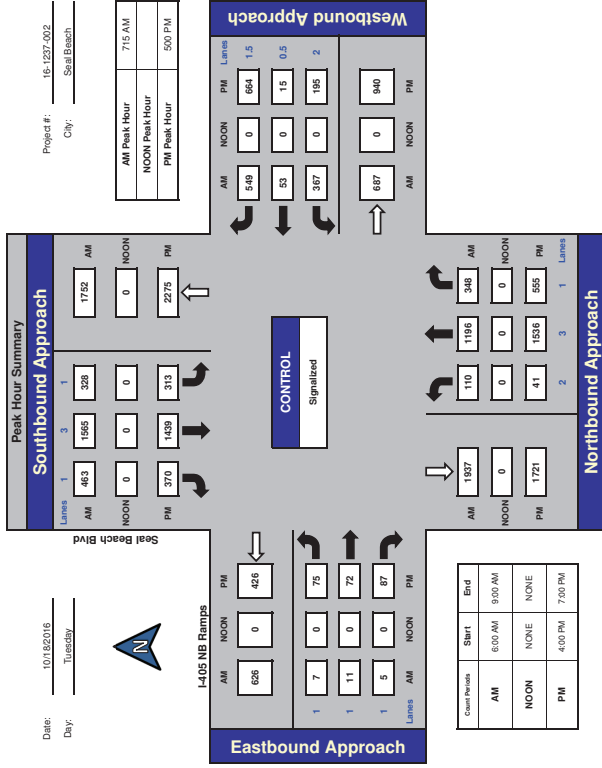
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

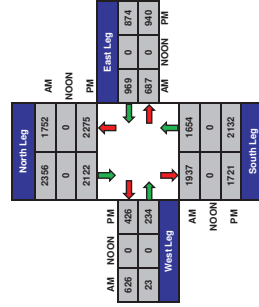
Seal Beach Blvd and I-405 NB Ramps, Seal Beach

Date: 10/18/2016
Day: Tuesday

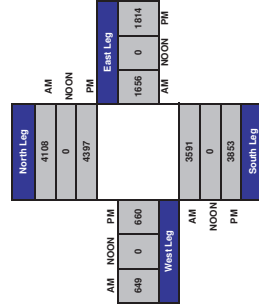
Project #: 16-1237-002
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



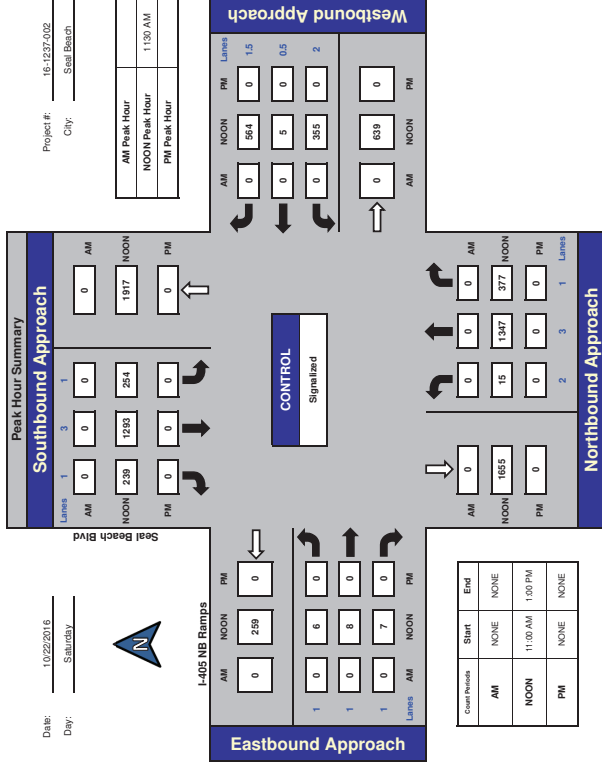
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

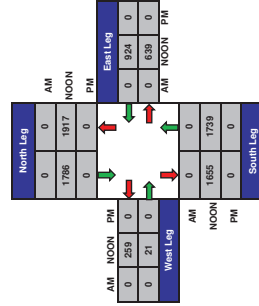
Seal Beach Blvd and I-405 NB Ramps, Seal Beach

Date: 10/22/2016
Day: Saturday

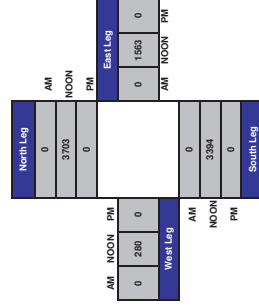
Project #: 16-1237-002
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



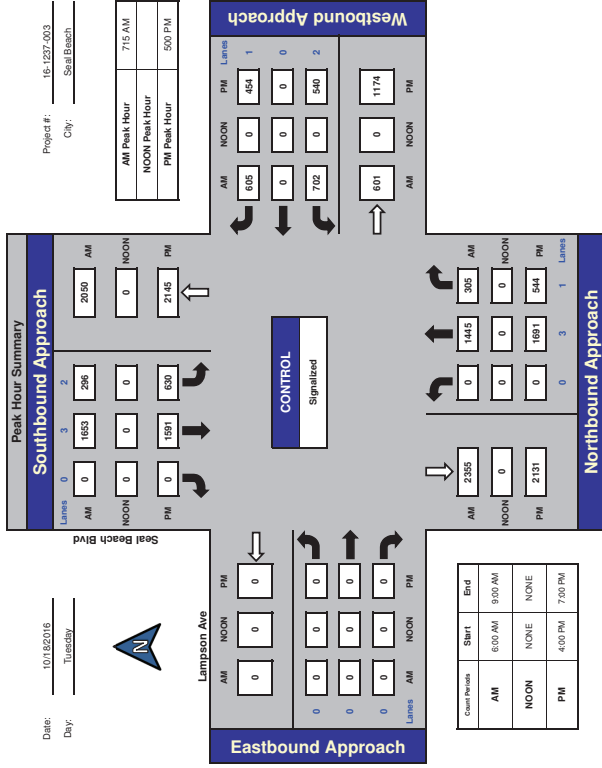
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

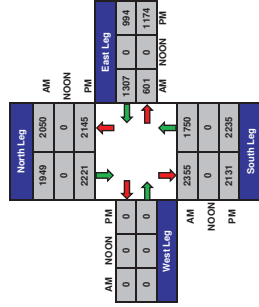
Seal Beach Blvd and Lampson Ave., Seal Beach

Date: 10/18/2016
Day: Tuesday

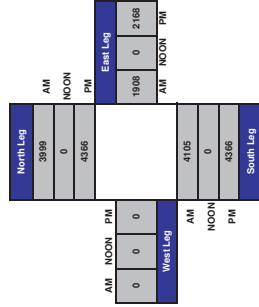
Project #: 16-1237-003
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



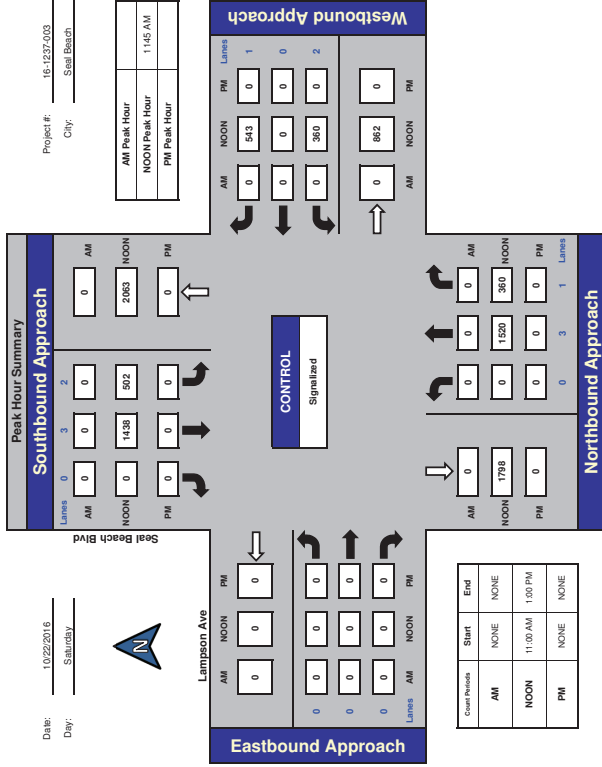
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

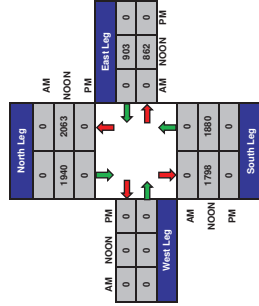
Seal Beach Blvd and Lampson Ave., Seal Beach

Date: 10/22/2016
Day: Saturday

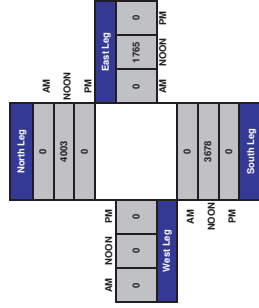
Project #: 16-1237-003
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



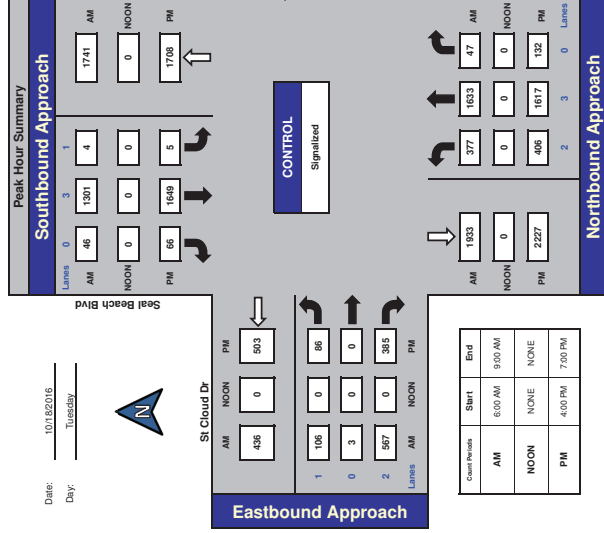
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

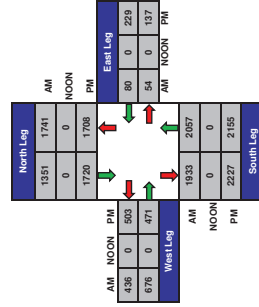
Seal Beach Blvd and St Cloud Dr., Seal Beach

Date: 10/8/2016
Day: Tuesday

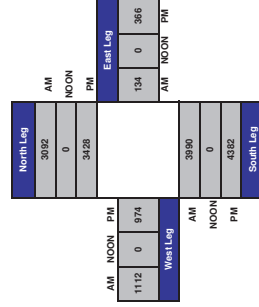
Project #: 16-1237-004
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



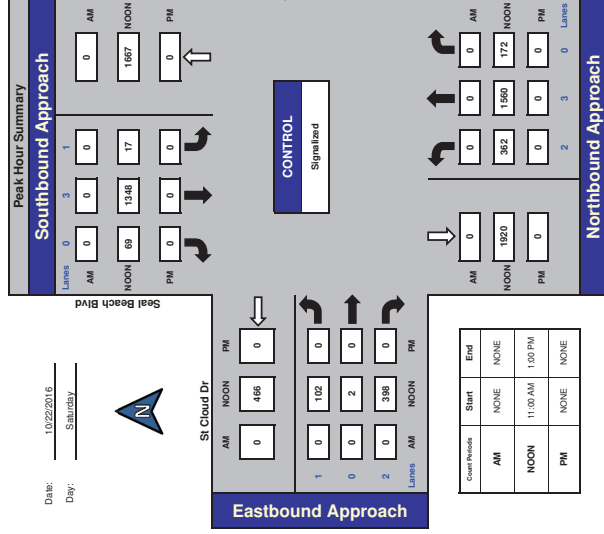
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

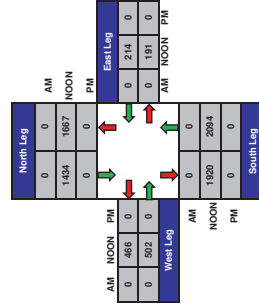
Seal Beach Blvd and St Cloud Dr., Seal Beach

Date: 10/22/2016
Day: Saturday

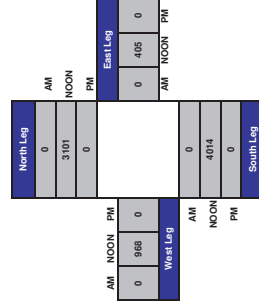
Project #: 16-1237-004
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



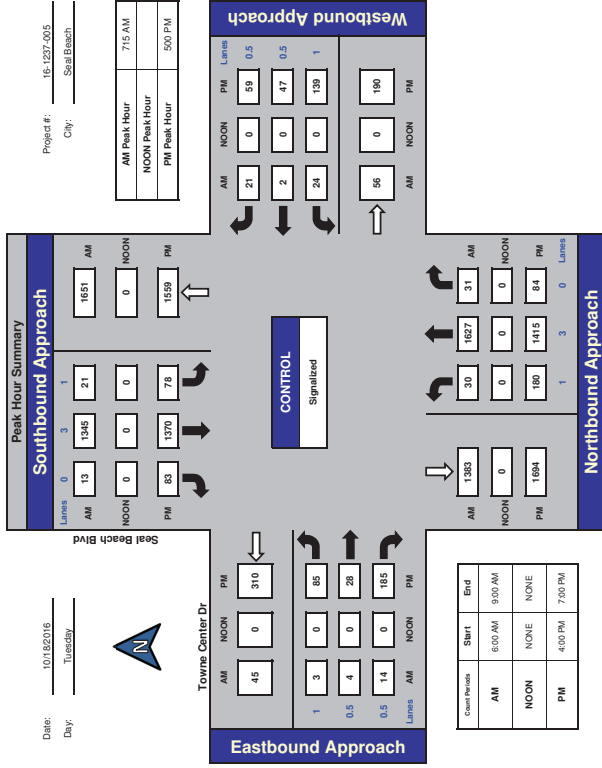
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

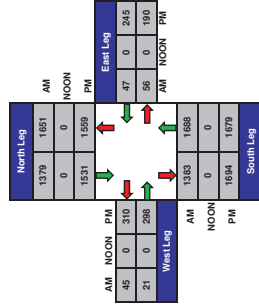
Seal Beach Blvd and Towne Center Dr., Seal Beach

Date: 10/18/2016
Day: Tuesday

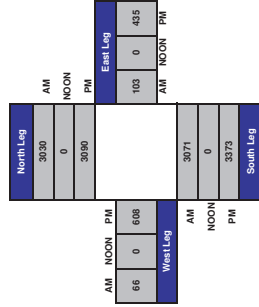
Project #: 16-1237-005
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



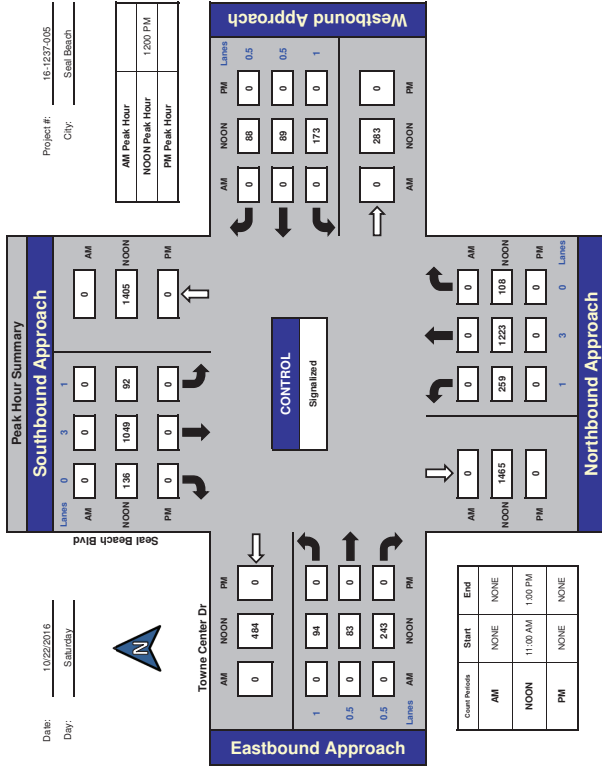
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

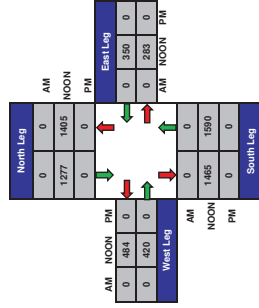
Seal Beach Blvd and Towne Center Dr., Seal Beach

Date: 10/22/2016
Day: Saturday

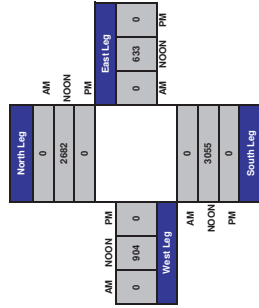
Project #: 16-1237-005
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



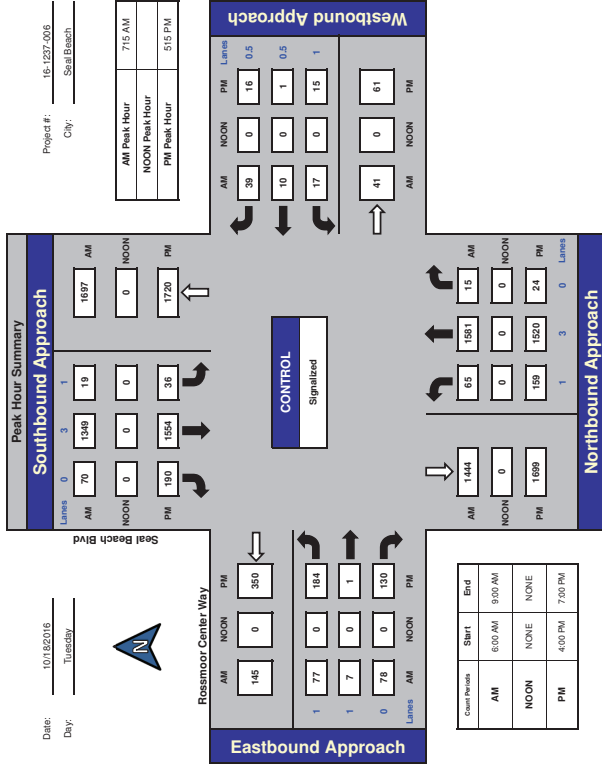
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

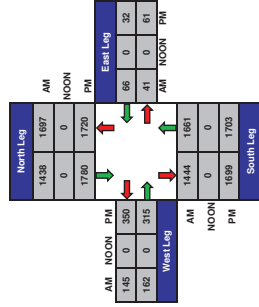
Seal Beach Blvd and Rossmore Center Way, Seal Beach

Date: 10/8/2016
Day: Tuesday
Project #: 16-1237-006
City: Seal Beach

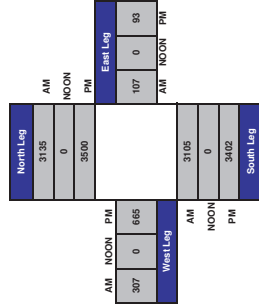
AM Peak Hour	7:15 AM
NOON Peak Hour	
PM Peak Hour	5:15 PM



Total Ins & Outs



Total Volume Per Leg



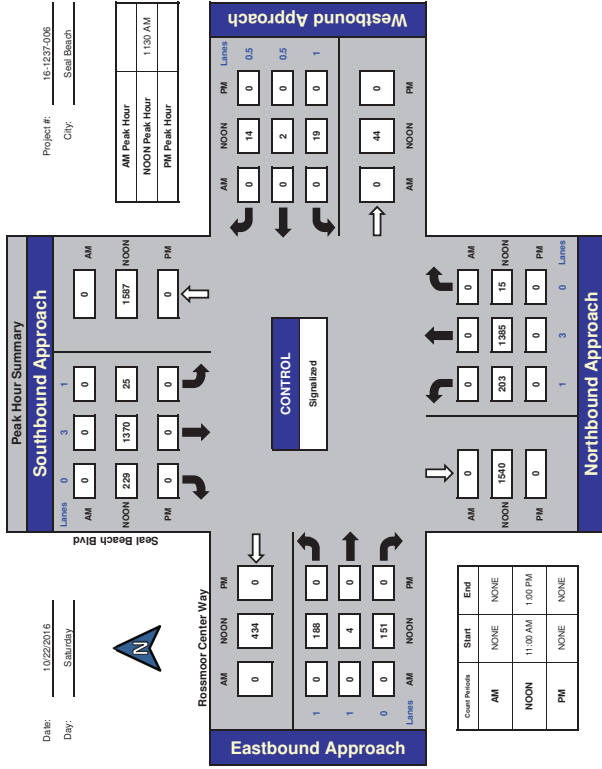
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

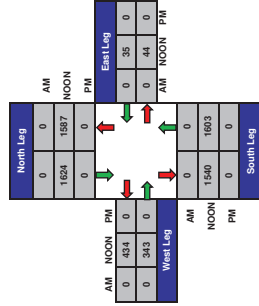
Seal Beach Blvd and Rossmore Center Way, Seal Beach

Date: 10/22/2016
Day: Saturday
Project #: 16-1237-006
City: Seal Beach

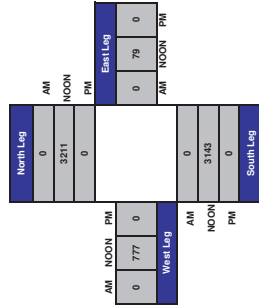
AM Peak Hour	11:30 AM
NOON Peak Hour	
PM Peak Hour	



Total Ins & Outs



Total Volume Per Leg



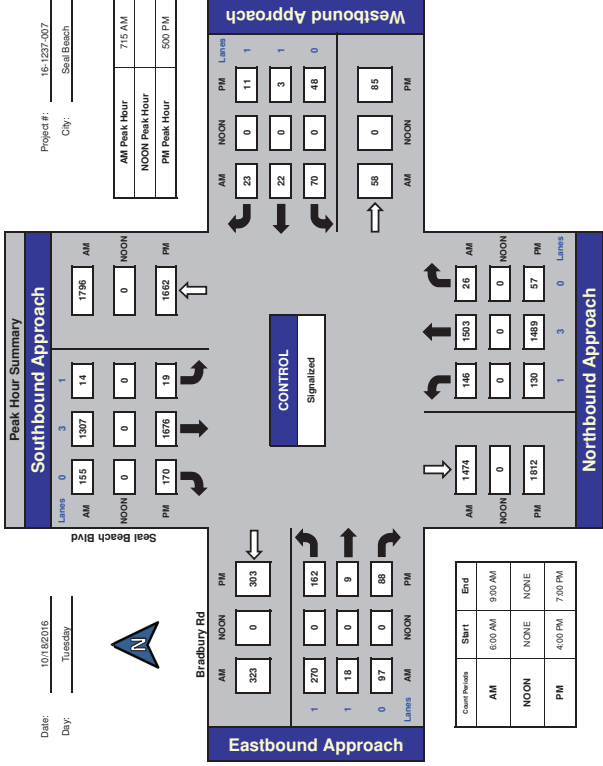
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

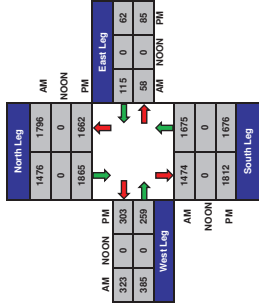
Seal Beach Blvd and Bradbury Rd., Seal Beach

Date: 10/8/2016
Day: Tuesday

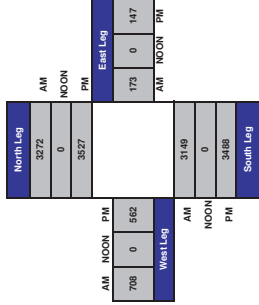
Project #: 16-1237-007
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



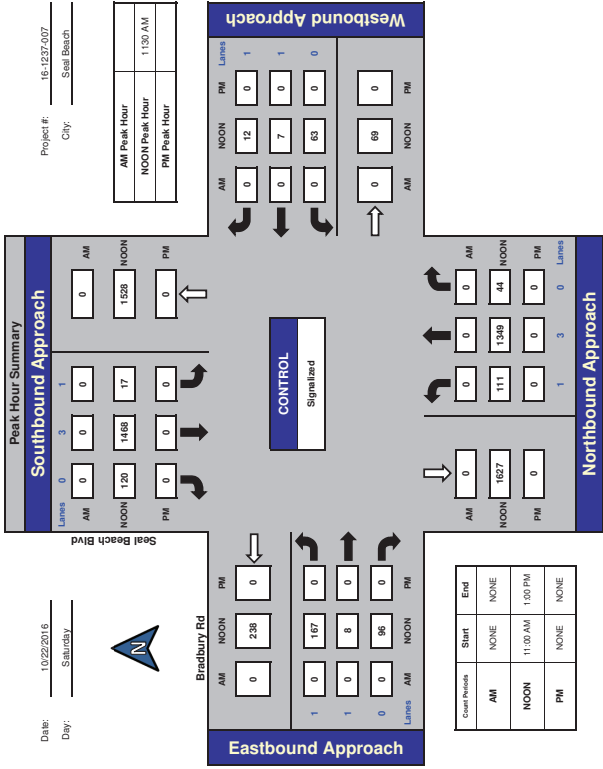
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

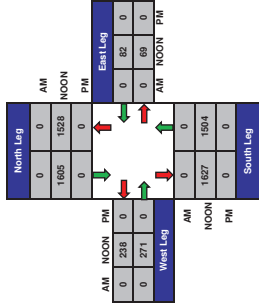
Seal Beach Blvd and Bradbury Rd., Seal Beach

Date: 10/22/2016
Day: Saturday

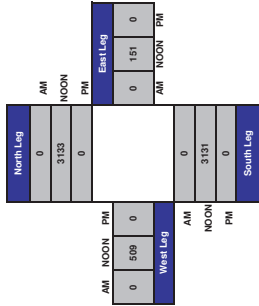
Project #: 16-1237-007
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



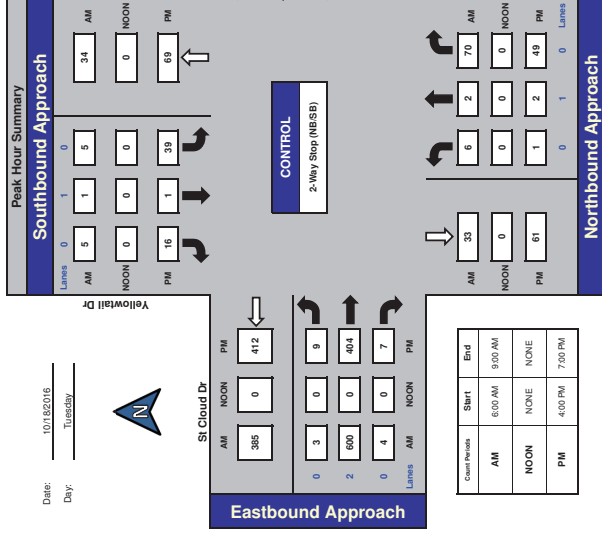
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Yellowtail Dr and St Cloud Dr, Seal Beach

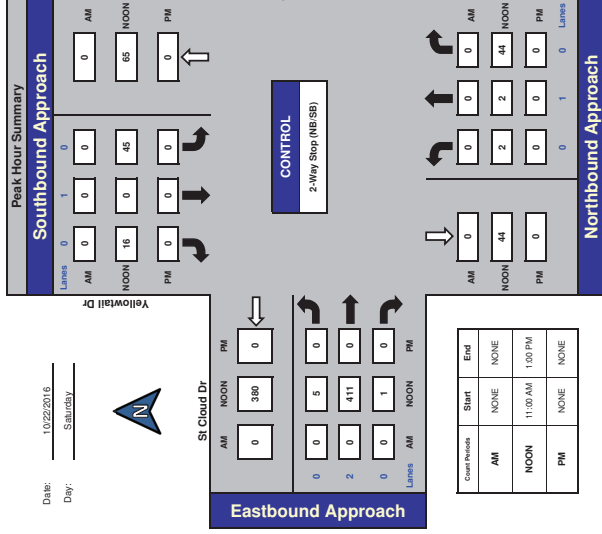
Date: 10/8/2016
Day: Tuesday

Project #: 16-1237-008
City: Seal Beach

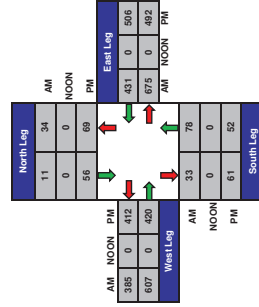


Date: 10/22/2016
Day: Saturday

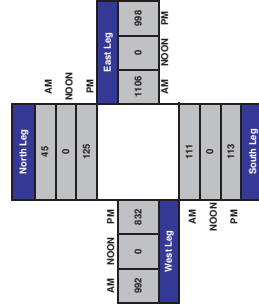
Project #: 16-1237-008
City: Seal Beach



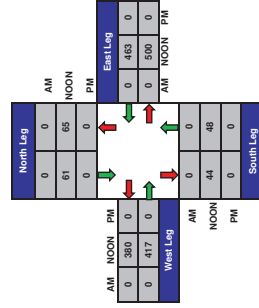
Total Ins & Outs



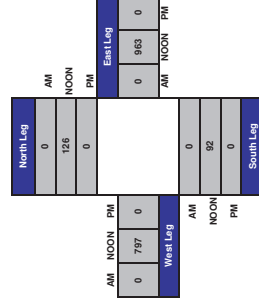
Total Volume Per Leg



Total Ins & Outs



Total Volume Per Leg



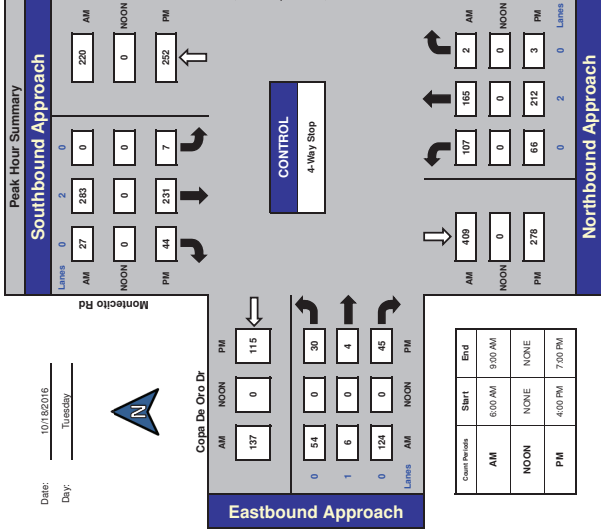
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

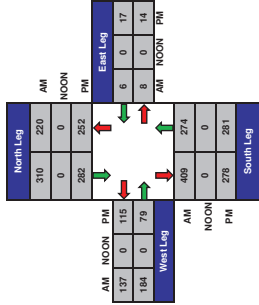
Montecito Rd and Copa De Oro Dr., Seal Beach

Date: 10/8/2016
Day: Tuesday

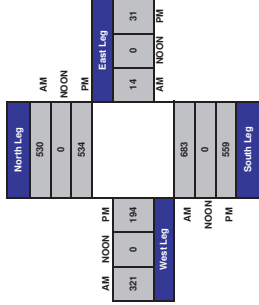
Project #: 16-1237-009
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



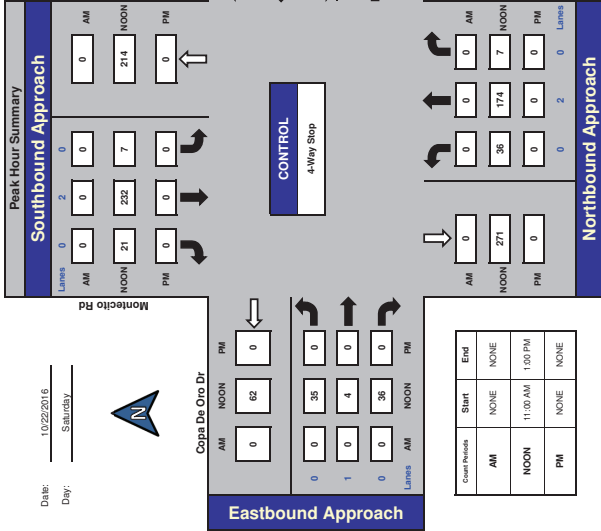
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

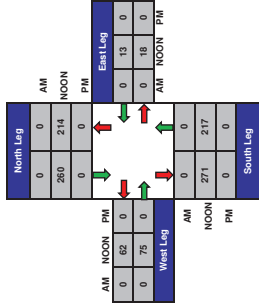
Montecito Rd and Copa De Oro Dr., Seal Beach

Date: 10/22/2016
Day: Saturday

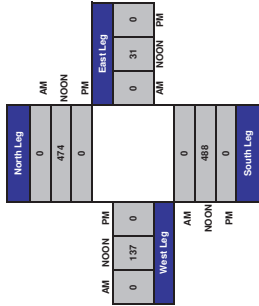
Project #: 16-1237-009
City: Seal Beach

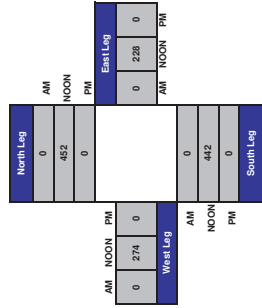
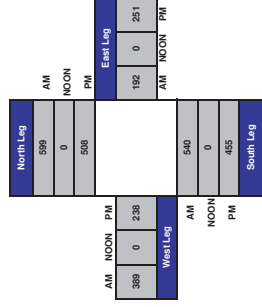


Total Ins & Outs



Total Volume Per Leg





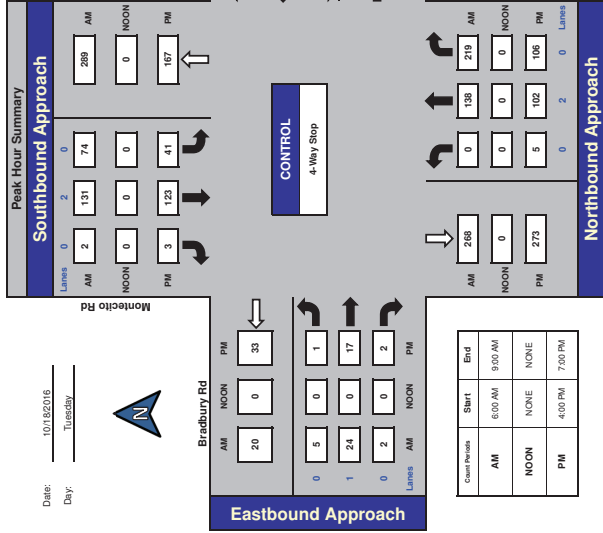
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

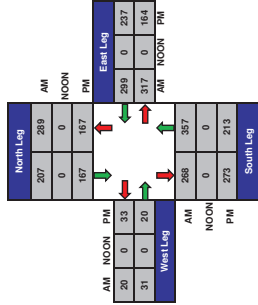
Montecito Rd and Bradbury Rd - Seal Beach

Date: 10/8/2016
Day: Tuesday

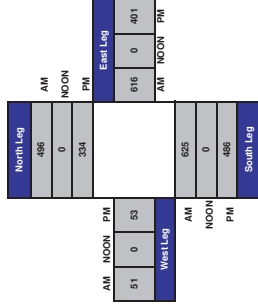
Project #: 16-1237-011
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



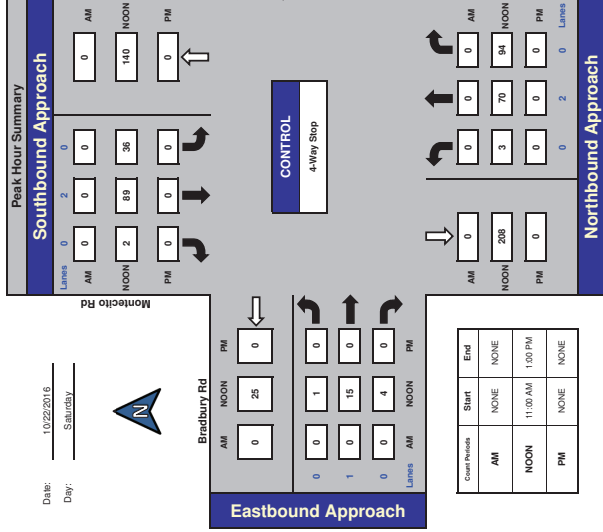
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

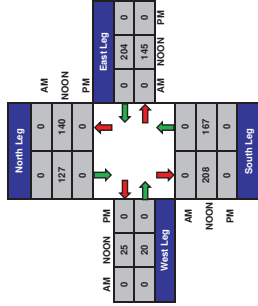
Montecito Rd and Bradbury Rd - Seal Beach

Date: 10/22/2016
Day: Saturday

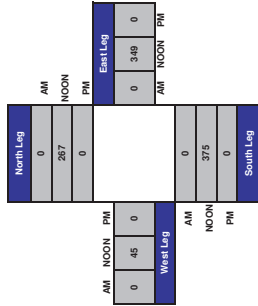
Project #: 16-1237-011
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



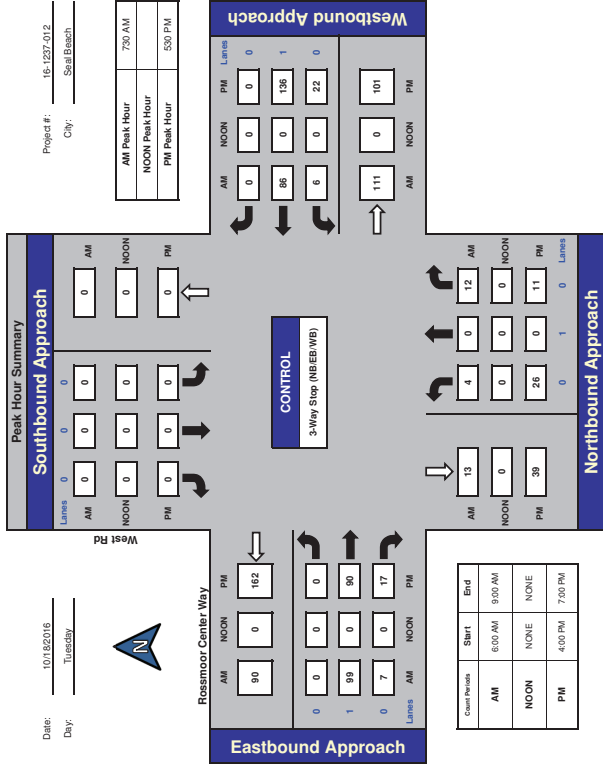
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

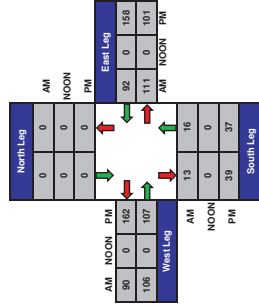
West Rd and Rossmore Center Way - Seal Beach

Date: 10/8/2016
Day: Tuesday

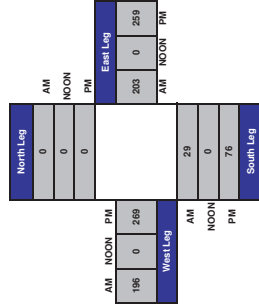
Project #: 16-1237-012
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



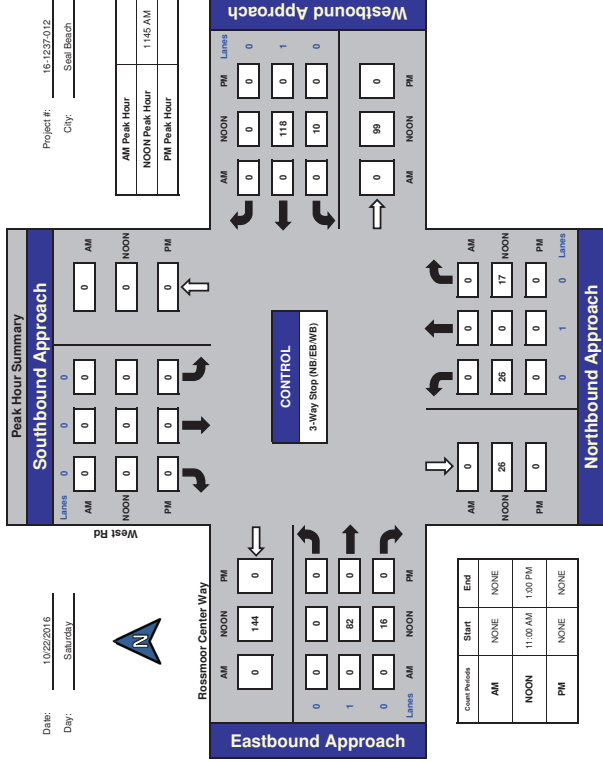
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

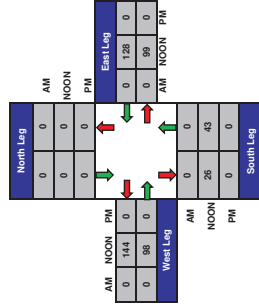
West Rd and Rossmore Center Way - Seal Beach

Date: 10/22/2016
Day: Saturday

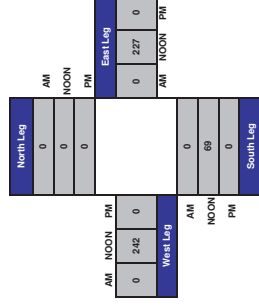
Project #: 16-1237-012
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



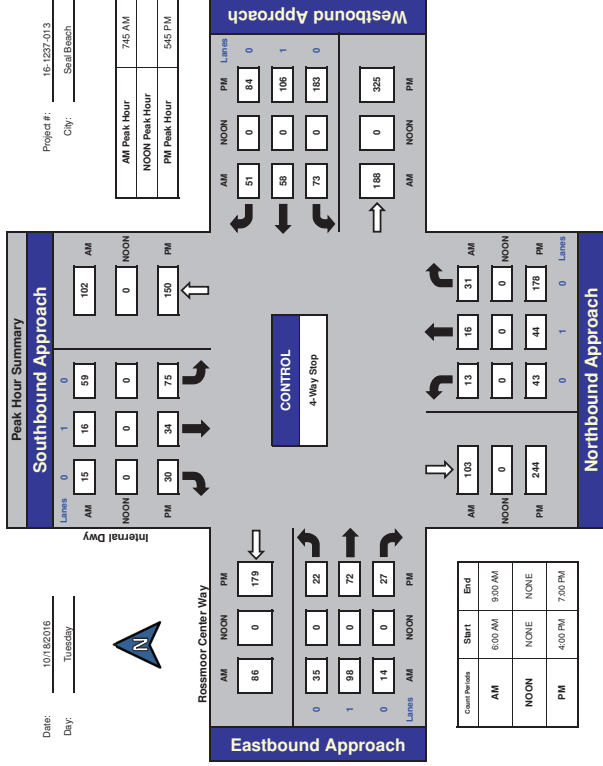
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

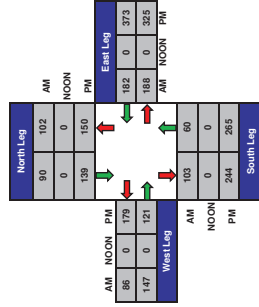
Internal Dwy and Rossmore Center Way, Seal Beach

Date: 10/8/2016
Day: Tuesday

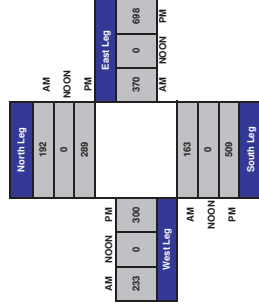
Project #: 16-1237-013
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



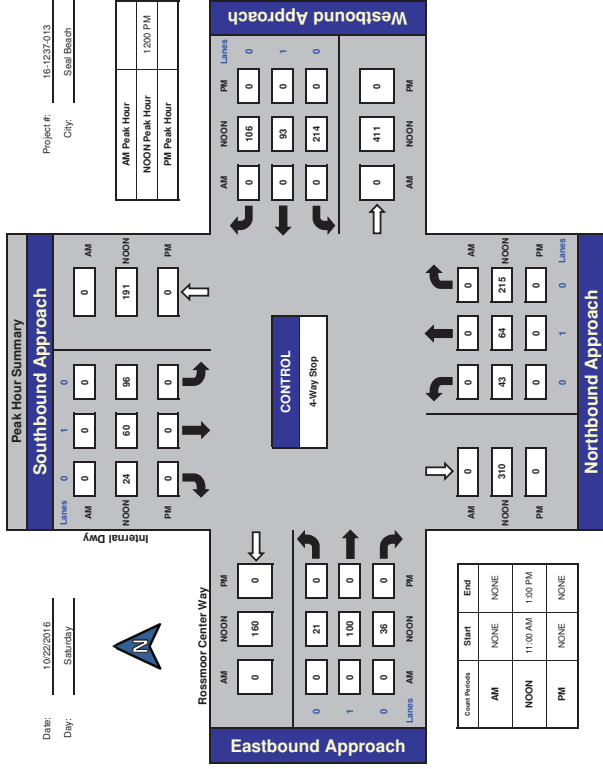
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

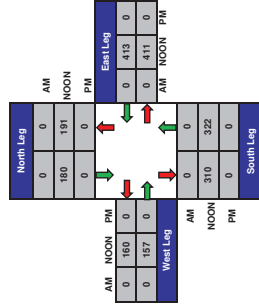
Internal Dwy and Rossmore Center Way, Seal Beach

Date: 10/22/2016
Day: Saturday

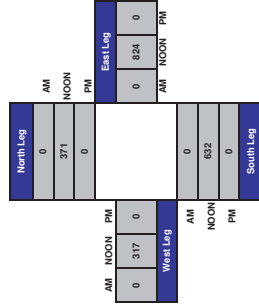
Project #: 16-1237-013
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



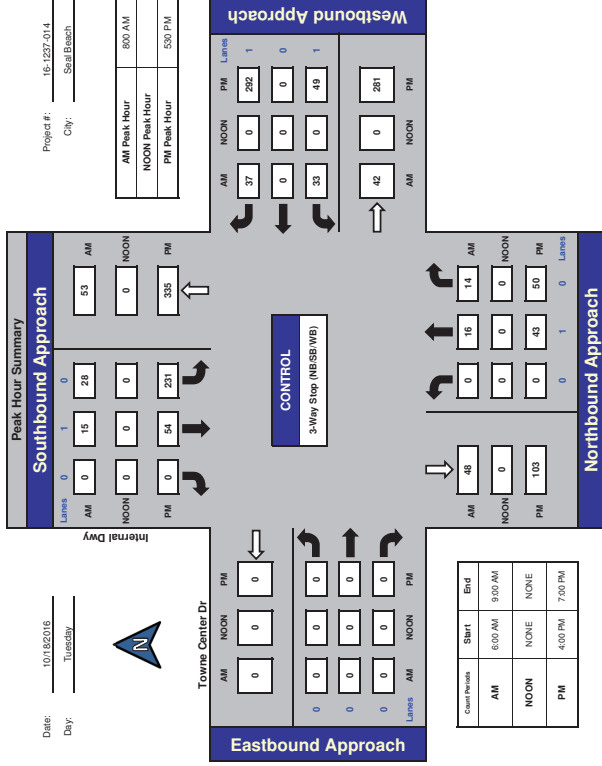
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

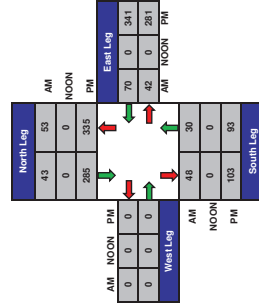
Internal Dwy and Towne Center Dr., Seal Beach

Date: 10/8/2016
Day: Tuesday

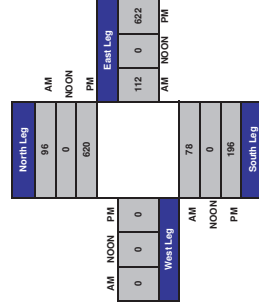
Project #: 16-1237-014
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



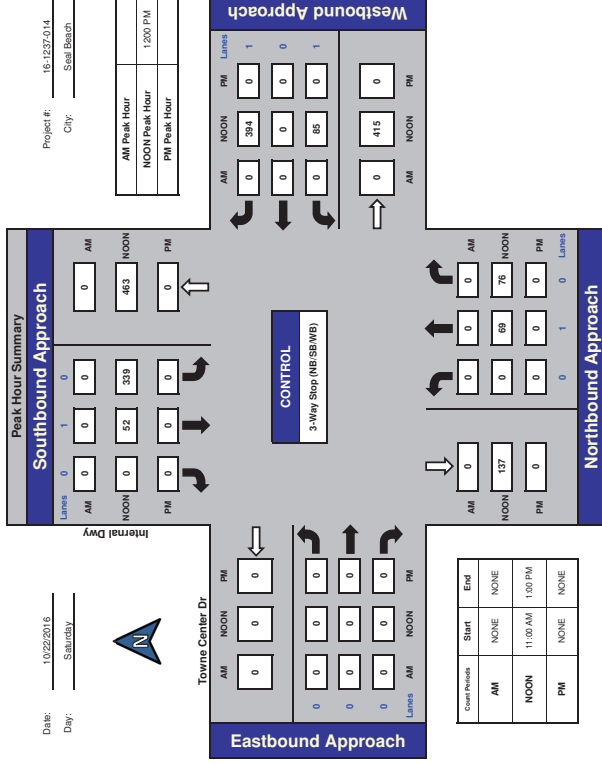
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

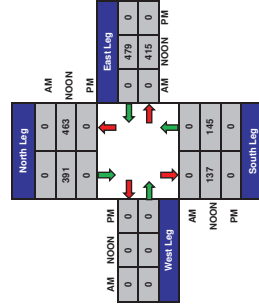
Internal Dwy and Towne Center Dr., Seal Beach

Date: 10/22/2016
Day: Saturday

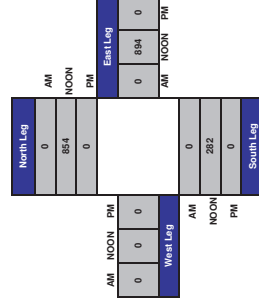
Project #: 16-1237-014
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



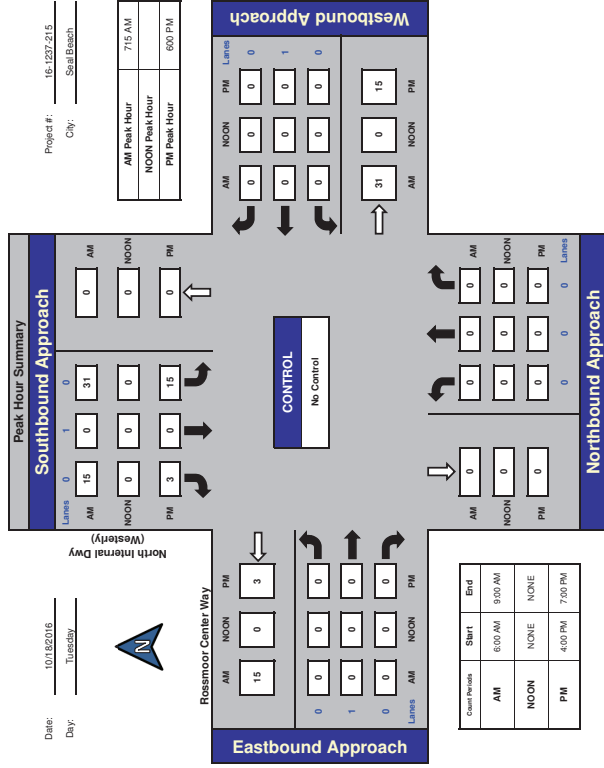
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

North Internal Dwy (Westerly) and Rossmoor Center Way - Seal Beach

Date: 10/8/2016
Day: Tuesday
Project #: 46-1237-215
City: Seal Beach

AM Peak Hour	7:15 AM
NOON Peak Hour	
PM Peak Hour	6:00 PM



Total Volume Per Leg

North Leg	46	0	46
AM	0	0	0
NOON	0	0	0
PM	18	0	18
West Leg	15	0	3
AM	0	0	0
NOON	0	0	0
PM	0	0	0
East Leg	31	0	15
AM	0	0	0
NOON	0	0	0
PM	0	0	0
South Leg	0	0	0

Total Ins & Outs

North Leg	46	0	46
AM	0	0	0
NOON	0	0	0
PM	18	0	18
West Leg	15	0	3
AM	0	0	0
NOON	0	0	0
PM	0	0	0
East Leg	31	0	15
AM	0	0	0
NOON	0	0	0
PM	0	0	0
South Leg	0	0	0

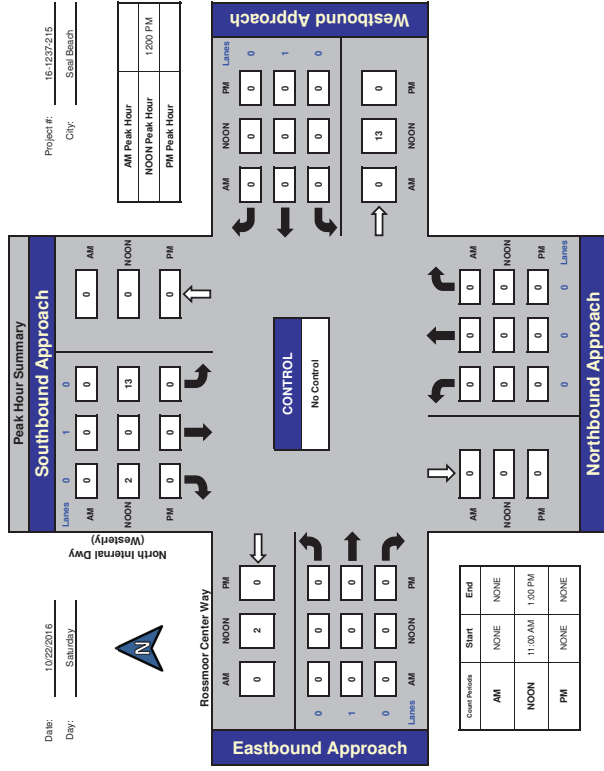
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

North Internal Dwy (Westerly) and Rossmoor Center Way - Seal Beach

Date: 10/22/2016
Day: Saturday
Project #: 46-1237-215
City: Seal Beach

AM Peak Hour	
NOON Peak Hour	1:00 PM
PM Peak Hour	



Total Volume Per Leg

North Leg	0	0	0
AM	0	0	0
NOON	15	0	15
PM	0	0	0
West Leg	0	2	0
AM	0	0	0
NOON	0	0	0
PM	0	0	0
East Leg	0	0	13
AM	0	0	0
NOON	0	0	0
PM	0	0	0
South Leg	0	0	0

Total Ins & Outs

North Leg	0	0	0
AM	0	0	0
NOON	15	0	15
PM	0	0	0
West Leg	0	2	0
AM	0	0	0
NOON	0	0	0
PM	0	0	0
East Leg	0	0	13
AM	0	0	0
NOON	0	0	0
PM	0	0	0
South Leg	0	0	0

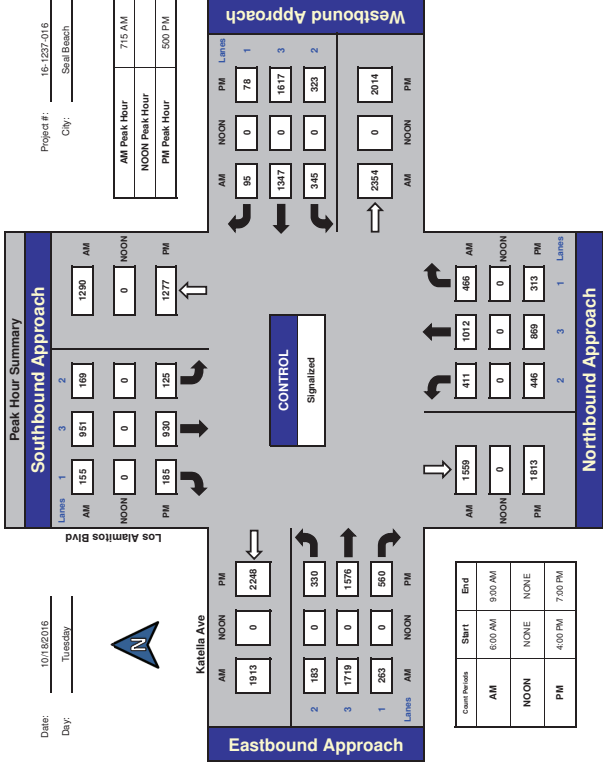
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

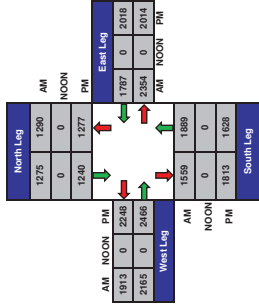
Los Alamitos Blvd and Katella Ave., Seal Beach

Date: 10/8/2016
Day: Tuesday

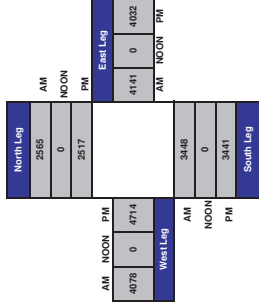
Project #: 16-1237-016
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



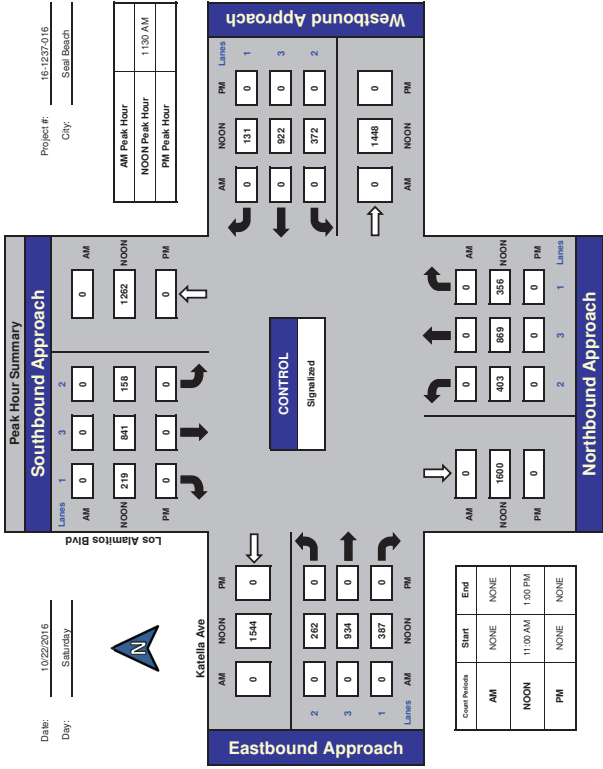
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

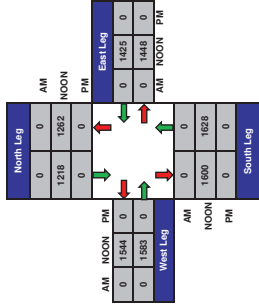
Los Alamitos Blvd and Katella Ave., Seal Beach

Date: 10/22/2016
Day: Saturday

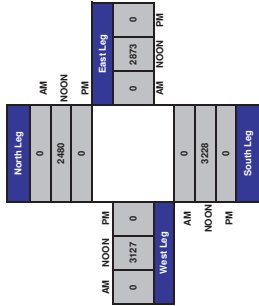
Project #: 16-1237-016
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



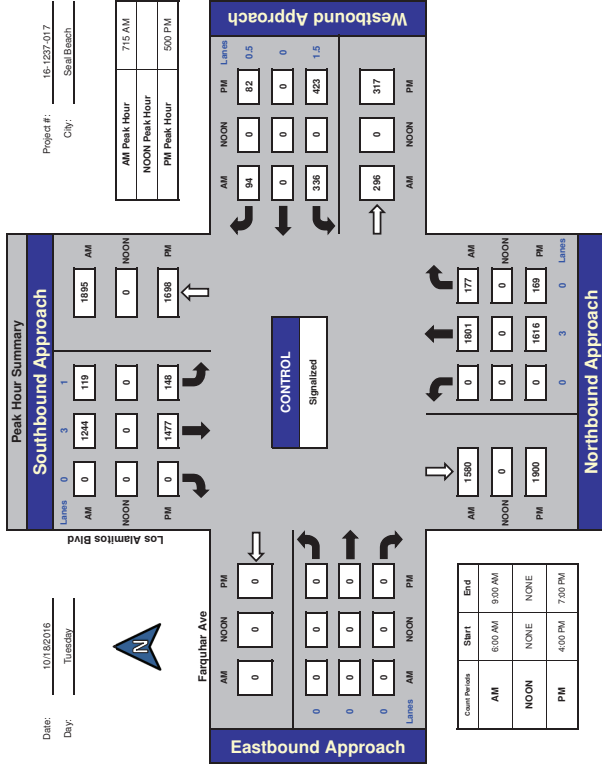
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

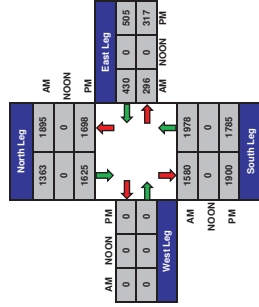
Los Alamitos Blvd and Farquhar Ave., Seal Beach

Date: 10/18/2016
Day: Tuesday

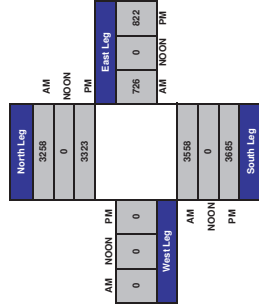
Project #: 16-1237-017
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



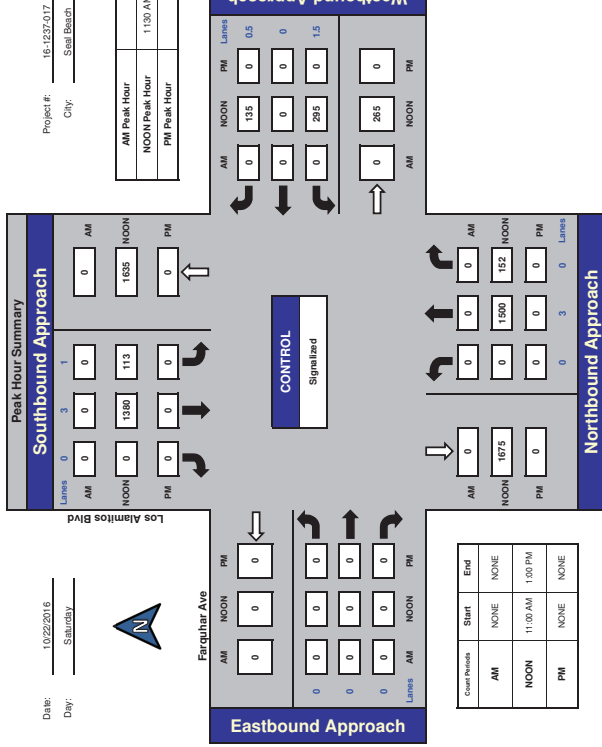
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

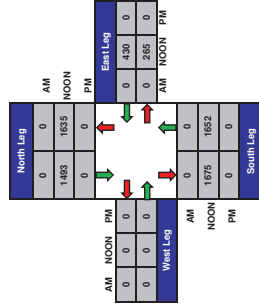
Los Alamitos Blvd and Farquhar Ave., Seal Beach

Date: 10/22/2016
Day: Saturday

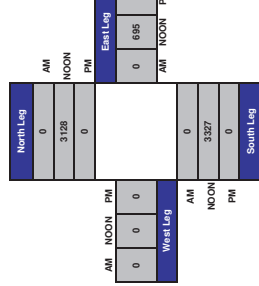
Project #: 16-1237-017
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



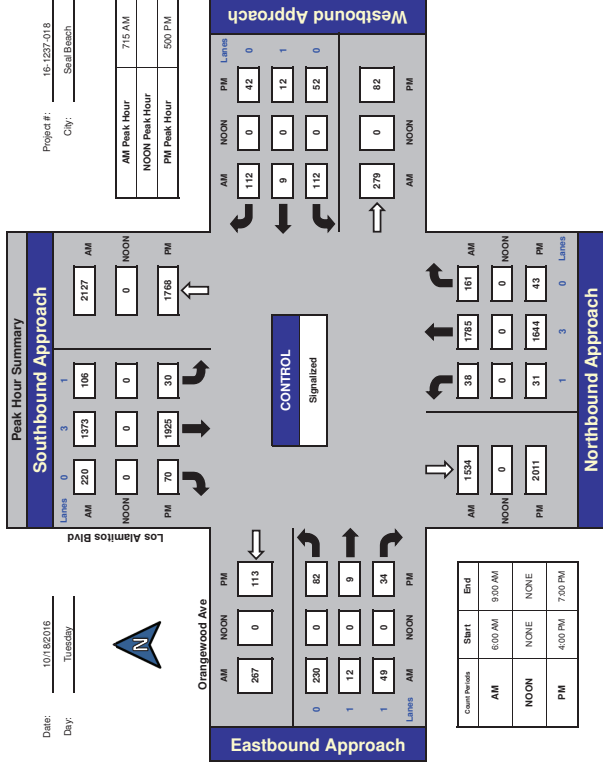
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

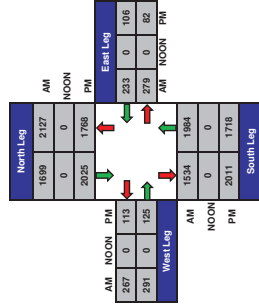
Los Alamitos Blvd and Orangewood Ave., Seal Beach

Date: 10/8/2016
Day: Tuesday

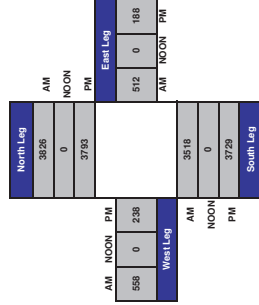
Project #: 16-1237-018
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



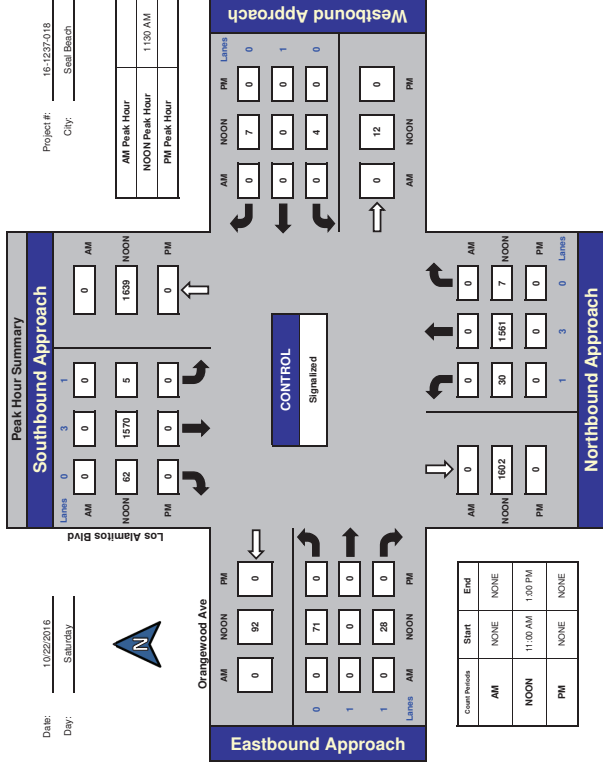
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

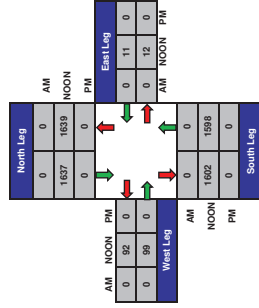
Los Alamitos Blvd and Orangewood Ave., Seal Beach

Date: 10/22/2016
Day: Saturday

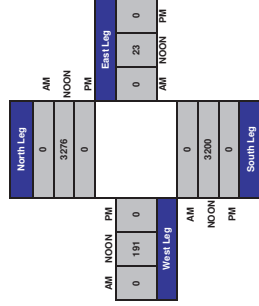
Project #: 16-1237-018
City: Seal Beach



Total Ins & Outs



Total Volume Per Leg



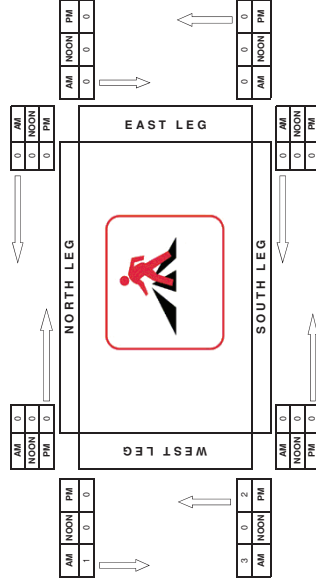
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count Peak Hour

PROJECT#: 16-1239-001
NS Street: Seal Beach Blvd
EW Street: St Cloud Dr
DATE: 10/18/2016
CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	1:00
PM 15:00	19:00



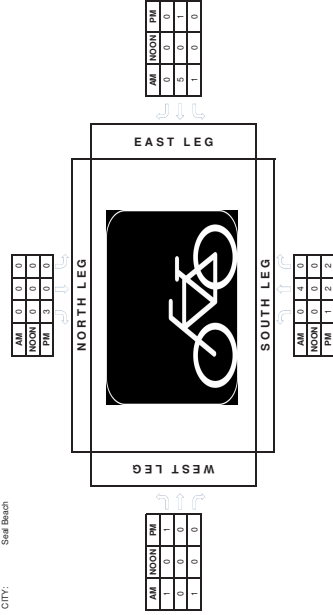
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

PROJECT#: 16-1239-001
NS Street: Seal Beach Blvd
EW Street: St Cloud Dr
DATE: 10/18/2016
CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	1:00
PM 15:00	19:00



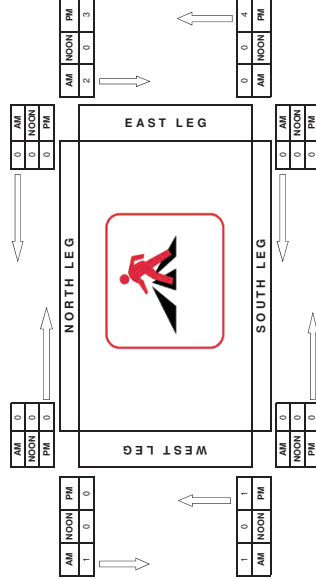
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count Peak Hour

PROJECT#: 16-1239-006
NS Street: Seal Beach Blvd
EW Street: St Cloud Dr
DATE: 10/18/2016
CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	1:00
PM 15:00	19:00



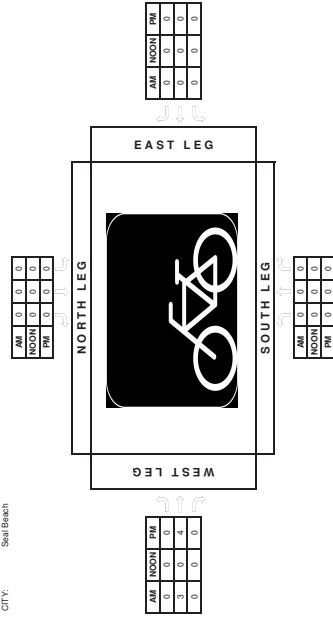
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

PROJECT#: 16-1239-006
NS Street: Seal Beach Blvd
EW Street: St Cloud Dr
DATE: 10/18/2016
CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	1:00
PM 15:00	19:00



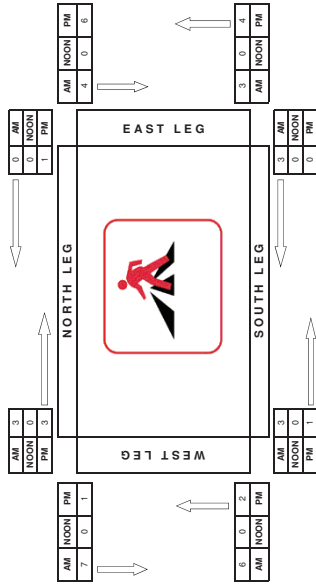
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count Peak Hour

PROJECT#: 16-1239-002
 NS Street: Morisco Rd
 EW Street: Capa De Oro Dr
 DATE: 10/19/2016
 CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	15:00
PM	16:00 19:00



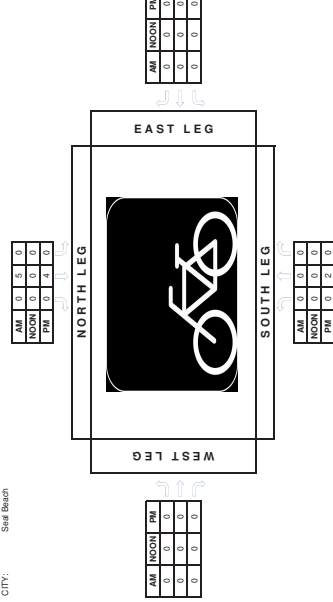
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

PROJECT#: 16-1239-002
 NS Street: Morisco Rd
 EW Street: Capa De Oro Dr
 DATE: 10/19/2016
 CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	15:00
PM	16:00 19:00



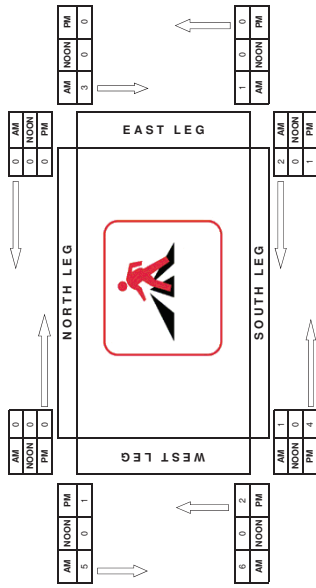
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count Peak Hour

PROJECT#: 16-1239-005
 NS Street: Morisco Rd
 EW Street: Tucker Ln
 DATE: 10/18/2016
 CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	15:00
PM	16:00 19:00



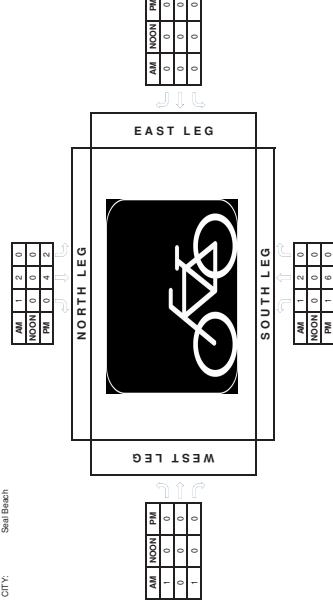
PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count Peak Hour

PROJECT#: 16-1239-005
 NS Street: Morisco Rd
 EW Street: Tucker Ln
 DATE: 10/18/2016
 CITY: Seal Beach

DAY: Tuesday

Start	End
AM 6:00	9:00
NOON	15:00
PM	16:00 19:00



DAILY TOTALS										Total
AM Period	NB		SB		EB		WB		TOTAL	Total
	NB	0	SB	0	EB	6,646	WB	5,649		
00:00	2	6	8	101	88	189	189	189	189	189
00:15	8	9	17	12:00	105	83	188	188	188	188
00:30	4	3	7	12:30	94	84	178	178	178	178
00:45	1	15	1	12:45	86	386	82	337	168	723
01:00	2	4	6	13:00	111	95	206	206	206	206
01:15	3	3	6	13:15	107	99	186	186	186	186
01:30	1	3	4	13:30	112	96	208	208	208	208
01:45	3	9	3	13:45	105	415	108	398	213	813
02:00	1	1	2	14:00	82	134	216	216	216	216
02:15	4	0	4	14:15	107	99	206	206	206	206
02:30	3	4	7	14:30	156	114	270	270	270	270
02:45	2	10	4	14:45	141	486	96	443	237	929
03:00	0	1	1	15:00	122	109	231	231	231	231
03:15	1	1	2	15:15	126	106	232	232	232	232
03:30	4	0	4	15:30	132	133	265	265	265	265
03:45	7	8	15	15:45	139	519	95	443	234	962
04:00	7	4	11	16:00	124	96	220	220	220	220
04:15	6	5	11	16:15	97	119	216	216	216	216
04:30	15	8	23	16:30	109	95	204	204	204	204
04:45	28	56	3	16:45	110	440	142	452	252	892
05:00	20	2	22	17:00	115	107	222	222	222	222
05:15	33	1	34	17:15	120	126	246	246	246	246
05:30	50	42	10	17:30	112	127	239	239	239	239
05:45	49	144	18	17:45	127	474	143	503	270	977
06:00	64	18	82	18:00	137	112	249	249	249	249
06:15	60	15	75	18:15	111	116	227	227	227	227
06:30	89	22	111	18:30	98	112	210	210	210	210
06:45	116	329	35	18:45	70	383	114	437	184	820
07:00	131	43	174	19:00	68	106	174	174	174	174
07:15	132	55	187	19:15	65	88	153	153	153	153
07:30	149	104	253	19:30	58	79	137	137	137	137
07:45	182	594	170	19:45	46	237	58	331	104	568
08:00	204	77	281	20:00	63	69	132	132	132	132
08:15	142	81	223	20:15	50	81	131	131	131	131
08:30	109	552	661	20:30	46	65	111	111	111	111
08:45	115	58	173	20:45	48	226	69	284	117	510
09:00	129	179	308	21:00	28	54	82	82	82	82
09:15	97	50	147	21:15	27	35	62	62	62	62
09:30	104	74	178	21:30	18	39	57	57	57	57
09:45	100	416	516	21:45	22	95	41	169	63	264
10:00	101	82	183	22:00	31	37	68	68	68	68
10:15	107	68	175	22:15	19	30	49	49	49	49
10:30	90	73	163	22:30	13	20	33	33	33	33
10:45	76	374	450	22:45	13	76	20	102	28	178
11:00	78	68	146	23:00	3	15	18	18	18	18
11:15	107	84	191	23:15	9	11	20	20	20	20
11:30	107	87	194	23:30	5	8	13	13	13	13
11:45	87	382	469	23:45	3	20	4	38	7	58
TOTALS	2889	1712	4601	TOTALS	3757	3937	7694	7694	7694	7694
SPLIT %	62.8%	37.2%	37.4%	SPLIT %	48.8%	51.2%	51.2%	51.2%	51.2%	51.2%

DAILY TOTALS										Total
	NB		SB		EB		WB			
	0	0	0	0	6,646	5,649			12,295	
AM Peak Hour	07:30	07:30	07:30	07:30	PM Peak Hour	17:00	17:00	17:00	17:15	
AM PK Volume	677	432	1109	474	PM PK Volume	1750	1700	1700	1715	
PK Hr Factor	0.830	0.635	0.788	0.933	PK Hr Factor	0.873	0.883	0.930	0.930	
7 - 9 Volume	1146	680	1826	914	4 - 6 Volume	914	955	1869	1869	
7 - 9 Peak Hour	07:30	07:30	07:30	4 - 6 Peak Hour	17:00	17:00	17:00	17:00	17:00	
7 - 9 PK Volume	677	432	1109	474	4 - 6 PK Volume	474	503	977	977	
PK Hr Factor	0.830	0.635	0.788	0.933	PK Hr Factor	0.903	0.879	0.905	0.905	

DAILY TOTALS										Total
NB		SB		EB		WB		WB		TOTAL
2,781		3,494		0		0		0		
AM Period	NB	SB	EB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	5	1	0	6	12:00	35	42	77	77	77
00:15	4	3	3	7	12:15	36	42	78	78	78
00:30	3	2	2	5	12:30	44	47	91	91	91
00:45	1	13	1	7	12:45	28	143	39	170	67 313
01:00	2	0	0	2	13:00	37	54	91	91	91
01:15	0	0	0	0	13:15	44	44	88	88	88
01:30	1	1	1	2	13:30	61	53	57	208	114 114
01:45	1	4	2	3	13:45	44	186	57	208	101 394
02:00	1	0	0	1	14:00	86	44	130	130	130
02:15	0	4	4	8	14:15	58	55	113	113	113
02:30	0	0	0	0	14:30	62	100	162	162	162
02:45	1	2	0	4	14:45	48	254	102	301	150 555
03:00	1	0	0	1	15:00	47	51	98	98	98
03:15	1	1	1	2	15:15	56	71	127	127	127
03:30	0	3	3	3	15:30	42	76	118	118	118
03:45	0	2	2	6	15:45	49	194	61	259	110 453
04:00	1	2	2	3	16:00	45	65	110	110	110
04:15	1	4	4	9	16:15	61	59	120	120	120
04:30	1	6	6	7	16:30	49	63	112	112	112
04:45	1	4	15	27	16:45	80	235	58	245	138 480
05:00	2	13	15	15	17:00	59	47	106	106	106
05:15	4	23	27	27	17:15	64	65	129	129	129
05:30	5	20	25	25	17:30	63	58	121	121	121
05:45	7	18	21	77	17:45	91	277	74	244	165 521
06:00	9	28	37	37	18:00	56	80	136	136	136
06:15	8	38	46	46	18:15	45	65	110	110	110
06:30	21	48	69	94	18:30	54	90	104	104	104
06:45	51	52	73	187	18:45	94	239	104	434	100 434
07:00	26	60	86	86	19:00	62	26	88	88	88
07:15	33	72	105	105	19:15	28	44	72	72	72
07:30	68	76	144	144	19:30	36	24	60	60	60
07:45	103	230	114	322	19:45	29	155	31	125	60 280
08:00	51	132	183	217	20:00	35	27	62	62	62
08:15	41	87	128	128	20:15	43	17	60	60	60
08:30	24	57	81	81	20:30	30	29	59	59	59
08:45	27	147	62	338	20:45	23	151	31	104	54 255
09:00	22	52	74	74	21:00	35	10	45	45	45
09:15	21	57	78	78	21:15	13	15	28	28	28
09:30	27	48	75	75	21:30	24	9	33	33	33
09:45	15	85	54	211	21:45	17	89	7	41	24 130
10:00	34	46	80	80	22:00	15	12	27	27	27
10:15	26	50	76	76	22:15	13	10	23	23	23
10:30	22	32	74	74	22:30	13	8	34	34	34
10:45	29	120	32	179	22:45	9	46	3	12	80
11:00	29	32	61	61	23:00	7	3	1	1	12
11:15	30	54	84	84	23:15	7	1	8	8	8
11:30	28	48	76	76	23:30	1	2	3	3	3
11:45	52	139	43	177	23:45	1	18	2	8	26
TOTALS	816	1538	2354	2354	TOTALS	1965	1956	3921	3921	62.5%
SPLIT %	34.7%	65.3%	37.5%	37.5%	SPLIT %	50.1%	49.9%	49.9%	49.9%	62.5%

DAILY TOTALS										Total
NB		SB		EB		WB		WB		Total
2,781		3,494		0		0		0		
AM Peak Hour	07:30	07:30	07:30	07:30	PM Peak Hour	17:30	14:30	14:30	14:00	
AM PK Volume	263	409	672	672	PM PK Volume	277	324	355	355	
PK Hr Factor	0.638	0.775	0.704	0.704	PK Hr Factor	0.761	0.794	0.856	0.856	
7 - 9 Peak Hour	07:30	07:30	07:30	07:30	4 - 6 Peak Hour	17:00	16:00	17:00	17:00	
7 - 9 PK Volume	263	409	672	672	4 - 6 PK Volume	277	245	521	521	
PK Hr Factor	0.638	0.775	0.704	0.704	PK Hr Factor	0.761	0.794	0.856	0.856	

DAILY TOTALS										Total
NB		SB		EB		WB		WB		Total
2,553		3,342		0		0		0		
AM Period	NB	SB	EB	TOTAL	PM Period	NB	SB	EB	TOTAL	TOTAL
0000	2	1	1	3	1200	38	49		87	
0015	2	4		6	1215	34	44		78	
0030	3	1		4	1230	40	54		94	
0045	2	9	1	12	1245	30	141	189	260	
0100	1	0		1	1300	35	48		83	
0115	2	0		2	1315	38	46		84	
0130	1	1		2	1330	54	47		101	
0145	1	5	2	8	1345	39	166	203	369	
0200	0			0	1400	66	52		118	
0215	0	1		1	1415	41	62		103	
0230	0	1		1	1430	69	64		133	
0245	0	0	2	2	1445	47	223	110	380	
0300	1	0		1	1500	53	76		129	
0315	0	2		2	1515	46	87		133	
0330	0	1		1	1530	35	76		111	
0345	0	1	4	5	1545	51	185	50	286	
0400	1	3		4	1600	47	67		114	
0415	2	2		4	1615	91	75		166	
0430	1	3		4	1630	64	78		142	
0445	2	6	12	20	1645	64	216	249	429	
0500	7	7		14	1700	60	55		115	
0515	4	14		18	1715	61	53		114	
0530	4	14		18	1730	62	64		126	
0545	8	23	11	46	1745	72	255	88	315	
0600	10	18		28	1800	53	76		129	
0615	8	35		43	1815	43	67		110	
0630	15	18		33	1830	63	45		108	
0645	24	59	62	153	1845	51	210	248	411	
0700	36	59		95	1900	51	40		91	
0715	25	53		78	1915	25	47		72	
0730	57	58		115	1930	29	32		61	
0745	55	173	84	254	1945	28	133	151	312	
0800	70	93		163	2000	21	31		52	
0815	49	76		125	2015	33	23		56	
0830	33	89		122	2030	45	27		72	
0845	20	176	56	276	2045	73	122	120	315	
0900	20	46		66	2100	22	14		36	
0915	32	52		84	2115	14	16		30	
0930	24	38		62	2130	14	9		23	
0945	18	94	39	175	2145	14	64	12	90	
1000	29	43		72	2200	5	10		15	
1015	28	52		80	2215	9	7		16	
1030	22	37	154	215	2230	12	13		25	
1045	33	112	22	267	2245	3	29	38	70	
1100	37	35		72	2300	6	4		10	
1115	30	41		71	2315	5	1		7	
1130	28	44		72	2330	0	1		1	
1145	36	140	33	153	2345	0	11	3	14	
TOTALS	798	1247		2045	TOTALS	1755	2095		3850	
SPLIT %	39.0%	61.0%		34.7%	SPLIT %	45.6%	54.4%		65.3%	

DAILY TOTALS										Total
NB		SB		EB		WB				Total
2,553		3,342		0		0				
AM Peak Hour	7:30	7:30	7:30	7:30	PM Peak Hour	7:00	14:45	14:30		
AM PK Volume	311	311	311	311	PM PK Volume	1700	255	1430		
PK Hr Factor	0.825	0.836	0.836	0.831	PK Hr Factor	0.885	0.793	0.852		
7 - 9 Volume	349	530	530	879	4 - 6 Volume	471	509	980		
7 - 9 Peak Hour	7:30	7:30	7:30	7:30	4 - 6 Peak Hour	17:00	17:00	17:00		
7 - 9 PK Volume	231	311	311	542	4 - 6 PK Volume	255	260	515		
PK Hr Factor	0.825	0.836	0.836	0.831	PK Hr Factor	0.885	0.793	0.845		

DAILY TOTALS										Total
NB		SB		EB		WB		WB		Total
2,773		2,874		0		0		5,647		
AM Period	NB	SB	EB	TOTAL	PM Period	NB	SB	EB	TOTAL	TOTAL
0:00	1	2		3	12:00	34	37		71	
0:15	1	1		2	12:15	30	28		58	
0:30	3	4		7	12:30	41	36		77	
0:45	1	6	2	9	12:45	38	143	143	286	
1:00	0	0		0	13:00	36	51		87	
1:15	0	0		0	13:15	37	30		67	
1:30	1	1		2	13:30	55	39		94	
1:45	1	2	4	7	13:45	51	179	175	354	
2:00	0	0		0	14:00	53	55		108	
2:15	0	1		1	14:15	45	70		115	
2:30	1	1		2	14:30	107	60		167	
2:45	0	1	3	4	14:45	67	272	83	342	
3:00	1	1		2	15:00	59	73		132	
3:15	0	0		0	15:15	53	88		141	
3:30	0	1		1	15:30	49	83		132	
3:45	1	2	0	3	15:45	55	216	259	510	
4:00	1	0		1	16:00	48	57		105	
4:15	3	0		3	16:15	48	58		126	
4:30	1	0		1	16:30	42	65		107	
4:45	1	6	5	12	16:45	45	203	246	454	
5:00	7	2		9	17:00	56	61		117	
5:15	5	1		6	17:15	53	65		118	
5:30	8	3		11	17:30	41	68		109	
5:45	8	28	9	45	17:45	63	213	272	353	
6:00	10	7		17	18:00	50	64		114	
6:15	10	9		19	18:15	51	49		100	
6:30	33	26		59	18:30	40	55		95	
6:45	30	110	39	179	18:45	36	177	234	447	
7:00	69	26		95	19:00	35	41		76	
7:15	73	33		106	19:15	19	48		67	
7:30	90	51		141	19:30	30	25		55	
7:45	95	327	209	531	19:45	23	107	147	277	
8:00	90	59		149	20:00	16	23		39	
8:15	80	57		137	20:15	20	16		36	
8:30	34	37		71	20:30	28	37		65	
8:45	24	248	20	292	20:45	21	85	36	352	
9:00	26	39		65	21:00	15	18		33	
9:15	36	39		75	21:15	13	18		31	
9:30	28	24		52	21:30	8	18		26	
9:45	24	114	123	261	21:45	9	45	62	116	
10:00	25	31		56	22:00	5	8		13	
10:15	28	39		67	22:15	5	9		14	
10:30	35	26	123	194	22:30	7	12		19	
10:45	27	115	27	269	22:45	5	23	36	64	
11:00	28	39		67	23:00	5	7		12	
11:15	42	31		73	23:15	4	1		5	
11:30	43	31		74	23:30	1	2		3	
11:45	28	141	25	194	23:45	0	10	13	23	
TOTALS	1100	877		1977	TOTALS	1673	1997		3670	
SPLIT %	55.6%	44.4%		35.0%	SPLIT %	45.6%	54.4%		65.0%	

DAILY TOTALS										Total
NB		SB		EB		WB		WB		Total
2,773		2,874		0		0		0		
AM Peak Hour	7:30	7:30	7:30	PM Peak Hour	14:30	14:30	14:30	14:30	14:30	5,647
PK Hr Volume	355	266	0	PK Hr Volume	590	590	590	590	590	
PK Hr Factor	0.934	0.672	0	PK Hr Factor	0.668	0.668	0.668	PK Hr Factor	0.668	
7 - 9 Volume	575	391	0	4 - 6 Volume	416	518	0	4 - 6 Volume	934	
7 - 9 Peak Hour	7:30	7:30	0	4 - 6 Peak Hour	17:00	17:00	0	4 - 6 Peak Hour	17:00	
7 - 9 PK Volume	355	266	0	4 - 6 PK Volume	213	272	0	4 - 6 PK Volume	485	
PK Hr Factor	0.934	0.672	0	PK Hr Factor	0.845	0.845	0	PK Hr Factor	0.860	

APPENDIX B

INTERSECTION LOS WORKSHEETS

HCM 2010 Signalized Intersection Summary 1: Seal Beach Boulevard & I-405 SB Ramps

11/21/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	87	28	16	696	44	525	14	1051	166	428	1449	72
Future Volume (veh/h)	87	28	16	696	44	525	14	1051	166	428	1449	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	96	31	18	799	0	0	15	1155	182	470	1592	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	861	0	384	30	1232	384	643	3074	957
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.24	0.40	0.40
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	96	0	49	799	0	0	15	1155	182	470	1592	79
Grp Sat Flow(s), veh/hln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.5	10.8	26.8	25.9	3.4
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.5	10.8	26.8	25.9	3.4
Prop In Lane	1.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	861	0	384	30	1232	384	643	3074	957
V/C Ratio(X)	1.08	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.73	0.52	0.08
Avail Cap(c.a), veh/h	89	0	87	861	0	384	30	1232	384	643	3074	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	36.7	20.7	13.9
Incr Delay (d2), s/veh	119.6	0.0	7.8	15.4	0.0	0.0	12.7	14.5	4.2	3.2	0.5	0.1
Initial Q Delay(d3), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/hln	5.6	0.0	1.6	13.7	0.0	0.0	0.6	13.1	5.2	13.7	12.3	1.5
LnGrp Delay(d), s/veh	172.3	0.0	58.9	56.1	0.0	0.0	66.3	55.3	39.8	39.9	21.1	14.1
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	C	B
Approach Vol, veh/h	145			799			1352				2141	
Approach Delay, s/veh	134.0			56.1			53.4				25.0	
Approach LOS	F			E			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	45.7	32.4		10.2	5.8	72.3		32.5				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5				
Max Q Clear Time (g_c+I), s	28.8	26.5		7.5	2.9	27.9		26.2				
Green Ext Time (p_c), s	0.2	0.2		0.0	0.0	14.2		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				42.8								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary 2: Seal Beach Boulevard & I-405 NB Ramps

11/21/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	7	11	5	367	53	549	110	1196	348	328	1565	463
Future Volume (veh/h)	7	11	5	367	53	549	110	1196	348	328	1565	463
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	12	6	408	0	649	122	1329	0	364	1739	514
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	44	46	39	877	0	783	549	1885	587	306	1869	582
Arrive On Green	0.02	0.02	0.02	0.25	0.00	0.25	0.32	0.74	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	8	12	6	408	0	649	122	1329	0	364	1739	514
Grp Sat Flow(s), veh/hln	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	0.5	0.7	0.4	10.8	0.0	21.3	2.9	15.6	0.0	19.0	36.2	33.4
Cycle Q Clear(g.c), s	0.5	0.7	0.4	10.8	0.0	21.3	2.9	15.6	0.0	19.0	36.2	33.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	44	46	39	877	0	783	549	1885	587	306	1869	582
V/C Ratio(X)	0.18	0.26	0.15	0.47	0.00	0.83	0.22	0.71	0.00	1.19	0.93	0.88
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	549	1885	587	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.59	0.59	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	35.2	0.0	39.2	32.5	11.0	0.0	45.5	33.4	32.6
Incr Delay (d2), s/veh	1.9	2.9	1.8	0.4	0.0	3.6	0.1	1.3	0.0	112.5	9.8	17.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/hln	0.4	0.2	0.3	0.0	0.0	9.8	1.4	7.1	0.0	18.9	18.6	17.4
LnGrp Delay(d), s/veh	54.5	55.5	54.3	35.6	0.0	42.8	32.6	12.3	0.0	158.0	43.3	50.1
LnGrp LOS	D	E	D	D	D	D	C	B		F	D	D
Approach Vol, veh/h	26			1057			1451			2617		
Approach Delay, s/veh	54.9			40.0			14.0			60.6		
Approach LOS	D			D			B			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	45.7	32.4		10.2	5.8	72.3		32.5				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5				
Max Q Clear Time (g_c+I), s	28.8	26.5		7.5	2.9	27.9		26.2				
Green Ext Time (p_c), s	0.2	0.2		0.0	0.0	14.2		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				43.2								
HCM 2010 LOS				D								
Notes												

Existing Current Occ AM Mon Feb 20, 2017 15:09:00 Page 2-1

Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.804

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 68 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted

Rights: Ovl Include Ovl

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1445 305 296 1653 0 0 0 0 702 0 605

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 1445 305 296 1653 0 0 0 702 0 605

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91

PHF Volume: 0 1591 336 326 1820 0 0 0 773 0 666

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 0 1591 336 326 1820 0 0 0 773 0 666

PCE Adj: 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

FinalVolume: 0 1591 336 326 1820 0 0 0 773 0 666

OvAdjVol: 0 1591 336 326 1820 0 0 0 773 0 666

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 3.00 2.00 3.00 0.00 0.00 0.00 2.00

Final Sat.: 0 5100 1700 3400 5100 0 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.31 0.20 0.10 0.36 0.00 0.00 0.00

OvAdjV/S: 0.00 0.31 0.20 0.10 0.36 0.00 0.00 0.23

Crit Moves: ****

Existing Current Occ AM Mon Feb 20, 2017 15:09:00 Page 3-1

Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 42 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Ovl

Rights: Include Include Ovl

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 377 1633 47 4 1301 46 106 3 567 65 13 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 377 1633 47 4 1301 46 106 3 567 65 13 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88

PHF Volume: 429 1858 53 5 1480 52 121 3 645 74 15 2

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 429 1858 53 5 1480 52 121 3 645 74 15 2

PCE Adj: 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

FinalVolume: 429 1858 53 5 1480 52 121 3 645 74 15 2

OvAdjVol: 429 1858 53 5 1480 52 121 3 645 74 15 2

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.92 0.08 1.00 2.90 0.10 0.97 0.03

Final Sat.: 3400 4957 143 1700 4926 174 1653 47 3400 2763 552 85

Capacity Analysis Module:

Vol/Sat: 0.13 0.37 0.37 0.00 0.30 0.30 0.07 0.07

OvAdjV/S: 0.13 0.37 0.37 0.00 0.30 0.30 0.19 0.03

Crit Moves: ****

Existing Current Occ AM Mon Feb 20, 2017 15:09:00 Page 4-1

Health Club within the Shops at Rossmoor
Existing (2016) Current Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.501

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 33 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 30 1627 31 21 1345 13 3 4 14 24 2 21

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: 30 1627 31 21 1345 13 3 4 14 24 2 21

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 33 1800 34 23 1488 14 3 4 15 27 2 23

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 33 1800 34 23 1488 14 3 4 15 27 2 23

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

Final Volume: 33 1800 34 23 1488 14 3 4 15 27 2 23

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.94 0.06 1.00 2.97 0.03 1.00 0.22 0.78 1.00 0.09 0.91

Final Sat.: 1700 5005 95 1700 5051 49 1700 378 1322 1700 148 1552

Capacity Analysis Module:

Vol/Sat: 0.02 0.36 0.01 0.29 0.29 0.00 0.01 0.01 0.02 0.01 0.01 0.01

Crit Moves: ****

Existing Current Occ AM Mon Feb 20, 2017 15:09:00 Page 5-1

Health Club within the Shops at Rossmoor
Existing (2016) Current Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.535

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 35 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 65 1581 15 19 1349 70 77 7 78 17 10 39

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: 65 1581 15 19 1349 70 77 7 78 17 10 39

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 71 1728 16 21 1474 77 84 8 85 19 11 43

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 71 1728 16 21 1474 77 84 8 85 19 11 43

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

Final Volume: 71 1728 16 21 1474 77 84 8 85 19 11 43

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.97 0.03 1.00 2.85 0.15 1.00 0.08 0.92 1.00 0.20 0.80

Final Sat.: 1700 5052 48 1700 4848 252 1700 140 1560 1700 347 1353

Capacity Analysis Module:

Vol/Sat: 0.04 0.34 0.01 0.30 0.30 0.05 0.05 0.05 0.01 0.03 0.03 0.03

Crit Moves: ****

Existing Current Occ AM Mon Feb 20, 2017 15:09:00 Page 6-1

Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.726
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: C

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - I - R L - I - R L - I - R L - I - R

Control: Protected Protected Protected Permitted Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 146 1503 26 14 1307 155 270 18 97 70 22 23
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: 146 1503 26 14 1307 155 270 18 97 70 22 23
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94
PHF Volume: 156 1607 28 15 1398 166 289 19 104 75 24 25
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 156 1607 28 15 1398 166 289 19 104 75 24 25
M/F Adj: 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: 156 1607 28 15 1398 166 289 19 104 75 24 25

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.95 0.05 1.00 2.68 0.32 1.00 0.16 0.84 0.76 0.24 1.00
Final Sat.: 1700 5013 87 1700 4559 541 1700 266 1434 1293 407 1700

Capacity Analysis Module:
Vol/Sat: 0.09 0.32 0.32 0.01 0.31 0.31 0.17 0.07 0.07 0.04 0.06 0.01
Crit Moves: ****

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HCM 2010 TWSC 8: Yellowtail Drive & Saint Cloud Drive

11/21/2016

Intersection		1.2					
Int Delay, s/veh							
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Traffic Vol, veh/h	605	4	28	403	6	70	
Future Vol, veh/h	605	4	28	403	6	70	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	0	-	0	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	79	79	79	79	79	79	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	766	5	35	510	8	89	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	771	0	1094	385	
Stage 1	-	-	-	-	768	-	
Stage 2	-	-	-	-	326	-	
Critical Hdwy	-	-	4.14	-	6.84	6.94	
Critical Hdwy Stg 1	-	-	-	-	5.84	-	
Critical Hdwy Stg 2	-	-	-	-	5.84	-	
Follow-up Hdwy	-	-	2.22	-	3.52	3.32	
Pot Cap-1 Maneuver	-	-	840	-	208	613	
Stage 1	-	-	-	-	418	-	
Stage 2	-	-	-	-	704	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	840	-	196	613	
Mov Cap-2 Maneuver	-	-	-	-	196	-	
Stage 1	-	-	-	-	418	-	
Stage 2	-	-	-	-	663	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		0.8		13.4		
HCM LOS					B		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	525	-	-	840	-		
HCM Lane V/C Ratio	0.183	-	-	0.042	-		
HCM Control Delay (s)	13.4	-	-	9.5	0.2		
HCM Lane LOS	B	-	-	A	A		
HCM 95th %ile Q(veh)	0.7	-	-	0.1	-		

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/21/2016

Intersection													
Intersection Delay, s/veh												11.3	
Intersection LOS												B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	54	6	124	0	2	3	1	0	107	165	2	
Future Vol, veh/h	0	54	6	124	0	2	3	1	0	107	165	2	
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	68	8	157	0	3	4	1	0	135	209	3	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	
Approach													
Opposing Approach	EB		WB		WB		EB		NB		SB		
Opposing Lanes	1		1		1		1		2		2		
Conflicting Approach Left	SB		NB		NB		EB		EB		EB		
Conflicting Lanes Left	2		2		2		2		1		1		
Conflicting Approach Right	NB		SB		SB		WB		WB		WB		
Conflicting Lanes Right	2		2		2		2		1		1		
HCM Control Delay	11.3		9.3		9.3		11.7		11.7		B		
HCM LOS	B		A		A		B		B				
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2							
Vol Left, %	56%	0%	29%	33%	0%	0%							
Vol Thru, %	44%	98%	3%	50%	100%	78%							
Vol Right, %	0%	2%	67%	17%	0%	22%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	190	85	184	6	189	121							
LT Vol	107	0	54	2	0	0							
Through Vol	83	83	6	3	189	94							
RT Vol	0	2	124	1	0	27							
Lane Flow Rate	240	107	233	8	239	154							
Geometry Grp	7	7	2	2	7	7							
Degree of Util (X)	0.4	0.169	0.348	0.013	0.377	0.236							
Departure Headway (Hd)	6	5.698	5.375	6.196	5.68	5.522							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	602	630	671	577	635	651							
Service Time	3.727	3.424	3.404	4.241	3.405	3.247							
HCM Lane V/C Ratio	0.399	0.17	0.347	0.014	0.376	0.237							
HCM Control Delay	12.7	9.6	11.3	9.3	11.8	10							
HCM Lane LOS	B	A	B	A	B	A							
HCM 95th-tile Q	1.9	0.6	1.6	0	1.8	0.9							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/21/2016

Intersection				
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	283	27
Future Vol, veh/h	0	0	283	27
Peak Hour Factor	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	0	358	34
Number of Lanes	0	0	2	0
Approach				
Opposing Approach	SB			
Opposing Lanes	NB			
Conflicting Approach Left	WB			
Conflicting Lanes Left	1			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	11.1			
HCM LOS	B			
Lane				

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

11/21/2016

Intersection																
Intersection Delay, s/veh11.9																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	97	61	86	0	13	42	31	0	38	180	21	0	24	202	65
Future Vol, veh/h	0	97	61	86	0	13	42	31	0	38	180	21	0	24	202	65
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	117	73	104	0	16	51	37	0	46	217	25	0	29	243	78
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2
Approach																
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				1				2				2			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	2				2				1				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	2				2				1				1			
HCM Control Delay	13.6				10.4				11.2				11.4			
HCM LOS	B				B				B				B			
Lane																
Lane	NBLn1				NBLn2				EBLn1				EBLn2			
Vol Left, %	30%				0%				40%				15%			
Vol Thru, %	70%				81%				25%				49%			
Vol Right, %	0%				19%				35%				36%			
Sign Control	Stop				Stop				Stop				Stop			
Traffic Vol by Lane	128				111				244				86			
LT Vol	38				0				97				13			
Through Vol	90				90				61				42			
RT Vol	0				21				86				31			
Lane Flow Rate	154				134				294				104			
Geometry Grp	7				7				2				2			
Degree of Util (X)	0.274				0.227				0.463				0.173			
Departure Headway (Hd)	6.399				6.113				5.666				6.021			
Convergence, Y/N	Yes				Yes				Yes				Yes			
Cap	560				586				635				593			
Service Time	4.159				3.872				3.722				4.095			
HCM Lane V/C Ratio	0.275				0.229				0.463				0.175			
HCM Control Delay	11.6				10.7				13.6				10.4			
HCM Lane LOS	B				B				B				B			
HCM 95th-tile Q	1.1				0.9				2.4				0.6			

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing + Current Occupancy AM Peak Hour
02/22/2017

Intersection												
Intersection Delay, s/veh 12.8												
Intersection LOS B												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			🚗🚗				🚗	🚗			🚗🚗	
Traffic Vol, veh/h	0	5	24	2	0	135	18	146	0	0	138	219
Future Vol, veh/h	0	5	24	2	0	135	18	146	0	0	138	219
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	171	23	185	0	0	175	277
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0
Approach	EB	EB		WB	WB	WB		NB	NB	NB		
Opposing Approach	WB			EB		EB					SB	
Opposing Lanes			2				1					2
Conflicting Approach Left	SB					NB					EB	
Conflicting Lanes Left		2				2						1
Conflicting Approach Right	NB					SB					WB	
Conflicting Lanes Right		2				2						2
HCM Control Delay		10.9				12.5					13.6	
HCM LOS		B				B					B	
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2					
Vol Left, %	0%	0%	16%	88%	0%	53%	0%					
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%					
Vol Right, %	0%	83%	6%	0%	100%	0%	3%					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop					
Traffic Vol by Lane	92	265	31	153	146	140	68					
LT Vol	0	0	5	135	0	74	0					
Through Vol	92	46	24	18	0	66	66					
RT Vol	0	219	2	0	146	0	2					
Lane Flow Rate	116	335	39	194	185	177	85					
Geometry Grp	7	7	6	7	7	7	7					
Degree of Util (X)	0.202	0.526	0.078	0.375	0.298	0.33	0.153					
Departure Headway (Hd)	6.236	5.649	7.193	6.97	5.813	6.721	6.429					
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes					
Cap	574	637	495	515	615	533	556					
Service Time	3.991	3.403	5.276	4.725	3.568	4.482	4.191					
HCM Lane V/C Ratio	0.202	0.526	0.079	0.377	0.301	0.332	0.153					
HCM Control Delay	10.6	14.6	10.9	13.9	11	12.8	10.4					
HCM Lane LOS	B	B	B	B	B	B	B					
HCM 95th-ile Q	0.7	3.1	0.3	1.7	1.2	1.4	0.5					

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR		
Lane Configurations						
Traffic Vol, veh/h	0	74	131	2		
Future Vol, veh/h	0	74	131	2		
Peak Hour Factor	0.92	0.79	0.79	0.79		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	94	166	3		
Number of Lanes	0	0	2	0		
Approach						
Opposing Approach	SB					
Opposing Lanes	NB					
Conflicting Approach Left	2					
Conflicting Lanes Left	WB					
Conflicting Approach Right	2					
Conflicting Lanes Right	EB					
HCM Control Delay	1					
HCM LOS	12					
	B					

Intersection												
Intersection Delay, s/veh 7.7												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	99	7	0	6	86	0	4	12			
Future Vol, veh/h	0	99	7	0	6	86	0	4	12			
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	116	8	0	7	101	0	5	14			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Opposing Approach		WB		EB								
Opposing Lanes		1		1					0			
Conflicting Approach Left				NB				EB				
Conflicting Lanes Left		0		1				1				
Conflicting Approach Right		NB						WB				
Conflicting Lanes Right		1		0				1				
HCM Control Delay		7.7		7.7				7.1				
HCM LOS		A		A				A				
Lane	NBLnt	EBLnt	WBLnt									
Vol Left, %	25%	0%	7%									
Vol Thru, %	0%	93%	93%									
Vol Right, %	75%	7%	0%									
Sign Control	Stop	Stop	Stop									
Traffic Vol by Lane	16	106	92									
LT Vol	4	0	6									
Through Vol	0	99	86									
RT Vol	12	7	0									
Lane Flow Rate	19	125	108									
Geometry Grp	1	1	1									
Degree of Util (X)	0.021	0.139	0.122									
Departure Headway (Hd)	4.031	4.008	4.074									
Convergence, Y/N	Yes	Yes	Yes									
Cap	893	883	879									
Service Time	2.031	2.038	2.105									
HCM Lane V/C Ratio	0.021	0.14	0.123									
HCM Control Delay	7.1	7.7	7.7									
HCM Lane LOS	A	A	A									
HCM 95th-ile Q	0.1	0.5	0.4									

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

11/21/2016

Intersection																
Intersection Delay, s/veh 8.7																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31	0	59	16	15
Future Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31	0	59	16	15
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	105	15	0	78	62	55	0	14	17	33	0	63	17	16
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				2				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				2				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				2			
HCM Control Delay	8.5				9				8.1				8.7			
HCM LOS	A				A				A				A			
Lane	NBLn1				EBLn1				WBLn2				SBLn1			
Vol Left, %	22%				42%				0%				66%			
Vol Thru, %	27%				58%				78%				32%			
Vol Right, %	52%				0%				22%				17%			
Sign Control	Stop				Stop				Stop				Stop			
Traffic Vol by Lane	60				84				63				182			
LT Vol	13				35				0				73			
Through Vol	16				49				49				58			
RT Vol	31				0				14				51			
Lane Flow Rate	65				90				68				196			
Geometry Grp	2				7				7				5			
Degree of Util (X)	0.083				0.133				0.093				0.246			
Departure Headway (Hd)	4.626				5.298				4.932				4.529			
Convergence, Y/N	Yes				Yes				Yes				Yes			
Cap	773				677				726				735			
Service Time	2.664				3.03				2.663				2.559			
HCM Lane V/C Ratio	0.084				0.133				0.094				0.247			
HCM Control Delay	8.1				8.8				8.2				9			
HCM Lane LOS	A				A				A				A			
HCM 95th-tile Q	0.3				0.5				0.3				1			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

11/21/2016

Intersection										
Intersection Delay, s/veh 7.4										
Intersection LOS A										
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Traffic Vol, veh/h	0	33	37	0	16	14	0	28	15	
Future Vol, veh/h	0	33	37	0	16	14	0	28	15	
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	38	43	0	18	16	0	32	17	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach	WB				NB			SB		
Opposing Approach					SB			NB		
Opposing Lanes	0				1			1		
Conflicting Approach Left	NB							WB		
Conflicting Lanes Left	1				0			2		
Conflicting Approach Right	SB				WB					
Conflicting Lanes Right	1				2			0		
HCM Control Delay	7.5				7			7.6		
HCM LOS	A				A			A		
Lane	NBLn1	WBLn1	WBLn2	SBLn1						
Vol Left, %	0%	100%	0%	65%						
Vol Thru, %	53%	0%	0%	35%						
Vol Right, %	47%	0%	100%	0%						
Sign Control	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	30	33	37	43						
LT Vol	0	33	0	28						
Through Vol	16	0	0	15						
RT Vol	14	0	37	0						
Lane Flow Rate	34	38	43	49						
Geometry Grp	2	7	7	2						
Degree of Util (X)	0.037	0.055	0.047	0.058						
Departure Headway (Hd)	3.829	5.181	3.979	4.229						
Convergence, Y/N	Yes	Yes	Yes	Yes						
Cap	924	690	897	840						
Service Time	1.898	2.92	1.718	2.291						
HCM Lane V/C Ratio	0.037	0.055	0.048	0.058						
HCM Control Delay	7	8.2	6.9	7.6						
HCM Lane LOS	A	A	A	A						
HCM 95th-tile Q	0.1	0.2	0.1	0.2						

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

11/21/2016

Intersection		0.7									
Int Delay, s/veh											
Movement		EBT		EBR		WBL		WBT		NBL	
Traffic Vol, veh/h		110	0	9	95	0	9	95	0	11	
Future Vol, veh/h		110	0	9	95	0	9	95	0	11	
Conflicting Peds, #/hr		0	0	0	0	0	0	0	0	0	
Sign Control		Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	
RT Channelized		-	None	-	None	-	None	-	None	-	
Storage Length		-	-	-	-	-	-	-	-	-	
Veh in Median Storage, #		0	-	-	0	0	-	0	0	-	
Grade, %		0	-	-	0	0	-	0	0	-	
Peak Hour Factor		89	89	89	89	89	89	89	89	89	
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	
Mvmt Flow		124	0	10	107	0	10	107	0	12	
Major/Minor		Major1		Major2		Minor1		Minor2			
Conflicting Flow All		0	0	124	0	251	124	0	251	124	
Stage 1		-	-	-	-	-	124	-	-	124	
Stage 2		-	-	-	-	-	127	-	-	127	
Critical Hwy		-	-	4.12	-	6.42	6.42	-	-	6.22	
Critical Hwy Stg 1		-	-	-	-	-	5.42	-	-	5.42	
Critical Hwy Stg 2		-	-	-	-	-	5.42	-	-	5.42	
Follow-up Hwy		-	-	2.218	-	3.518	3.518	-	-	3.318	
Pot Cap-1 Maneuver		-	-	1463	-	738	738	-	-	927	
Stage 1		-	-	-	-	902	902	-	-	902	
Stage 2		-	-	-	-	899	899	-	-	899	
Platoon blocked, %		-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver		-	-	1463	-	733	733	-	-	927	
Mov Cap-2 Maneuver		-	-	-	-	733	733	-	-	733	
Stage 1		-	-	-	-	902	902	-	-	902	
Stage 2		-	-	-	-	893	893	-	-	893	
Approach		EB		WB		NB		SB			
HCM Control Delay, s		0	0	0.6	0.6	8.9	8.9	0.6	0.6	8.9	
HCM LOS		-	-	-	-	-	-	-	-	A	
Minor Lane/Major Mvmt		NBLn1		EBT		EBR		WBL		WBT	
Capacity (veh/h)		927	-	-	1463	-	-	-	-	-	
HCM Lane V/C Ratio		0.013	-	-	0.007	-	-	-	-	-	
HCM Control Delay (s)		8.9	-	-	7.5	0	-	-	-	-	
HCM Lane LOS		A	-	-	A	A	-	-	-	A	
HCM 95th %ile Q(veh)		0	-	-	0	0	-	-	-	-	

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

11/29/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations		4T		4	4	4	4	4	4	4	4	
Traffic Volume (veh/h)	166	30	20	321	35	517	11	1445	361	516	1066	127
Future Volume (veh/h)	166	30	20	321	35	517	11	1445	361	516	1066	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qtb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1490	372	532	1099	131
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	3
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1591	495	562	3218	1022
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.63	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1490	372	532	1099	131
Grp Sat Flow(s),veh/h	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.3	23.2	30.2	0.0	0.0
Cycle Q Clear(g, c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.3	23.2	30.2	0.0	0.0
Prop In Lane	1.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1591	495	562	3218	1022
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.95	0.34	0.13
Avail Cap(c,a), veh/h	127	0	125	426	0	190	81	1600	498	562	3218	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.7	33.9	19.3	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	11.8	10.1	23.3	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.4	11.5	17.8	0.1	0.1
LnGrp Delay(d),s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	48.6	44.0	42.7	0.3	0.2
LnGrp LOS	F	D	E	E	E	E	D	D	D	D	A	A
Approach Vol, veh/h	223	357	1873								1762	
Approach Delay, s/veh	202.3	63.2	47.8								13.1	
Approach LOS	F	E	D								B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	40.6	40.2		12.6	5.4	75.4		18.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I1), s	32.2	33.3		9.9	2.7	2.0		12.9				
Green Ext Time (p_c), s	0.4	1.1		0.0	0.0	13.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay		42.7										
HCM 2010 LOS		D										
Notes												

11/29/2016 HCM 2010 Signalized Intersection Summary 2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	75	72	87	195	15	664	41	1536	555	313	1439	370
Future Volume (veh/h)	75	72	87	195	15	664	41	1536	555	313	1439	370
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	77	74	90	201	0	695	42	1584	0	323	1484	381
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	909	0	811	519	1920	598	242	1763	549
Arrive On Green	0.05	0.05	0.05	0.26	0.00	0.26	0.30	0.76	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	77	74	90	201	0	695	42	1584	0	323	1484	381
Grp Sat Flow(s), veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	4.8	4.3	5.0	4.9	0.0	23.0	1.0	22.3	0.0	15.0	29.6	22.8
Cycle Q Clear(g.s), s	4.8	4.3	5.0	4.9	0.0	23.0	1.0	22.3	0.0	15.0	29.6	22.8
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	909	0	811	519	1920	598	242	1763	549
V/C Ratio(X)	0.95	0.87	1.25	0.22	0.00	0.86	0.08	0.83	0.00	1.34	0.84	0.69
Avail Cap(c), veh/h	81	85	72	1258	0	1123	519	1920	598	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.54	0.54	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.2	52.5	32.3	0.0	39.0	33.0	11.1	0.0	47.5	33.1	30.9
Incr Delay (d2), s/veh	84.8	58.3	187.7	0.1	0.0	5.0	0.0	2.3	0.0	17.62	5.1	7.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	2	3.6	5.9	2.4	0.0	10.6	0.5	10.4	0.0	19.2	14.7	11.0
LnGrp Delay(d), s/veh	137.2	110.5	240.2	32.4	0.0	44.0	33.0	13.4	0.0	223.7	38.2	38.0
LnGrp LOS	F	F	F	C	D	C	D	C	B	F	D	D
Approach Vol, veh/h	241	167.5	896	414	0	1626	13.9	65.6	0	2188	65.6	0
Approach Delay, s/veh	167.5	167.5	896	414	0	1626	13.9	65.6	0	2188	65.6	0
Approach LOS	F	F	C	D	D	B	B	B	B	E	E	E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+Rc), s	9.0	47.3	9.7	22.4	43.9							
Change Period (Y+Rc), s	4.0		5.8	5.8	5.8							
Max Green Setting (Gmax), s	30.7		30.7	30.7	30.7							
Max Q Clear Time (g_c+1/16), s	24.3		24.3	24.3	24.3							
Green Ext Time (p_c), s	0.0	4.7	0.0	1.7	6.5							
Intersection Summary												
HCM 2010 Ctrl Delay	49.2											
HCM 2010 LOS	D											
Notes												

Existing Current Occ PM	Mon Feb 20, 2017 15:10:35	Page 2-1
Health Club within the Shops at Rossmoor	Existing (2016) Current Occupancy	PM Peak Hour
Level of Service Computation Report	ICU 1 (Loss as Cycle Length %) Method (Base Volume Alternative)	
Intersection #3 Seal Beach Blvd/Lampson Ave		
Cycle (sec):	100	Critical Vol./Cap. (X): 0.792
Optimal Cycle:	65	Average Delay (sec/veh): xxxxxx
Level of Service:	C	
Street Name:	Seal Beach Blvd	Lampson Ave
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Protected	Protected
Include:	Include	Include
Permitted:	Permitted	Permitted
Min. Green:	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0
Volume Module:		
Base Vol:	0 1691 544	630 1591
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 1691 544	630 1591
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.98 0.98 0.98	0.98 0.98 0.98
PHF Volume:	0 1731 557	645 1628
Reduced Vol:	0 0 0	0 0 0
PCE Adj:	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
Final Volume:	0 1731 557	645 1628
OvAdjVol:		
Saturation Flow Module:		
Sat/Lane:	1700 1700	1700 1700
Adjustment:	1.00 1.00 1.00	1.00 1.00 1.00
Lanes:	0.00 3.00 1.00	2.00 3.00 0.00
Final Sat.:	0 5100 1700	3400 5100
Capacity Analysis Module:		
Vol/Sat:	0.00 0.34 0.33	0.19 0.32
OvAdjV/S:		
Crit Moves:	****	****

Existing Current Occ PM Mon Feb 20, 2017 15:10:35 Page 3-1

Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.717

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 52 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Ovl Include

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 406 1617 132 5 1649 66 86 0 385 193 31 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 406 1617 132 5 1649 66 86 0 385 193 31 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 437 1739 142 5 1773 71 92 0 414 208 33 5

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 437 1739 142 5 1773 71 92 0 414 208 33 5

PCE Adj: 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

FinalVolume: 437 1739 142 5 1773 71 92 0 414 208 33 5

OrlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.77 0.23 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04

Final Sat.: 3400 4715 385 1700 4904 196 1700 0 3400 2866 460 74

Capacity Analysis Module:

Vol/Sat: 0.13 0.37 0.37 0.00 0.36 0.36 0.05 0.00 0.12 0.07 0.07 0.07

OrlAdjV/S: 0.00

Crit Moves: ****

Existing Current Occ PM Mon Feb 20, 2017 15:10:35 Page 4-1

Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.732

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 54 Level Of Service: C

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Include Include

Rights: Include Include

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 180 1415 84 78 1370 83 85 28 185 139 47 59

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 180 1415 84 78 1370 83 85 28 185 139 47 59

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 190 1496 89 82 1448 88 90 30 196 147 50 62

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 190 1496 89 82 1448 88 90 30 196 147 50 62

PCE Adj: 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

FinalVolume: 190 1496 89 82 1448 88 90 30 196 147 50 62

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.63 0.17 1.00 2.83 0.17 1.00 0.13 0.87 1.00 0.44 0.56

Final Sat.: 1700 4814 286 1700 4609 291 1700 223 1477 1700 754 946

Capacity Analysis Module:

Vol/Sat: 0.11 0.31 0.31 0.05 0.30 0.30 0.05 0.13 0.13 0.09 0.07 0.07

Crit Moves: ****

Existing Current Occ PM Mon Feb 20, 2017 15:10:35 Page 5-1

Health Club within the Shops at Rossmoor
Existing (2016) Current Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.686

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 48 Level Of Service: B

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0

Volume Module:

Base Vol: 159 1520 24 36 1554 190 184 1 130 15 1 16

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 159 1520 24 36 1554 190 184 1 130 15 1 16

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 168 1608 25 38 1644 201 195 1 138 16 1 17

Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 168 1608 25 38 1644 201 195 1 138 16 1 17

PCE Adj: 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

Final Volume: 168 1608 25 38 1644 201 195 1 138 16 1 17

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.95 0.05 1.00 2.67 0.33 1.00 0.01 0.99 1.00 0.06 0.94

Final Sat.: 1700 5021 79 1700 4544 556 1700 13 1687 1700 100 1600

Capacity Analysis Module:

Vol/Sat: 0.10 0.32 0.32 0.02 0.36 0.36 0.11 0.08 0.08 0.01 0.01

Crit Moves: ****

Existing Current Occ PM Mon Feb 20, 2017 15:10:35 Page 6-1

Health Club within the Shops at Rossmoor
Existing (2016) Current Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.679

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 48 Level Of Service: B

Street Name: Seal Beach Blvd-Los Alamitos Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0

Volume Module:

Base Vol: 130 1489 57 19 1676 170 162 9 88 48 3 11

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 130 1489 57 19 1676 170 162 9 88 48 3 11

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97

PHF Volume: 134 1530 59 20 1723 175 166 9 90 49 3 11

Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 134 1530 59 20 1723 175 166 9 90 49 3 11

PCE Adj: 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

Final Volume: 134 1530 59 20 1723 175 166 9 90 49 3 11

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.69 0.11 1.00 2.72 0.28 1.00 0.09 0.91 0.94 0.06 1.00

Final Sat.: 1700 4912 188 1700 4630 470 1700 158 1542 1600 100 1700

Capacity Analysis Module:

Vol/Sat: 0.08 0.31 0.31 0.01 0.37 0.37 0.10 0.06 0.06 0.03 0.03

Crit Moves: ****

Intersection		1 2											
Int Delay, s/veh													
Movement		EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h		443	7	53	453	3	49						
Future Vol, veh/h		443	7	53	453	3	49						
Conflicting Peds, #/hr		0	0	0	0	0	0						
Sign Control		Free	Free	Free	Free	Stop	Stop						
RT Channelized		-	None	-	None	-	None						
Storage Length		-	-	-	-	0	-						
Veh in Median Storage, #		0	-	-	0	0	-						
Grade, %		0	-	-	0	0	-						
Peak Hour Factor		90	90	90	90	90	90						
Heavy Vehicles, %		2	2	2	2	2	2						
Mvmt Flow		492	8	59	503	3	54						
Major/Minor		Major1			Major2			Minor1					
Conflicting Flow All		0	0	500	0	865	250						
Stage 1		-	-	-	-	496	-						
Stage 2		-	-	-	-	369	-						
Critical Hwy		-	-	4.14	-	6.84	6.94						
Critical Hwy Stg 1		-	-	-	-	5.84	-						
Critical Hwy Stg 2		-	-	-	-	5.84	-						
Follow-up Hwy		-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver		-	-	1060	-	293	750						
Stage 1		-	-	-	-	577	-						
Stage 2		-	-	-	-	670	-						
Platoon blocked, %		-	-	-	-	-	-						
Mov Cap-1 Maneuver		-	-	1060	-	270	750						
Mov Cap-2 Maneuver		-	-	-	-	270	-						
Stage 1		-	-	-	-	577	-						
Stage 2		-	-	-	-	618	-						
Approach		EB			WB			NB					
HCM Control Delay, s		0			1.2			10.8					
HCM LOS								B					
Minor Lane/Major Mvmt		NBLn1			EBL			WBL			WBT		
Capacity (veh/h)		680			-			-			1060		
HCM Lane V/C Ratio		0.085			-			-			0.056		
HCM Control Delay (s)		10.8			-			8.6			0.3		
HCM Lane LOS		B			-			A			A		
HCM 95th %tile Q(veh)		0.3			-			0.2			-		

Intersection													
Intersection Delay, s/veh		9.5											
Intersection LOS		A											
Movement		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h		0	30	4	45	0	2	5	10	0	66	212	3
Future Vol, veh/h		0	30	4	45	0	2	5	10	0	66	212	3
Peak Hour Factor		0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow		0	36	5	54	0	2	6	12	0	79	252	4
Number of Lanes		0	0	1	0	0	0	1	0	0	0	2	0
Approach		EB			WB			NB					
Opposing Approach		WB			EB			SB					
Opposing Lanes		1			1			2					
Conflicting Approach Left		SB			NB			EB					
Conflicting Lanes Left		2			2			1					
Conflicting Approach Right		NB			SB			WB					
Conflicting Lanes Right		2			2			1					
HCM Control Delay		9			8.5			9.9					
HCM LOS		A			A			A					
Lane		NBLn1			EBLn1			SBLn1			SBLn2		
Vol Left, %		38%			0%			12%			6%		
Vol Thru, %		62%			97%			5%			29%		
Vol Right, %		0%			3%			57%			0%		
Sign Control		Stop			Stop			Stop			Stop		
Traffic Vol by Lane		172			109			79			123		
LT Vol		66			0			30			2		
Through Vol		106			106			4			5		
RT Vol		0			3			45			10		
Lane Flow Rate		205			130			94			20		
Geometry Grp		7			7			2			7		
Degree of Utl (X)		0.303			0.184			0.135			0.029		
Departure Headway (Hr)		5.328			5.115			5.16			5.228		
Convergence, Y/N		Yes			Yes			Yes			Yes		
Cap		672			699			691			680		
Service Time		3.077			2.864			3.216			3.299		
HCM Lane V/C Ratio		0.305			0.186			0.136			0.029		
HCM Control Delay		10.4			9			8.5			9.3		
HCM Lane LOS		B			A			A			A		
HCM 95th-tile Q		1.3			0.7			0.5			0.1		

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

11/29/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	7	231	44	
Future Vol, veh/h	0	7	231	44	
Peak Hour Factor	0.92	0.84	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	8	275	52	
Number of Lanes	0	0	2	0	
Approach	SB				
Opposing Approach	NB				
Opposing Lanes	2				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	9.4				
HCM LOS	A				
ane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

11/29/2016

Intersection																
Intersection Delay, s/veh10.2																
Intersection LOS																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	35	53	0	36	39	71	0	29	131	26	0	44	180	40
Future Vol, veh/h	0	42	35	53	0	36	39	71	0	29	131	26	0	44	180	40
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	42	63	0	43	46	85	0	35	156	31	0	52	214	48
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		NB		SB									
Opposing Approach	WB		EB		SB		NB									
Opposing Lanes	1		1		2		2									
Conflicting Approach Left	SB		NB		EB		WB									
Conflicting Lanes Left	2		2		1		1									
Conflicting Approach Right	NB		SB		WB		EB									
Conflicting Lanes Right	2		2		1		1									
HCM Control Delay	10.1		10.2		9.9		10.4									
HCM LOS	B		B		A		B									
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	31%		0%		32%		25%		33%		0%					
Vol Thru, %	69%		72%		27%		27%		67%		69%					
Vol Right, %	0%		28%		41%		49%		0%		31%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	95		92		130		146		134		130					
LT Vol	29		0		42		36		44		0					
Through Vol	66		66		35		39		90		90					
RT Vol	0		26		53		71		0		40					
Lane Flow Rate	112		109		155		174		160		155					
Geometry Grp	7		7		2		2		7		7					
Degree of Util (X)	0.189		0.172		0.234		0.258		0.263		0.238					
Departure Headway (Hd)	6.034		5.677		5.434		5.339		5.925		5.54					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	595		632		661		673		606		648					
Service Time	3.769		3.412		3.471		3.376		3.657		3.273					
HCM Lane V/C Ratio	0.188		0.172		0.234		0.259		0.264		0.239					
HCM Control Delay	10.2		9.6		10.1		10.2		10.8		10					
HCM Lane LOS	B		A		B		B		B		A					
HCM 95th-tile Q	0.7		0.6		0.9		1		1.1		0.9					

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing + Current Occupancy PM Peak Hour 02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0 1 17 2 0 148 25 64 0 5 102 106											
Traffic Vol, veh/h	0 1 17 2 0 148 25 64 0 5 102 106											
Future Vol, veh/h	0 1 17 2 0 148 25 64 0 5 102 106											
Peak Hour Factor	0.92 0.87 0.87 0.87 0.92 0.87 0.87 0.87 0.92 0.87 0.87 0.87											
Heavy Vehicles, %	2 2 2 2 2 2 2 2 2 2 2 2											
Minrt Flow	0 1 20 2 0 170 29 74 0 6 117 122											
Number of Lanes	0 0 1 0 0 0 1 1 0 0 0 2											

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB											
Opposing Lanes	2											
Conflicting Approach Left	SB											
Conflicting Lanes Left	2											
Conflicting Approach Right	NB											
Conflicting Lanes Right	2											
HCM Control Delay	9.3											
HCM LOS	A											

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	0%	86%	0%	40%	0%	0%	0%
Vol Thru, %	91%	32%	85%	14%	0%	60%	95%	0%	5%	0%
Vol Right, %	0%	68%	10%	0%	100%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	157	20	173	64	103	65	0	0	0
LT Vol	5	0	1	148	0	41	0	0	0	0
Through Vol	51	51	17	25	0	62	62	0	0	0
RT Vol	0	166	2	0	64	0	3	0	0	0
Lane Flow Rate	64	180	23	199	74	118	74	0	0	0
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.101	0.256	0.039	0.335	0.101	0.191	0.115	0.115	0.115	0.115
Departure Headway (Hd)	5.634	5.112	6.095	6.064	4.929	5.828	5.593	5.593	5.593	5.593
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	631	697	591	589	719	610	635	635	635	635
Service Time	3.416	2.894	4.095	3.854	2.719	3.617	3.381	3.381	3.381	3.381
HCM Lane V/C Ratio	0.101	0.258	0.039	0.338	0.103	0.193	0.117	0.117	0.117	0.117
HCM Control Delay	9.1	9.7	9.3	11.9	8.3	10	9.1	9.1	9.1	9.1
HCM Lane LOS	A	A	A	B	A	A	A	A	A	A
HCM 95th-tile Q	0.3	1	0.1	1.5	0.3	0.7	0.4	0.4	0.4	0.4

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing + Current Occupancy PM Peak Hour 02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0 1 17 2 0 148 25 64 0 5 102 106											
Traffic Vol, veh/h	0 1 17 2 0 148 25 64 0 5 102 106											
Future Vol, veh/h	0 1 17 2 0 148 25 64 0 5 102 106											
Peak Hour Factor	0.92 0.87 0.87 0.87 0.92 0.87 0.87 0.87 0.92 0.87 0.87 0.87											
Heavy Vehicles, %	2 2 2 2 2 2 2 2 2 2 2 2											
Minrt Flow	0 1 20 2 0 170 29 74 0 6 117 122											
Number of Lanes	0 0 1 0 0 0 1 1 0 0 0 2											

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB											
Opposing Lanes	2											
Conflicting Approach Left	SB											
Conflicting Lanes Left	2											
Conflicting Approach Right	NB											
Conflicting Lanes Right	2											
HCM Control Delay	9.3											
HCM LOS	A											

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

11/29/2016

Intersection												
Intersection Delay, s/veh 8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol. veh/h	0	90	17	0	22	136	0	26	11			
Future Vol. veh/h	0	90	17	0	22	136	0	26	11			
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	100	19	0	24	151	0	29	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EB		WB		NB							
Opposing Approach	WB		EB		NB							
Opposing Lanes	1		1		0							
Conflicting Approach Left			NB		EB							
Conflicting Lanes Left	0		1		1							
Conflicting Approach Right	NB				WB							
Conflicting Lanes Right	1		0		1							
HCM Control Delay	7.7		8.2		7.8							
HCM LOS	A		A		A							
Lane	NBLn1EBLn1WBLn1											
Vol Left, %	70%		0%		14%							
Vol Thru, %	0%		84%		86%							
Vol Right, %	30%		16%		0%							
Sign Control	Stop		Stop		Stop							
Traffic Vol by Lane	37		107		158							
LT Vol	26		0		22							
Through Vol	0		90		136							
RT Vol	11		17		0							
Lane Flow Rate	41		119		176							
Geometry Grp	1		1		1							
Degree of Util (X)	0.052		0.134		0.201							
Departure Headway (Hd)	4.532		4.044		4.125							
Convergence, Y/N	Yes		Yes		Yes							
Cap	795		877		864							
Service Time	2.532		2.113		2.179							
HCM Lane V/C Ratio	0.052		0.136		0.204							
HCM Control Delay	7.8		7.7		8.2							
HCM Lane LOS	A		A		A							
HCM 95th-tile Q	0.2		0.5		0.7							

HCM 2010 AWSC

13: Internal Driveaway & Rossmoor Center Way

11/29/2016

Intersection														
Intersection Delay, s/veh 13														
Intersection LOS B														
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75
Future Vol, veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	75	28	0	191	110	88	0	45	46	185	0	78
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0	0	1
Approach	EB		WB		WB		NB		NB		SB		SB	
Opposing Approach	WB		EB		EB		SB		SB		NB		NB	
Opposing Lanes	1		2		2		1		1		1		1	
Conflicting Approach Left	SB		NB		NB		EB		EB		WB		WB	
Conflicting Lanes Left	1		1		1		2		2		1		1	
Conflicting Approach Right	NB		SB		SB		WB		WB		EB		EB	
Conflicting Lanes Right	1		1		1		1		1		2		2	
HCM Control Delay	9.7		15.7		15.7		11.8		11.8		10.7		10.7	
HCM LOS	A		C		C		B		B		B		B	
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1									
Vol Left, %	16%	38%	0%	49%	54%									
Vol Thru, %	17%	62%	57%	28%	24%									
Vol Right, %	67%	0%	43%	23%	22%									
Sign Control	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	265	58	63	373	139									
LT Vol	43	22	0	183	75									
Through Vol	44	36	36	106	34									
RT Vol	178	0	27	84	30									
Lane Flow Rate	276	60	66	389	145									
Geometry Grp	2	7	7	5	2									
Degree of Util (X)	0.403	0.108	0.109	0.582	0.234									
Departure Headway (Hd)	5.259	6.457	5.959	5.393	5.825									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes									
Cap	682	553	600	668	614									
Service Time	3.31	4.213	3.715	3.435	3.885									
HCM Lane V/C Ratio	0.405	0.108	0.11	0.582	0.236									
HCM Control Delay	11.8	10	9.4	15.7	10.7									
HCM Lane LOS	B	A	A	C	B									
HCM 95th-tile Q	1.9	0.4	0.4	3.8	0.9									

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

11/29/2016

Intersection												
Intersection Delay, s/veh 11.5												
Intersection LOS B												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SB	SB	SB	SB	SB	SB
Traffic Vol, veh/h	0	49	292	0	43	50	0	231	54			
Future Vol, veh/h	0	49	292	0	43	50	0	231	54			
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.92	0.89	0.89			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	55	328	0	48	56	0	260	61			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach												
Approach	WB	WB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach												
Opposing Lanes	0											
Conflicting Approach Left	NB											
Conflicting Lanes Left	1											
Conflicting Approach Right	SB											
Conflicting Lanes Right	1											
HCM Control Delay	11.3											
HCM LOS	B											
Lane												
Lane	NBLn1	WBLn1	WBLn2	SB	SB	SB	SB	SB	SB	SB	SB	SB
Vol Left, %	0%	100%	0%	81%								
Vol Thru, %	46%	0%	0%	19%								
Vol Right, %	54%	0%	100%	0%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	93	49	292	285								
LT Vol	0	49	0	231								
Through Vol	43	0	0	54								
RT Vol	50	0	292	0								
Lane Flow Rate	104	55	328	320								
Geometry Grp	2	7	7	2								
Degree of Util (X)	0.144	0.093	0.446	0.457								
Departure Headway (Hd)	4.964	6.099	4.889	5.143								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	713	884	732	695								
Service Time	3.06	3.874	2.662	3.219								
HCM Lane V/C Ratio	0.146	0.094	0.448	0.46								
HCM Control Delay	8.9	9.5	11.6	12.5								
HCM Lane LOS	A	A	B	B								
HCM 95th-ile Q	0.5	0.3	2.3	2.4								

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

11/29/2016

Intersection												
Intersection Delay, s/veh 12												
Movement												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	88	1	20	165	4	20						
Future Vol, veh/h	88	1	20	165	4	20						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	0						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	93	93	93	93	93	93						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	95	1	22	177	4	22						
Major/Minor												
Major/Minor	Major1	Major2	Minor1									
Conflicting Flow All	0	0	315									
Stage 1	-	-	95									
Stage 2	-	-	220									
Critical Hdwy	-	-	6.42									
Critical Hdwy Stg 1	-	-	5.42									
Critical Hdwy Stg 2	-	-	5.42									
Follow-up Hdwy	-	2.218	3.518									
Platoon blocked, %	-	-	678									
Stage 1	-	-	929									
Stage 2	-	-	817									
Platoon blocked, %	-	-	667									
Mov Cap-1 Maneuver	-	-	667									
Mov Cap-2 Maneuver	-	-	929									
Stage 1	-	-	804									
Stage 2	-	-	-									
Approach												
Approach	EB	WB	NB									
HCM Control Delay, s	0	0.8	9.1									
HCM LOS		A										
Minor Lane/Major Mvmt												
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	896	-	-	1498	-							
HCM Lane V/C Ratio	0.029	-	-	0.014	-							
HCM Control Delay (s)	9.1	-	-	7.4	0							
HCM Lane LOS	A	-	-	A	A							
HCM 95th-ile Q(veh)	0.1	-	-	0	-							

HCM 2010 Signalized Intersection Summary
1: Seal Beach Boulevard & I-405 SB Ramps

11/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB	4TB	4TB	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	147	26	16	544	37	488	9	1097	272	411	1110	131
Future Volume (veh/h)	147	26	16	544	37	488	9	1097	272	411	1110	131
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	28	17	607	0	0	10	1167	289	437	1181	139
Adj No. of Lanes	0	2	0	2	0	2	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	679	0	303	21	1312	408	503	2775	864
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.57	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	156	0	45	607	0	0	10	1167	289	437	1181	139
Grp Sat Flow(s), veh/hln	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.3	18.2	23.2	0.0	0.0
Cycle Q Clear(g, c), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.3	18.2	23.2	0.0	0.0
Prop In Lane	1.00	0.00	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	679	0	303	21	1312	408	503	2775	864
V/C Ratio(X)	1.33	0.00	0.39	0.89	0.00	0.00	0.47	0.89	0.71	0.87	0.43	0.16
Avail Cap(c, a), veh/h	118	0	116	748	0	334	81	1350	420	503	2775	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	0.89
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.4	0.0	0.0	54.0	39.3	37.0	22.1	0.0	0.0
Incr Delay (d2), s/veh	193.4	0.0	2.1	12.4	0.0	0.0	15.3	9.3	9.9	13.7	0.4	0.4
Initial Q Delay(d3), s/veh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
%ile BackOfQ(50%) veh/ln	9.9	0.0	1.4	10.2	0.0	0.0	0.4	12.5	9.1	13.1	0.1	0.1
LnGrp Delay(d), s/veh	244.8	0.0	51.3	55.8	0.0	0.0	69.3	48.6	47.0	35.8	0.4	0.4
LnGrp LOS	F	D	E	E	E	E	E	D	D	D	A	A
Approach Vol, veh/h	201			607				1466			1757	
Approach Delay, s/veh	201.4			55.8				48.4			9.2	
Approach LOS	F			E				D			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.0	34.2		12.0	5.3	65.8		26.9				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	25.2	26.3		9.3	2.6	2.0		20.4				
Green Ext Time (p_c), s	1.0	2.1		0.0	0.0	13.6		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				40.1								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
2: Seal Beach Boulevard & I-405 NB Ramps

11/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	6	8	7	355	5	564	15	1347	377	254	1293	239
Future Volume (veh/h)	6	8	7	355	5	564	15	1347	377	254	1293	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	6	8	7	374	0	597	16	1418	0	267	1361	252
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	38	40	34	815	0	728	754	2175	677	242	1672	521
Arrive On Green	0.02	0.02	0.02	0.23	0.00	0.23	0.44	0.86	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	6	8	7	374	0	597	16	1418	0	267	1361	252
Grp Sat Flow(s), veh/hln	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g, s), s	0.4	0.5	0.5	10.0	0.0	19.7	0.3	10.0	0.0	15.0	27.0	14.0
Cycle Q Clear(g, c), s	0.4	0.5	0.5	10.0	0.0	19.7	0.3	10.0	0.0	15.0	27.0	14.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	38	40	34	815	0	728	754	2175	677	242	1672	521
V/C Ratio(X)	0.16	0.20	0.21	0.46	0.00	0.82	0.02	0.65	0.00	1.10	0.81	0.48
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	754	2175	677	242	1682	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.68	0.68	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	52.9	52.9	36.5	0.0	40.2	24.2	5.3	0.0	47.5	33.8	29.5
Incr Delay (d2), s/veh	1.9	2.4	2.9	0.4	0.0	2.9	0.0	1.1	0.0	88.4	4.5	3.2
Initial Q Delay(d3), s/veh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
%ile BackOfQ(50%) veh/ln	0.3	0.2	0.2	4.9	0.0	8.9	0.1	4.4	0.0	13.3	13.3	6.6
LnGrp Delay(d), s/veh	54.7	55.3	55.8	36.9	0.0	43.1	24.2	6.3	0.0	135.9	38.3	32.7
LnGrp LOS	D	E	E	D	D	D	C	A	F	D	C	C
Approach Vol, veh/h	21			971				1434			1880	
Approach Delay, s/veh	55.3			40.7				6.5			51.4	
Approach LOS	E			D				A			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	59.0	52.9		7.1	29.9	42.0		31.1				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	30.7	30.7		* 5	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	12.0	2.5	2.3	29.0	21.7							
Green Ext Time (p_c), s	0.0	9.3	0.0	2.0	7.2			3.6				
Intersection Summary												
HCM 2010 Ctrl Delay				34.1								
HCM 2010 LOS				C								
Notes												

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Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.764

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 60 Level Of Service: C

Street Name: Seal Beach Blvd Lampson Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted

Rights: Ovl Include Include Ovl

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1520 360 502 1438 0 0 0 0 360 0 543

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 1520 360 502 1438 0 0 0 360 0 543

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 0 1634 387 540 1546 0 0 387 0 584

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 0 1634 387 540 1546 0 0 387 0 584

PCE Adj: 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

FinalVolume: 0 1634 387 540 1546 0 0 387 0 584

OvAdjVol: 0 1634 387 540 1546 0 0 387 0 584

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00

Final Sat.: 0 5100 1700 3400 5100 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.32 0.23 0.16 0.30 0.00 0.00 0.00

OvAdjV/S: 0.00 0.32 0.23 0.16 0.30 0.00 0.11 0.00

Crit Moves: ****

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Health Club within the Shops at Rossmore
Existing (2016) Current Occupancy
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.648

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 44 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Ovl

Rights: Include Include Ovl

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 362 1560 172 17 1348 69 102 2 398 174 35 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 362 1560 172 17 1348 69 102 2 398 174 35 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 391 1683 186 18 1454 74 110 2 429 188 38 5

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 391 1683 186 18 1454 74 110 2 429 188 38 5

PCE Adj: 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

FinalVolume: 391 1683 186 18 1454 74 110 2 429 188 38 5

OvAdjVol: 391 1683 186 18 1454 74 110 2 429 188 38 5

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.70 0.30 1.00 2.85 0.15 0.98 0.02

Final Sat.: 3400 4594 506 1700 4852 248 1667 33 3400 2764 556 79

Capacity Analysis Module:

Vol/Sat: 0.11 0.37 0.37 0.01 0.30 0.30 0.07 0.07

OvAdjV/S: 0.11 0.37 0.37 0.01 0.30 0.13 0.07 0.07

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Current Occupancy
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.815

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 70 Level Of Service: D

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0

Volume Module:

Base Vol: 259 1223 108 92 1049 136 94 83 243 173 89 88

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: 259 1223 108 92 1049 136 94 83 243 173 89 88

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 273 1290 114 97 1107 143 99 88 256 182 94 93

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 273 1290 114 97 1107 143 99 88 256 182 94 93

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: 273 1290 114 97 1107 143 99 88 256 182 94 93

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.76 0.24 1.00 2.66 0.34 1.00 0.25 0.75 1.00 0.50 0.50

Final Sat.: 1700 4686 414 97 1107 143 99 88 256 182 94 93

Capacity Analysis Module:

Vol/Sat: 0.16 0.28 0.28 0.06 0.25 0.25 0.06 0.20 0.20 0.11 0.11 0.11

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Current Occupancy
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 46 Level Of Service: B

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0

Volume Module:

Base Vol: 203 1385 15 25 1370 229 188 4 151 19 2 14

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: 203 1385 15 25 1370 229 188 4 151 19 2 14

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97

PHF Volume: 208 1422 15 26 1407 235 193 4 155 20 2 14

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 208 1422 15 26 1407 235 193 4 155 20 2 14

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: 208 1422 15 26 1407 235 193 4 155 20 2 14

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.97 0.03 1.00 2.57 0.43 1.00 0.03 0.97 1.00 0.13 0.87

Final Sat.: 1700 5045 55 1700 4370 730 1700 44 1656 1700 213 1487

Capacity Analysis Module:

Vol/Sat: 0.12 0.28 0.28 0.02 0.32 0.32 0.11 0.09 0.09 0.01 0.01 0.01

Crit Moves: ****

Intersection									
1									
Init Delay, s/veh									
Movement									
Traffic Vol, veh/h	456	1	43	420	4	44			
Future Vol, veh/h	456	1	43	420	4	44			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	94	94	94	94	94	94			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	485	1	46	447	4	47			
Major/Minor									
Conflicting Flow All	0	0	486	0	801	243			
Stage 1	-	-	-	-	486	-			
Stage 2	-	-	-	-	-	315			
Critical Hdwy	-	-	4.14	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	-	-	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	1073	-	322	768			
Stage 1	-	-	-	-	584	-			
Stage 2	-	-	-	-	713	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1073	-	304	768			
Mov Cap-2 Maneuver	-	-	-	-	304	-			
Stage 1	-	-	-	-	584	-			
Stage 2	-	-	-	-	672	-			
Approach									
EB	EB	WB	WB	NB	NB				
HCM Control Delay, s	0	1	1	10.8	10.8				
HCM LOS									
B									
Minor Lane/Major Mvmt									
NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)	674	-	-	1073	-				
HCM Lane V/C Ratio	0.076	-	-	0.043	-				
HCM Control Delay (s)	10.8	-	-	8.5	0.2				
HCM Lane LOS	B	-	-	A	A				
HCM 95th %ile Q(veh)	0.2	-	-	0.1	-				

Existing Current Occ 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HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

11/18/2016

Intersection		Intersection Delay, s/veh 9.6															
Intersection LOS		A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	42	42	61	0	18	51	43	0	45	129	29	0	45	160	33	
Future Vol, veh/h	0	42	42	61	0	18	51	43	0	45	129	29	0	45	160	33	
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	47	47	68	0	20	57	48	0	50	143	32	0	50	178	37	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		SB		NB										
Opposing Lanes	1		1		2		2										
Conflicting Approach Left	SB		NB		EB		WB										
Conflicting Lanes Left	2		2		1		1										
Conflicting Approach Right	NB		SB		WB		EB										
Conflicting Lanes Right	2		2		1		1										
HCM Control Delay	9.7		9.4		9.6		9.7										
HCM LOS	A		A		A		A										
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2		
Vol Left, %	41%		0%		29%		16%		36%		0%		0%		0%		
Vol Thru, %	59%		69%		29%		46%		64%		71%		0%		96%		
Vol Right, %	0%		31%		42%		38%		0%		29%		0%		4%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	110		94		145		112		125		113						
LT Vol	45		0		42		18		45		0						
Through Vol	65		65		42		51		80		80						
RT Vol	0		29		61		43		0		33						
Lane Flow Rate	122		104		161		124		139		126						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.198		0.154		0.228		0.178		0.219		0.185						
Departure Headway (Hd)	5.858		5.331		5.105		5.259		5.689		5.4						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	617		665		694		687		624		668						
Service Time	3.558		3.13		3.2		3.259		3.488		3.1						
HCM Lane V/C Ratio	0.198		0.156		0.232		0.18		0.223		0.189						
HCM Control Delay	10		9.1		9.7		9.4		10.1		9.3						
HCM Lane LOS	A		A		A		A		B		A						
HCM 95th-tile Q	0.7		0.5		0.9		0.6		0.8		0.7						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing + Current Occupancy Saturday Peak Hour
02/22/2017

Intersection													
Intersection Delay, s/veh		8.9											
Intersection LOS		A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	70	94	
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	70	94	
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	72	97	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													
Opposing Approach	WB		EB		WB		NB		SB				
Opposing Lanes	2		1		1		2		2				
Conflicting Approach Left	SB		NB		WB		EB		EB				
Conflicting Lanes Left	2		2		2		1		1				
Conflicting Approach Right	NB		SB		WB		WB		WB				
Conflicting Lanes Right	2		2		2		2		2				
HCM Control Delay	8.7		9.3		9.3		8.5		8.5				
HCM LOS	A		A		A		A		A				
Lane													
Vol Left, %	8%		0%		5%		85%		0%		45%		
Vol Thru, %	92%		27%		75%		15%		0%		55%		
Vol Right, %	0%		73%		20%		0%		100%		0%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	38		129		20		135		69		81		
LT Vol	3		0		1		115		0		36		
Through Vol	35		35		15		20		0		45		
RT Vol	0		94		4		0		69		0		
Lane Flow Rate	39		133		21		139		71		83		
Geometry Grp	7		7		6		7		7		7		
Degree of Util (X)	0.058		0.176		0.031		0.221		0.091		0.128		
Departure Headway (Hd)	5.33		4.776		5.447		5.724		4.594		5.54		
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		
Cap	671		750		655		626		777		646		
Service Time	3.068		2.514		3.502		3.466		2.335		3.281		
HCM Lane V/C Ratio	0.058		0.177		0.032		0.222		0.091		0.128		
HCM Control Delay	8.4		8.5		8.7		10.1		7.8		9.1		
HCM Lane LOS	A		A		A		B		A		A		
HCM 95th-tile Q	0.2		0.6		0.1		0.8		0.3		0.4		
	0.2		0.6		0.1		0.8		0.3		0.4		

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing + Current Occupancy Saturday Peak Hour 02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement					
Lane Configurations	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	36	89	2	
Future Vol, veh/h	0	36	89	2	
Peak Hour Factor	0.92	0.97	0.97	0.97	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	37	92	2	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	8.8				
HCM LOS	A				

HCM 2010 AWSC
12: West Road & Rossmore Center Way 11/18/2016

Intersection											
Intersection Delay, s/veh 7.8											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	82	16	0	10	118	0	26	17		
Future Vol, veh/h	0	82	16	0	10	118	0	26	17		
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	90	18	0	11	130	0	29	19		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		NB						
Opposing Approach	WB		EB		0						
Opposing Lanes	1		1		0						
Conflicting Approach Left			NB		EB						
Conflicting Lanes Left	0		1		1						
Conflicting Approach Right	NB				WB						
Conflicting Lanes Right	1		0		1						
HCM Control Delay	7.6		8		7.6						
HCM LOS	A		A		A						
Lane	NBLn1EBLn1WBLn1										
Vol Left, %	60%		0%		8%						
Vol Thru, %	0%		84%		92%						
Vol Right, %	40%		16%		0%						
Sign Control	Stop		Stop		Stop						
Traffic Vol by Lane	43		98		128						
LT Vol	26		0		10						
Through Vol	0		82		118						
RT Vol	17		16		0						
Lane Flow Rate	47		108		141						
Geometry Grp	1		1		1						
Degree of Util (X)	0.057		0.12		0.161						
Departure Headway (Hd)	4.353		4.025		4.114						
Convergence, Y/N	Yes		Yes		Yes						
Cap	828		883		866						
Service Time	2.353		2.086		2.165						
HCM Lane V/C Ratio	0.057		0.122		0.163						
HCM Control Delay	7.6		7.6		8						
HCM Lane LOS	A		A		A						
HCM 95th-ile Q	0.2		0.4		0.6						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

11/18/2016

Intersection																	
Intersection Delay, s/veh		18															
Intersection LOS		C															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol. veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96	60	24	
Future Vol. veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96	60	24	
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	
Heavy Vehicles %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	22	106	38	0	228	99	113	0	46	68	229	0	102	64	26	
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1	

Approach		EB		WB		NB		SB	
Opposing Approach		WB		EB		SB		NB	
Opposing Lanes		1		2		1		1	
Conflicting Approach Left		SB		NB		EB		WB	
Conflicting Lanes Left		1		1		2		1	
Conflicting Approach Right		NB		SB		WB		EB	
Conflicting Lanes Right		1		1		1		2	
HCM Control Delay		11.1		24		16.3		13.2	
HCM LOS		B		C		C		B	

Lane		NBLn1		EBLn1		WBLn1		SBLn1	
Vol Left, %		13%		30%		0%		52%	
Vol Thru, %		20%		70%		58%		23%	
Vol Right, %		67%		0%		42%		26%	
Sign Control		Stop		Stop		Stop		Stop	
Traffic Vol by Lane		322		71		86		413	
LT Vol		43		21		0		214	
Through Vol		64		50		93		60	
RT Vol		215		0		36		106	
Lane Flow Rate		343		76		91		439	
Geometry Grp		2		7		5		2	
Degree of Util (X)		0.561		0.151		0.172		0.352	
Departure Headway (Hd)		5.894		7.205		6.753		6.026	
Convergence, Y/N		Yes		Yes		Yes		Yes	
Cap		610		497		530		598	
Service Time		3.941		4.963		4.511		4.071	
HCM Lane V/C Ratio		0.562		0.153		0.172		0.734	
HCM Control Delay		16.3		11.3		10.9		24	
HCM Lane LOS		C		B		B		C	
HCM 95th-ile Q		3.5		0.5		0.6		6.3	

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

11/18/2016

Intersection																	
Intersection Delay, s/veh		15.5															
Intersection LOS		C															
Movement	WBU	WBL	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT							
Traffic Vol. veh/h	0	85	394	0	69	76	0	339	52								
Future Vol. veh/h	0	85	394	0	69	76	0	339	52								
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97	0.97							
Heavy Vehicles %	2	2	2	2	2	2	2	2	2	2							
Mvmt Flow	0	88	406	0	71	78	0	349	54								
Number of Lanes	0	1	1	0	1	0	0	0	0	1							

Approach		WB		NB		SB	
Opposing Approach		0		1		1	
Opposing Lanes		NB		SB		NB	
Conflicting Approach Left		1		0		WB	
Conflicting Lanes Left		1		0		2	
Conflicting Approach Right		SB		WB		0	
Conflicting Lanes Right		1		2		0	
HCM Control Delay		15.1		10.3		17.9	
HCM LOS		C		B		C	

Lane		NBLn1		WBLn1		SBLn1	
Vol Left, %		0%		100%		0%	
Vol Thru, %		48%		0%		13%	
Vol Right, %		52%		0%		100%	
Sign Control		Stop		Stop		Stop	
Traffic Vol by Lane		145		85		394	
LT Vol		0		85		0	
Through Vol		69		0		52	
RT Vol		76		0		394	
Lane Flow Rate		149		88		406	
Geometry Grp		2		7		2	
Degree of Util (X)		0.232		0.161		0.607	
Departure Headway (Hd)		5.589		6.599		5.383	
Convergence, Y/N		Yes		Yes		Yes	
Cap		641		543		670	
Service Time		3.638		4.337		3.12	
HCM Lane V/C Ratio		0.232		0.162		0.606	
HCM Control Delay		10.3		10.6		16.1	
HCM Lane LOS		B		B		C	
HCM 95th-ile Q		0.9		0.6		4.1	

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

11/18/2016

Intersection	2.4	
Int Delay, s/veh		
Movement	EBT	NBL
Traffic Vol, veh/h	99	5
Future Vol, veh/h	99	5
Conflicting Peds, #/hr	0	0
Sign Control	Free	Free
RT Channelized	- None	- None
Storage Length	-	-
Veh in Median Storage, #	0	0
Grade, %	0	0
Peak Hour Factor	92	92
Heavy Vehicles, %	2	2
Mvmt Flow	108	5
Major/Minor	Major1	Minor1
Conflicting Flow All	0	337
Stage 1	-	108
Stage 2	-	229
Critical Hwy	-	6.42
Critical Hwy Stg 1	-	5.42
Critical Hwy Stg 2	-	5.42
Follow-up Hwy	-	3.518
Pot Cap-1 Maneuver	-	658
Stage 1	-	916
Stage 2	-	809
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	635
Mov Cap-2 Maneuver	-	635
Stage 1	-	916
Stage 2	-	781
Approach	EB	NB
HCM Control Delay, s	0	9.2
HCM LOS		A
Minor Lane/Major Mvmt	NBLn1	EBT
Capacity (veh/h)	896	-
HCM Lane V/C Ratio	0.053	-
HCM Control Delay (s)	9.2	-
HCM Lane LOS	A	A
HCM 95th %tile Q(veh)	0.2	0.1

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/11/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Configurations		4T			4			4T		4T	
Traffic Volume (veh/h)	87	28	16	696	44	530	14	1056	166	434	1453
Future Volume (veh/h)	87	28	16	696	44	530	14	1056	166	434	1453
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	96	31	18	799	0	0	15	1160	182	477	1597
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	861	0	384	30	1233	384	682	3187
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.26	0.42
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085
Grp Volume(v), veh/h	96	0	49	799	0	0	15	1160	182	477	1597
Grp Sat Flow(s), veh/h	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695
Q Serve(g, s)	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.6	10.8	26.8	25.4
Cycle Q Clear(g, c), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.6	10.8	26.8	25.4
Prop In Lane	1.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	861	0	384	30	1233	384	682	3187
V/C Ratio(X)	1.08	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.70	0.50
Avail Cap(c, a), veh/h	89	0	87	867	0	396	81	1234	384	682	3187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.74	0.74
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	35.1	19.3
Incr Delay (d2), s/veh	119.6	0.0	7.8	15.4	0.0	0.0	12.7	14.8	4.1	2.4	0.4
Initial Q Delay(d3), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	5.6	0.0	1.6	13.7	0.0	0.0	0.6	13.2	5.2	13.6	12.0
LnGrp Delay(d), s/veh	172.3	0.0	58.9	56.1	0.0	0.0	66.3	55.7	39.8	37.4	19.7
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	B
Approach Vol, veh/h	145			799			1357				2153
Approach Delay, s/veh	134.0			56.1			53.7				23.4
Approach LOS	F			E			D				C
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	48.1	32.5		10.2	5.8	74.7		32.5			
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8			
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5			
Max Q Clear Time (g_c+I), s	28.8	26.6		7.5	2.9	27.4		26.2			
Green Ext Time (p_c), s	0.2	0.1		0.0	0.0	14.5		0.5			
Intersection Summary											
HCM 2010 Ctrl Delay				42.1							
HCM 2010 LOS				D							
Notes											

12/1/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	9	11	5	367	53	557	110	1206	348	332	1575	464
Future Volume (veh/h)	9	11	5	367	53	557	110	1206	348	332	1575	464
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	12	6	408	0	658	122	1340	0	369	1750	516
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	46	49	41	887	0	791	534	1865	581	306	1871	583
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.31	0.73	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	10	12	6	408	0	658	122	1340	0	369	1750	516
Grp Sat Flow(s), veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	0.6	0.7	0.4	10.7	0.0	21.6	2.9	16.3	0.0	19.0	36.5	33.6
Cycle Q Clear(g.s), s	0.6	0.7	0.4	10.7	0.0	21.6	2.9	16.3	0.0	19.0	36.5	33.6
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	49	41	887	0	791	534	1865	581	306	1871	583
V/C Ratio(X)	0.22	0.25	0.15	0.46	0.00	0.83	0.23	0.72	0.00	1.20	0.94	0.89
Aval Cap(c.a), veh/h	81	85	72	1258	0	1123	534	1865	581	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.58	0.58	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	35.0	0.0	39.1	33.1	11.5	0.0	45.5	33.5	32.6
Incr Delay (d2), s/veh	2.3	2.6	1.6	0.4	0.0	3.8	0.1	1.4	0.0	18.7	10.3	17.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/InQ	3	0.4	0.2	5.3	0.0	9.9	1.4	7.4	0.0	19.4	18.8	17.5
LnGrp Delay(d), s/veh	54.8	55.1	53.9	35.3	0.0	42.8	33.2	12.9	0.0	64.2	43.8	50.4
LnGrp LOS	D	E	D	D	D	D	C	B	F	D	D	D
Approach Vol, veh/h	28	1462	2635									
Approach Delay, s/veh	54.7	39.9	61.9									
Approach LOS	D	D	B									
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	46.1	7.6	22.9	46.3	33.3							
Change Period (Y+Rc), s	4.0	5.8	* 4.7	5.8	* 5.8	5.8						
Max Green Setting (Gmax), s	26.7	* 5.0	* 5.0	* 41	39.0							
Max Q Clear Time (g_c+d), s	18.3	2.7	4.9	38.5	23.6							
Green Ext Time (p_c), s	0.0	5.3	0.0	0.0	2.0	3.9						
Intersection Summary												
HCM 2010 Ctrl Delay	44.0											
HCM 2010 LOS	D											
Notes												

Existing Full Occ AM	Mon Feb 20, 2017 15:11:53	Page 2-1
Health Club within the Shops at Rossmoor		
Existing (2016) Full Occupancy		
AM Peak Hour		
Level of Service Computation Report		
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)		
Intersection #3 Seal Beach Blvd/Lampson Ave		
Cycle (sec):	100	Critical Vol./Cap.(X): 0.812
Loss Time (sec):	69	Average Delay (sec/veh): xxxxxx
Optimal Cycle:	69	Level of Service: D
Street Name:	Seal Beach Blvd	Lampson Ave
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Protected	Protected
Rights:	Ovl	Include
Min. Green:	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0
Volume Module:		
Base Vol:	0 1465 305	301 1669 0
Growth Adj:	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 1465 305	301 1669 0
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.91 0.91 0.91	0.91 0.91 0.91
PHF Volume:	0 1613 336	331 1838 0
Reduced Vol:	0 0 0	0 0 0
Reduced Vol:	0 1613 336	331 1838 0
PCE Adj:	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
Final Volume:	0 1613 336	331 1838 0
OvAdjVol:		
Saturation Flow Module:		
Sat/Lane:	1700 1700	1700 1700
Adjustment:	1.00 1.00	1.00 1.00
Lanes:	0.00 3.00	2.00 3.00
Final Sat.:	0 5100	1700 3400
Capacity Analysis Module:		
Vol/Sat:	0.00 0.32	0.10 0.36
OvAdjV/S:		
Crit Moves:	****	****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.631

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 43 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Ovl Include

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 377 1659 47 4 1322 46 106 3 567 65 13 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 377 1659 47 4 1322 46 106 3 567 65 13 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88

PHF Volume: 429 1887 53 5 1504 52 121 3 645 74 15 2

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 429 1887 53 5 1504 52 121 3 645 74 15 2

PCE Adj: 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

FinalVolume: 429 1887 53 5 1504 52 121 3 645 74 15 2

OrlAdjVol: 429 1887 53 5 1504 52 121 3 645 74 15 2

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.92 0.08 1.00 2.90 0.10 0.97 0.03

Final Sat.: 3400 4959 141 1700 4929 171 1653 47 3400 2763 552 85

Capacity Analysis Module:

Vol/Sat: 0.13 0.38 0.38 0.00 0.31 0.31 0.07 0.07 0.19 0.03 0.03 0.03

OrlAdjV/S: 0.13 0.38 0.38 0.00 0.31 0.31 0.07 0.07 0.19 0.03 0.03 0.03

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.501

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 33 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Include Include

Rights: Include Include Permitted Permitted

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 56 1627 31 21 1356 25 21 4 14 24 2 21

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 56 1627 31 21 1356 25 21 4 14 24 2 21

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 62 1800 34 23 1500 28 23 4 15 27 2 23

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 62 1800 34 23 1500 28 23 4 15 27 2 23

PCE Adj: 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

FinalVolume: 62 1800 34 23 1500 28 23 4 15 27 2 23

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.94 0.06 1.00 2.95 0.05 1.00 0.22 0.78 1.00 0.09 0.91

Final Sat.: 1700 5005 95 1700 5008 92 1700 378 1322 1700 148 1552

Capacity Analysis Module:

Vol/Sat: 0.04 0.36 0.36 0.01 0.30 0.30 0.01 0.01 0.02 0.01 0.01

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.539

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 36 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0

Volume Module:

Base Vol: 65 1599 15 19 1372 70 77 7 78 17 10 39

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 65 1599 15 19 1372 70 77 7 78 17 10 39

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 71 1748 16 21 1499 77 84 8 85 19 11 43

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 71 1748 16 21 1499 77 84 8 85 19 11 43

PCE Adj: 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

Final Volume: 71 1748 16 21 1499 77 84 8 85 19 11 43

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.97 0.03 1.00 2.85 0.15 1.00 0.08 0.92 1.00 0.20 0.80

Final Sat.: 1700 5053 47 1700 4852 248 1700 140 1560 1700 347 1353

Capacity Analysis Module:

Vol/Sat: 0.04 0.35 0.01 0.31 0.31 0.05 0.05 0.05 0.01 0.03 0.03

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.731

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 54 Level Of Service: C

Street Name: Seal Beach Blvd-Los Alamitos Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0

Volume Module:

Base Vol: 146 1521 26 14 1330 155 270 18 97 70 22 23

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 146 1521 26 14 1330 155 270 18 97 70 22 23

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94

PHF Volume: 156 1627 28 15 1422 166 289 19 104 75 24 25

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 156 1627 28 15 1422 166 289 19 104 75 24 25

PCE Adj: 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

Final Volume: 156 1627 28 15 1422 166 289 19 104 75 24 25

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.95 0.05 1.00 2.69 0.31 1.00 0.16 0.84 0.76 0.24 1.00

Final Sat.: 1700 5014 86 1700 4568 532 1700 266 1434 1293 407 1700

Capacity Analysis Module:

Vol/Sat: 0.09 0.32 0.32 0.01 0.31 0.31 0.17 0.07 0.07 0.04 0.06 0.01

Crit Moves: ****

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection		1.3									
Int Delay, s/veh											
Movement		EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h		605	4	28	403	8	70				
Future Vol, veh/h		605	4	28	403	8	70				
Conflicting Peds, #/hr		0	0	0	0	0	0				
Sign Control		Free	Free	Free	Free	Stop	Stop				
RT Channelized		-	None	-	None	-	None				
Storage Length		-	-	-	-	0	-				
Veh in Median Storage, #		0	-	-	0	0	-				
Grade, %		0	-	-	0	0	-				
Peak Hour Factor		79	79	79	79	79	79				
Heavy Vehicles, %		2	2	2	2	2	2				
Mvmt Flow		766	5	35	510	10	89				
Major/Minor		Major1		Major2		Minor1					
Conflicting Flow All		0	0	771	0	1094	385				
Stage 1		-	-	-	-	768	-				
Stage 2		-	-	-	-	326	-				
Critical Hdwy		-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1		-	-	-	-	5.84	-				
Critical Hdwy Stg 2		-	-	-	-	5.84	-				
Follow-up Hdwy		-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver		-	-	840	-	208	613				
Stage 1		-	-	-	-	418	-				
Stage 2		-	-	-	-	704	-				
Platoon blocked, %		-	-	-	-	-	-				
Mov Cap-1 Maneuver		-	-	840	-	196	613				
Mov Cap-2 Maneuver		-	-	-	-	196	-				
Stage 1		-	-	-	-	418	-				
Stage 2		-	-	-	-	663	-				
Approach		EB		WB		NB					
HCM Control Delay, s		0		0.8		13.9					
HCM LOS				B							
Minor Lane/Major Mvmt		NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)		503	-	-	840	-					
HCM Lane V/C Ratio		0.196	-	-	0.042	-					
HCM Control Delay (s)		13.9	-	-	9.5	0.2					
HCM Lane LOS		B	-	-	A	A					
HCM 95th %tile Q(veh)		0.7	-	-	0.1	-					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection		11.4									
Intersection LOS		B									
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT
Traffic Vol veh/h	0	54	6	126	0	2	3	1	0	108	167
Future Vol. veh/h	0	54	6	126	0	2	3	1	0	108	167
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	68	8	159	0	3	4	1	0	137	211
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2
Approach	EB	EB	WB	WB	NB	NB					
Opposing Approach	WB		EB		SB						
Opposing Lanes	1		1		2						
Conflicting Approach Left	SB		NB		EB						
Conflicting Lanes Left	2		2		1						
Conflicting Approach Right	NB		SB		WB						
Conflicting Lanes Right	2		2		1						
HCM Control Delay	11.3		9.4		11.8						
HCM LOS	B		A		B						
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2			
Vol Left, %	56%	0%	29%	33%	0%	0%					
Vol Thru, %	44%	98%	3%	50%	100%	78%					
Vol Right, %	0%	2%	68%	17%	0%	22%					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop					
Traffic Vol by Lane	192	86	186	6	191	122					
LT Vol	108	0	54	2	0	0					
Through Vol	84	84	6	3	191	95					
RT Vol	0	2	126	1	0	27					
Lane Flow Rate	242	108	235	8	241	155					
Geometry Grp	7	7	2	2	7	7					
Degree of Util (X)	0.405	0.172	0.352	0.013	0.382	0.238					
Departure Headway (Hd)	6.017	5.715	5.389	6.224	5.697	5.541					
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes					
Cap	599	629	669	574	632	649					
Service Time	3.741	3.439	3.418	4.269	3.42	3.264					
HCM Lane V/C Ratio	0.404	0.172	0.351	0.014	0.381	0.239					
HCM Control Delay	12.8	9.6	11.3	9.4	11.9	10					
HCM Lane LOS	B	A	B	A	B	A					
HCM 95th-tile Q	2	0.6	1.6	0	1.8	0.9					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	0	286	27	
Future Vol, veh/h	0	0	286	27	
Peak Hour Factor	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	0	362	34	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB		NB		
Opposing Lanes			2		
Conflicting Approach Left			WB		
Conflicting Lanes Left			1		
Conflicting Approach Right			EB		
Conflicting Lanes Right			1		
HCM Control Delay			11.2		
HCM LOS			B		
ane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh11.9																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	97	61	88	0	13	42	31	0	39	181	21	0	24	203	65
Future Vol, veh/h	0	97	61	88	0	13	42	31	0	39	181	21	0	24	203	65
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	117	73	106	0	16	51	37	0	47	218	25	0	29	245	78
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		NB											
Opposing Approach	WB		EB		SB											
Opposing Lanes	1		1		2											
Conflicting Approach Left	SB		NB		EB											
Conflicting Lanes Left	2		2		1											
Conflicting Approach Right	NB		SB		WB											
Conflicting Lanes Right	2		2		1											
HCM Control Delay	13.7		10.4		11.2											
HCM LOS	B		B		B											
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	30%		0%		39%		15%		19%		0%					
Vol Thru, %	70%		81%		25%		49%		81%		61%					
Vol Right, %	0%		19%		36%		36%		0%		39%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	130		112		246		86		126		167					
LT Vol	39		0		97		13		24		0					
Through Vol	91		91		61		42		102		102					
RT Vol	0		21		88		31		0		65					
Lane Flow Rate	156		134		296		104		151		201					
Geometry Grp	7		7		2		2		7		7					
Degree of Util (X)	0.278		0.229		0.467		0.174		0.264		0.329					
Departure Headway (Hd)	6.412		6.125		5.674		6.04		6.281		5.905					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	559		584		631		591		570		606					
Service Time	4.175		3.887		3.733		4.116		4.04		3.665					
HCM Lane V/C Ratio	0.279		0.229		0.469		0.176		0.265		0.332					
HCM Control Delay	11.6		10.7		13.7		10.4		11.3		11.6					
HCM Lane LOS	B		B		B		B		B		B					
HCM 95th-ile Q	1.1		0.9		2.5		0.6		1.1		1.4					

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing Full Occupancy AM Peak Hour 02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	12.8											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	5	24	2	0	135	18	146	0	0	139	219
Future Vol, veh/h	0	5	24	2	0	135	18	146	0	0	139	219
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	171	23	185	0	0	176	277
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	EB	WB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	10.9		12.5		13.6
HCM LOS	B	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	0%	53%	0%	53%	0%	53%	0%	53%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%	47%	97%	0%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	100%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	265	31	153	146	140	68	140	68	140	68	140
LT Vol	0	0	5	135	0	74	0	74	0	74	0	74
Through Vol	93	46	24	18	0	66	66	66	66	66	66	66
RT Vol	0	219	2	0	146	0	2	146	0	2	146	0
Lane Flow Rate	117	336	39	194	185	177	86	185	177	86	185	177
Geometry Grp	7	7	6	7	7	7	7	7	7	7	7	7
Degree of Utl (X)	0.203	0.528	0.079	0.375	0.299	0.331	0.154	0.299	0.331	0.154	0.299	0.331
Departure Headway (Hd)	6.242	5.655	7.204	6.977	5.82	6.726	6.436	5.82	6.726	6.436	5.82	6.726
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	574	635	495	515	533	555	555	533	555	555	533	555
Service Time	3.996	3.409	5.284	4.733	3.576	4.487	4.197	3.576	4.487	4.197	3.576	4.487
HCM Lane V/C Ratio	0.204	0.529	0.079	0.377	0.301	0.332	0.155	0.301	0.332	0.155	0.301	0.332
HCM Control Delay	10.6	14.6	10.9	13.9	11.1	12.8	10.4	11.1	12.8	10.4	11.1	12.8
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	3.1	0.3	1.7	1.3	1.4	0.5	1.3	1.4	0.5	1.3	1.4

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing Full Occupancy AM Peak Hour 02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	12.8											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	5	24	2	0	135	18	146	0	0	139	219
Future Vol, veh/h	0	5	24	2	0	135	18	146	0	0	139	219
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	171	23	185	0	0	176	277
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	EB	WB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	10.9		12.5		13.6
HCM LOS	B	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	0%	53%	0%	53%	0%	53%	0%	53%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%	47%	97%	0%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	100%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	265	31	153	146	140	68	140	68	140	68	140
LT Vol	0	0	5	135	0	74	0	74	0	74	0	74
Through Vol	93	46	24	18	0	66	66	66	66	66	66	66
RT Vol	0	219	2	0	146	0	2	146	0	2	146	0
Lane Flow Rate	117	336	39	194	185	177	86	185	177	86	185	177
Geometry Grp	7	7	6	7	7	7	7	7	7	7	7	7
Degree of Utl (X)	0.203	0.528	0.079	0.375	0.299	0.331	0.154	0.299	0.331	0.154	0.299	0.331
Departure Headway (Hd)	6.242	5.655	7.204	6.977	5.82	6.726	6.436	5.82	6.726	6.436	5.82	6.726
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	574	635	495	515	533	555	555	533	555	555	533	555
Service Time	3.996	3.409	5.284	4.733	3.576	4.487	4.197	3.576	4.487	4.197	3.576	4.487
HCM Lane V/C Ratio	0.204	0.529	0.079	0.377	0.301	0.332	0.155	0.301	0.332	0.155	0.301	0.332
HCM Control Delay	10.6	14.6	10.9	13.9	11.1	12.8	10.4	11.1	12.8	10.4	11.1	12.8
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	3.1	0.3	1.7	1.3	1.4	0.5	1.3	1.4	0.5	1.3	1.4

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection									
Intersection Delay, s/veh 7.7									
Intersection LOS A									
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	99	7	0	6	86	0	4	12
Future Vol, veh/h	0	99	7	0	6	86	0	4	12
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	8	0	7	101	0	5	14
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB		WB		NB				
Opposing Approach	WB		EB		NB				
Opposing Lanes	1		1		0				
Conflicting Approach Left			NB		EB				
Conflicting Lanes Left	0		1		1				
Conflicting Approach Right	NB				WB				
Conflicting Lanes Right	1		0		1				
HCM Control Delay	7.7		7.7		7.1				
HCM LOS	A		A		A				
Lane	NBLn1		EBLn1WBLn1		Lane				
Vol Left, %	25%		0%		7%				
Vol Thru, %	0%		93%		93%				
Vol Right, %	75%		7%		0%				
Sign Control	Stop		Stop		Stop				
Traffic Vol by Lane	16		106		92				
LT Vol	4		0		6				
Through Vol	0		99		86				
RT Vol	12		7		0				
Lane Flow Rate	19		125		108				
Geometry Grp	1		1		1				
Degree of Util (X)	0.021		0.139		0.122				
Departure Headway (Hd)	4.031		4.008		4.074				
Convergence, Y/N	Yes		Yes		Yes				
Cap	893		893		879				
Service Time	2.031		2.038		2.105				
HCM Lane V/C Ratio	0.021		0.14		0.123				
HCM Control Delay	7.1		7.7		7.7				
HCM Lane LOS	A		A		A				
HCM 95th-tile Q	0.1		0.5		0.4				

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh 8.7															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31	0	59	16
Future Vol, veh/h	0	35	98	14	0	73	58	51	0	13	16	31	0	59	16
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	105	15	0	78	62	55	0	14	17	33	0	63	17
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1
Approach	EB			WB			NB			SB					
Opposing Approach	WB			EB			SB			NB					
Opposing Lanes	1			2			1			1					
Conflicting Approach Left	SB			NB			EB			WB					
Conflicting Lanes Left	1			1			2			1					
Conflicting Approach Right	NB			SB			WB			EB					
Conflicting Lanes Right	1			1			1			2					
HCM Control Delay	8.5			9			8.1			8.7					
HCM LOS	A			A			A			A					
Lane	NBLn1			EBLn1			WBLn1			SBLn1					
Vol Left, %	22%			42%			0%			66%					
Vol Thru, %	27%			58%			78%			32%					
Vol Right, %	52%			0%			22%			17%					
Sign Control	Stop			Stop			Stop			Stop					
Traffic Vol by Lane	60			84			182			90					
LT Vol	13			35			0			73					
Through Vol	16			49			58			16					
RT Vol	31			0			14			51					
Lane Flow Rate	65			90			68			196					
Geometry Grp	2			7			5			2					
Degree of Util (X)	0.083			0.133			0.093			0.246					
Departure Headway (Hd)	4.626			5.298			4.932			4.876					
Convergence, Y/N	Yes			Yes			Yes			Yes					
Cap	773			677			726			793					
Service Time	2.664			3.03			2.663			2.559					
HCM Lane V/C Ratio	0.084			0.133			0.094			0.247					
HCM Control Delay	8.1			8.8			8.2			9					
HCM Lane LOS	A			A			A			A					
HCM 95th-tile Q	0.3			0.5			0.3			1					

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15			
Future Vol, veh/h	0	71	37	0	16	32	0	28	15			
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	82	43	0	18	37	0	32	17			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach												
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	8.1				7.1				7.7			
HCM LOS	A				A				A			
Lane												
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%			100%			0%			65%		
Vol Thru, %	33%			0%			0%			35%		
Vol Right, %	67%			0%			100%			0%		
Sign Control	Stop			Stop			Stop			Stop		
Traffic Vol by Lane	48			71			37			43		
LT Vol	0			71			0			28		
Through Vol	16			0			0			15		
RT Vol	32			0			37			0		
Lane Flow Rate	55			82			43			49		
Geometry Grp	2			7			7			2		
Degree of Util (X)	0.06			0.118			0.047			0.061		
Departure Headway (Hd)	3.897			5.216			4.014			4.428		
Convergence, Y/N	Yes			Yes			Yes			Yes		
Cap	924			685			885			814		
Service Time	1.899			2.97			1.768			2.43		
HCM Lane V/C Ratio	0.06			0.12			0.049			0.06		
HCM Control Delay	7.1			8.7			7			7.7		
HCM Lane LOS	A			A			A			A		
HCM 95th-tile Q	0.2			0.4			0.1			0.2		

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection												
Int Delay, s/veh 0.7												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	110	0	9	95	0	11						
Future Vol, veh/h	110	0	9	95	0	11						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	89	89	89	89	89	89						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	124	0	10	107	0	12						
Major/Minor	Major1				Major2				Minor1			
Conflicting Flow All	0	0	124	0	251	124						
Stage 1	-	-	-	-	124	-						
Stage 2	-	-	-	-	127	-						
Critical Hdwy	-	-	4.12	-	6.42	6.22						
Critical Hdwy Stg 1	-	-	-	-	5.42	-						
Critical Hdwy Stg 2	-	-	-	-	5.42	-						
Follow-up Hdwy	-	-	2.218	-	3.518	3.318						
Pot Cap-1 Maneuver	-	-	1463	-	738	927						
Stage 1	-	-	-	-	902	-						
Stage 2	-	-	-	-	893	-						
Platoon blocked, %	-	-	-	-	899	-						
Mov Cap-1 Maneuver	-	-	1463	-	733	927						
Mov Cap-2 Maneuver	-	-	-	-	733	-						
Stage 1	-	-	-	-	902	-						
Stage 2	-	-	-	-	893	-						
Approach	EB				WB				NB			
HCM Control Delay, s	0				0.6				8.9			
HCM LOS					A				A			
Minor Lane/Major Mvmt	NBLn1				EBT				WBL			
Capacity (veh/h)	927				-				1463			
HCM Lane V/C Ratio	0.013				-				0.007			
HCM Control Delay (s)	8.9				-				7.5			
HCM Lane LOS	A				-				A			
HCM 95th %ile Q(veh)	0				-				0			

HCM 2010 Signalized Intersection Summary
1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	166	30	20	321	35	522	11	1450	361	521	1069	127
Traffic Volume (veh/h)	166	30	20	321	35	522	11	1450	361	521	1069	127
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1495	372	537	1102	131
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1592	496	570	3242	1009
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.64	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1495	372	537	1102	131
Grp Sat Flow(s), veh/hln	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.5	23.2	30.2	0.0	0.0
Cycle Q Clear(g, c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.5	23.2	30.2	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1592	496	570	3242	1009
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.94	0.34	0.13
Avail Cap(c, a), veh/h	127	0	125	426	0	190	81	1600	498	570	3242	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	33.9	18.8	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	12.1	10.0	22.3	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.5	11.5	17.8	0.1	0.1
LnGrp Delay(d), s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	48.9	44.0	41.0	0.3	0.2
LnGrp LOS	F	D	E	E	D	E	D	D	D	D	A	A
Approach Vol, veh/h	223			357			1878				1770	
Approach Delay, s/veh	202.3			63.2			48.0				12.6	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	41.1	40.2		12.6	5.4	75.9		18.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I), s	32.2	33.5		9.9	2.7	2.0		12.9				
Green Ext Time (p_c), s	0.5	1.0		0.0	0.0	13.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay		42.6										
HCM 2010 LOS		D										
Notes												

HCM 2010 Signalized Intersection Summary
2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	77	72	87	195	15	672	41	1546	555	317	1447	371
Traffic Volume (veh/h)	77	72	87	195	15	672	41	1546	555	317	1447	371
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	79	74	90	201	0	703	42	1594	0	327	1492	382
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	917	0	819	507	1907	594	242	1768	550
Arrive On Green	0.05	0.05	0.05	0.26	0.00	0.26	0.29	0.75	0.00	0.14	0.35	0.36
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	79	74	90	201	0	703	42	1594	0	327	1492	382
Grp Sat Flow(s), veh/hln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g, s), s	4.9	4.3	5.0	4.9	0.0	23.3	1.0	23.1	0.0	15.0	29.8	22.8
Cycle Q Clear(g, c), s	4.9	4.3	5.0	4.9	0.0	23.3	1.0	23.1	0.0	15.0	29.8	22.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	917	0	819	507	1907	594	242	1768	550
V/C Ratio(X)	0.96	0.87	1.25	0.22	0.00	0.86	0.08	0.84	0.00	1.35	0.84	0.69
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	507	1907	594	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.54	0.54	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.2	52.5	32.0	0.0	38.9	33.4	11.5	0.0	47.5	33.1	30.9
Incr Delay (d2), s/veh	93.1	58.3	187.7	0.1	0.0	5.1	0.0	2.5	0.0	183.0	5.1	7.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.6	5.9	2.4	0.0	10.7	0.5	10.8	0.0	19.6	14.8	11.1	11.1
LnGrp Delay(d), s/veh	145.6	110.5	240.2	32.2	0.0	44.0	33.4	14.0	0.0	230.5	38.3	37.9
LnGrp LOS	F	F	F	C	D	C	D	C	B	F	D	D
Approach Vol, veh/h	243			904			1636				2201	
Approach Delay, s/veh	170.0			41.3			14.5				66.8	
Approach LOS	F			D			B				E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	41.1	40.2		9.7	22.0	44.0		34.2				
Change Period (Y+Rc), s	5.8	* 4.7		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 5.0	5.0	41		39.0				
Max Q Clear Time (g_c+I), s	32.2	33.5		7.0	3.0	31.8		25.3				
Green Ext Time (p_c), s	0.5	1.0		0.0	1.7	6.4		3.2				
Intersection Summary												
HCM 2010 Ctrl Delay		50.0										
HCM 2010 LOS		D										
Notes												

Existing Full Occ PM Mon Feb 20, 2017 15:12:10 Page 2-1

Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.797

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 66 Level Of Service: C

Street Name: Seal Beach Blvd Lampson Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted

Rights: Ovl Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1710 544 634 1604 0 0 0 0 0 540 0 460

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 1710 544 634 1604 0 0 0 0 540 0 460

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 0 1750 557 649 1642 0 0 0 0 553 0 471

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1750 557 649 1642 0 0 0 0 553 0 471

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 1750 557 649 1642 0 0 0 0 553 0 471

OvAdjVol: 0 1750 557 649 1642 0 0 0 0 553 0 471

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00 1.00

Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.34 0.33 0.19 0.32 0.00 0.00 0.00 0.00 0.16 0.00 0.28

OvAdjV/S: 0.00 0.34 0.33 0.19 0.32 0.00 0.00 0.00 0.00 0.16 0.00 0.28

Crit Moves: ****

Existing Full Occ PM Mon Feb 20, 2017 15:12:10 Page 3-1

Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.720

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 53 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected

Rights: Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 406 1642 132 5 1666 66 86 0 385 193 31 5

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: 406 1642 132 5 1666 66 86 0 385 193 31 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 437 1766 142 5 1791 71 92 0 414 208 33 5

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 437 1766 142 5 1791 71 92 0 414 208 33 5

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: 437 1766 142 5 1791 71 92 0 414 208 33 5

OvAdjVol: 437 1766 142 5 1791 71 92 0 414 208 33 5

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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: 2.00 2.89 0.22 1.00 2.89 0.11 1.00 0.00 2.00 1.69 0.27 0.04

Final Sat.: 3400 4721 379 1700 4906 194 1700 0 3400 2866 460 74

Capacity Analysis Module:

Vol/Sat: 0.13 0.37 0.37 0.00 0.37 0.37 0.05 0.00 0.12 0.07 0.07 0.07

OvAdjV/S: 0.13 0.37 0.37 0.00 0.37 0.37 0.05 0.00 0.12 0.07 0.07 0.07

Crit Moves: ****

Existing Full Occ PM Mon Feb 20, 2017 15:12:10 Page 4-1

Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.752

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 57 Level Of Service: C

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 205 1415 84 78 1381 94 100 28 185 139 47 59

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: 205 1415 84 78 1381 94 100 28 185 139 47 59

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 217 1496 89 82 1460 99 106 30 196 147 50 62

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 217 1496 89 82 1460 99 106 30 196 147 50 62

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: 217 1496 89 82 1460 99 106 30 196 147 50 62

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.83 0.17 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56

Final Sat.: 1700 4814 286 1700 4775 325 1700 223 1477 1700 754 946

Capacity Analysis Module:

Vol/Sat: 0.13 0.31 0.31 0.05 0.31 0.31 0.06 0.13 0.13 0.09 0.07 0.07

Crit Moves: ****

Existing Full Occ PM Mon Feb 20, 2017 15:12:10 Page 5-1

Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.691

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 49 Level Of Service: B

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 159 1535 24 36 1576 190 184 1 130 15 1 16

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: 159 1535 24 36 1576 190 184 1 130 15 1 16

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 168 1624 25 38 1668 201 195 1 138 16 1 17

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 168 1624 25 38 1668 201 195 1 138 16 1 17

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: 168 1624 25 38 1668 201 195 1 138 16 1 17

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.95 0.05 1.00 2.68 0.32 1.00 0.01 0.99 1.00 0.06 0.94

Final Sat.: 1700 5021 79 1700 4551 549 1700 13 1687 1700 100 1600

Capacity Analysis Module:

Vol/Sat: 0.10 0.32 0.32 0.02 0.37 0.37 0.11 0.08 0.08 0.01 0.01 0.01

Crit Moves: ****

Existing Full Occ PM Mon Feb 20, 2017 15:12:10 Page 6-1

Health Club within the Shops at Rossmore
Existing (2016) Full Occupancy
PM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.684
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: B

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - I - R L - I - R L - I - R L - I - R

Control: Protected Protected Protected Permitted Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 130 1504 57 19 1698 170 162 9 88 48 3 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 130 1504 57 19 1698 170 162 9 88 48 3 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 134 1546 59 20 1745 175 166 9 90 49 3 11
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 134 1546 59 20 1745 175 166 9 90 49 3 11
M/F Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 134 1546 59 20 1745 175 166 9 90 49 3 11

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.69 0.11 1.00 2.73 0.27 1.00 0.09 0.91 0.94 0.06 1.00
Final Sat.: 1700 4914 186 1700 4636 464 1700 158 1542 1600 100 1700

Capacity Analysis Module:
Vol/Sat: 0.08 0.31 0.31 0.01 0.38 0.38 0.10 0.06 0.06 0.03 0.03 0.01
Crit Moves: ****

Intersection		1.2											
Int Delay, s/veh													
Movement	EBT	EBR	WBL	WBT	NBL	NBR							
Traffic Vol, veh/h	443	7	53	453	3	49							
Future Vol, veh/h	443	7	53	453	3	49							
Conflicting Peds, #/hr	0	0	0	0	0	0							
Sign Control	Free	Free	Free	Free	Stop	Stop							
RT Channelized	-	None	-	None	-	None							
Storage Length	-	-	-	-	0	-							
Veh in Median Storage, #	0	-	-	0	0	-							
Grade, %	0	-	-	0	0	-							
Peak Hour Factor	90	90	90	90	90	90							
Heavy Vehicles, %	2	2	2	2	2	2							
Mvmt Flow	492	8	59	503	3	54							
Major/Minor	Major1			Major2			Minor1						
Conflicting Flow All	0	0	0	500	0	865	250						
Stage 1	-	-	-	-	-	496	-						
Stage 2	-	-	-	-	-	369	-						
Critical Hdwy	-	-	-	4.14	-	7.54	6.94						
Critical Hdwy Stg 1	-	-	-	-	-	6.54	-						
Critical Hdwy Stg 2	-	-	-	-	-	6.54	-						
Follow-up Hdwy	-	-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver	-	-	-	1060	-	248	750						
Stage 1	-	-	-	-	-	524	-						
Stage 2	-	-	-	-	-	623	-						
Platoon blocked, %	-	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	-	1060	-	233	750						
Mov Cap-2 Maneuver	-	-	-	-	-	233	-						
Stage 1	-	-	-	-	-	524	-						
Stage 2	-	-	-	-	-	575	-						
Approach	EB		WB		NB								
HCM Control Delay, s	0		1.2		10.9								
HCM LOS					B								
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT								
Capacity (veh/h)	665	-	-	1060	-								
HCM Lane V/C Ratio	0.087	-	-	0.056	-								
HCM Control Delay (s)	10.9	-	-	8.6	0.3								
HCM Lane LOS	B	-	-	A	A								
HCM 95th %ile Q(veh)	0.3	-	-	0.2	-								

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh												9.6	
Intersection LOS												A	
Movement													
Traffic Vol, veh/h	0	30	4	47	0	2	5	10	0	67	214	NBT	NBR
Future Vol, veh/h	0	30	4	47	0	2	5	10	0	67	214		3
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	5	56	0	2	6	12	0	80	255	4	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0
Approach													
Approach	EB		WB		WB		EB		NB		SB		
Opposing Approach	WB		EB		EB		SB		SB		SB		
Opposing Lanes	1		1		1		1		2		2		
Conflicting Approach Left	SB		NB		NB		EB		EB		EB		
Conflicting Lanes Left	2		2		2		2		1		1		
Conflicting Approach Right	NB		SB		SB		WB		WB		WB		
Conflicting Lanes Right	2		2		2		2		1		1		
HCM Control Delay	9.1		8.5		8.5		10		10		A		
HCM LOS	A		A		A		A		A		A		
Lane													
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2		
Vol Left, %	39%		0%		37%		12%		6%		0%		
Vol Thru, %	61%		97%		5%		29%		94%		73%		
Vol Right, %	0%		3%		58%		59%		0%		27%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	174		110		81		17		124		161		
LT Vol	67		0		30		2		7		0		
Through Vol	107		107		4		5		117		117		
RT Vol	0		3		47		10		0		44		
Lane Flow Rate	207		131		96		20		148		192		
Geometry Grp	7		7		2		2		7		7		
Degree of Util (X)	0.307		0.187		0.138		0.029		0.213		0.265		
Departure Headway (Hd)	5.341		5.128		5.167		5.247		5.189		4.968		
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		
Cap	671		698		690		677		689		721		
Service Time	3.089		2.876		3.225		3.322		2.935		2.714		
HCM Lane V/C Ratio	0.308		0.188		0.139		0.03		0.215		0.266		
HCM Control Delay	10.5		9.1		9.1		8.5		9.3		9.5		
HCM Lane LOS	B		A		A		A		A		A		
HCM 95th-tile Q	1.3		0.7		0.5		0.1		0.8		1.1		

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh													
Intersection LOS													
Movement													
	SBU	SBL	SBT	SBR									
Traffic Vol, veh/h	0	7	234	44									
Future Vol, veh/h	0	7	234	44									
Peak Hour Factor	0.92	0.84	0.84	0.84									
Heavy Vehicles, %	2	2	2	2									
Mvmt Flow	0	8	279	52									
Number of Lanes	0	0	2	0									
Approach													
Opposing Approach	SB												
Opposing Lanes	NB												
Conflicting Approach Left	WB												
Conflicting Lanes Left	1												
Conflicting Approach Right	EB												
Conflicting Lanes Right	1												
HCM Control Delay	9.4												
HCM LOS	A												
Lane													

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection		Intersection Delay, s/veh10.2															
Intersection LOS		B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	42	35	55	0	36	39	71	0	30	132	26	0	44	181	40	
Future Vol, veh/h	0	42	35	55	0	36	39	71	0	30	132	26	0	44	181	40	
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	50	42	65	0	43	46	85	0	36	157	31	0	52	215	48	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		NB		SB								SB		
Opposing Lanes	1		1		2		2								2		
Conflicting Approach Left	SB		NB		EB		WB								WB		
Conflicting Lanes Left	2		2		1		1								1		
Conflicting Approach Right	NB		SB		WB		EB								EB		
Conflicting Lanes Right	2		2		1		1								1		
HCM Control Delay	10.2		10.3		9.9		10.4								10.4		
HCM LOS	B		B		A		B								B		
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2		
Vol Left, %	31%		0%		32%		25%		33%		0%		0%		0%		
Vol Thru, %	69%		72%		27%		67%		69%		0%		0%		0%		
Vol Right, %	0%		28%		42%		49%		0%		31%		0%		31%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	96		92		132		146		135		131						
LT Vol	30		0		42		36		44		0						
Through Vol	66		66		35		39		91		91						
RT Vol	0		26		55		71		0		40						
Lane Flow Rate	114		110		157		174		160		155						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.192		0.173		0.237		0.259		0.264		0.24						
Departure Headway (Hd)	6.049		5.69		5.439		5.355		5.939		5.556						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	593		631		660		671		605		646						
Service Time	3.783		3.424		3.477		3.391		3.668		3.285						
HCM Lane V/C Ratio	0.192		0.174		0.238		0.259		0.264		0.24						
HCM Control Delay	10.2		9.6		10.2		10.3		10.8		10						
HCM Lane LOS	B		A		B		B		A		A						
HCM 95th-tile Q	0.7		0.6		0.9		1		1.1		0.9						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing Full Occupancy PM Peak Hour
02/22/2017

Intersection													
Intersection Delay, s/veh		10.1											
Intersection LOS		B											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	1	17	2	0	148	25	64	0	5	103	106	
Future Vol, veh/h	0	1	17	2	0	148	25	64	0	5	103	106	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	1	20	2	0	170	29	74	0	6	118	122	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													
Opposing Approach	WB		EB		WB		NB		SB				
Opposing Lanes	2		1		1		2		2				
Conflicting Approach Left	SB		NB		NB		EB		EB				
Conflicting Lanes Left	2		2		2		1		1				
Conflicting Approach Right	NB		SB		SB		WB		WB				
Conflicting Lanes Right	2		2		2		2		2				
HCM Control Delay	9.3		10.9		10.9		9.5		9.5				
HCM LOS	A		B		B		A		A				
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2						
Vol Left, %	9%	0%	5%	86%	0%	40%	0%						
Vol Thru, %	91%	33%	85%	14%	0%	60%	95%						
Vol Right, %	0%	67%	10%	0%	100%	0%	5%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	57	158	20	173	64	103	65						
LT Vol	5	0	1	148	0	41	0						
Through Vol	52	52	17	25	0	62	62						
RT Vol	0	106	2	0	64	0	3						
Lane Flow Rate	65	181	23	199	74	118	75						
Geometry Grp	7	7	6	7	7	7	7						
Degree of Util (X)	0.102	0.257	0.039	0.335	0.101	0.192	0.116						
Departure Headway (Hd)	5.635	5.115	6.101	6.07	4.935	5.829	5.595						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	631	631	590	587	717	610	634						
Service Time	3.418	2.897	4.101	3.861	2.725	3.617	3.383						
HCM Lane V/C Ratio	0.103	0.26	0.039	0.339	0.103	0.193	0.118						
HCM Control Delay	9.1	9.7	9.3	11.9	8.3	10	9.1						
HCM Lane LOS	A	A	A	B	A	A	A						
HCM 95th-tile Q	0.3	1	0.1	1.5	0.3	0.7	0.4						

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Existing Full Occupancy PM Peak Hour
02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	41	124	3	
Future Vol, veh/h	0	41	124	3	
Peak Hour Factor	0.92	0.87	0.87	0.87	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	47	143	3	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
HCM Control Delay	1				
HCM LOS	9.7				
	A				

HCM 2010 AWSC
12: West Road & Rossmoor Center Way

12/1/2016

Intersection											
Intersection Delay, s/veh 8											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	90	17	0	22	136	0	26	11		
Future Vol, veh/h	0	90	17	0	22	136	0	26	11		
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	100	19	0	24	151	0	29	12		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		NB						
Opposing Approach	WB		EB		0						
Opposing Lanes	1		1		0						
Conflicting Approach Left			NB		EB						
Conflicting Lanes Left	0		1		1						
Conflicting Approach Right	NB				WB						
Conflicting Lanes Right	1		0		1						
HCM Control Delay	7.7		8.2		7.8						
HCM LOS	A		A		A						
Lane	NBLn1EBLn1WBLn1										
Vol Left, %	70%		0%		14%						
Vol Thru, %	0%		84%		86%						
Vol Right, %	30%		16%		0%						
Sign Control	Stop		Stop		Stop						
Traffic Vol by Lane	37		107		158						
LT Vol	26		0		22						
Through Vol	0		90		136						
RT Vol	11		17		0						
Lane Flow Rate	41		119		176						
Geometry Grp	1		1		1						
Degree of Util (X)	0.052		0.134		0.201						
Departure Headway (Hd)	4.532		4.044		4.125						
Convergence, Y/N	Yes		Yes		Yes						
Cap	795		877		864						
Service Time	2.532		2.113		2.179						
HCM Lane V/C Ratio	0.052		0.136		0.204						
HCM Control Delay	7.8		7.7		8.2						
HCM Lane LOS	A		A		A						
HCM 95th-ile Q	0.2		0.5		0.7						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh 13																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol. veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75	34	30
Future Vol. veh/h	0	22	72	27	0	183	106	84	0	43	44	178	0	75	34	30
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	75	28	0	191	110	88	0	45	46	185	0	78	35	31
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				2				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				2				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				2			
HCM Control Delay	9.7				15.7				11.8				10.7			
HCM LOS	A				C				B				B			
Lane	NBLn1				EBLn1				WBLn1				SBLn1			
Vol Left, %	16%				38%				0%				49%			
Vol Thru, %	17%				62%				57%				28%			
Vol Right, %	67%				0%				43%				23%			
Sign Control	Stop				Stop				Stop				Stop			
Traffic Vol by Lane	265				58				63				373			
LT Vol	43				22				0				183			
Through Vol	44				36				36				106			
RT Vol	178				0				27				84			
Lane Flow Rate	276				60				66				389			
Geometry Grp	2				7				7				5			
Degree of Util (X)	0.403				0.108				0.109				0.582			
Departure Headway (Hd)	5.259				6.457				5.959				5.393			
Convergence, Y/N	Yes				Yes				Yes				Yes			
Cap	682				553				600				668			
Service Time	3.31				4.213				3.715				3.435			
HCM Lane V/C Ratio	0.405				0.108				0.11				0.582			
HCM Control Delay	11.8				10				9.4				15.7			
HCM Lane LOS	B				A				A				C			
HCM 95th-ile Q	1.9				0.4				0.4				3.8			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection										
Intersection Delay, s/veh11.6										
Intersection LOS B										
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Traffic Vol, veh/h	0	86	292	0	43	65	0	231	54	
Future Vol, veh/h	0	86	292	0	43	65	0	231	54	
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.92	0.89	0.89	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	97	328	0	48	73	0	260	61	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach	WB				NB		SB			
Opposing Approach					SB		NB			
Opposing Lanes	0				1		1			
Conflicting Approach Left	NB						WB			
Conflicting Lanes Left	1				0		2			
Conflicting Approach Right	SB				WB					
Conflicting Lanes Right	1				2		0			
HCM Control Delay	11.4				9.2		12.9			
HCM LOS	B				A		B			
Lane	NBLn1WBLn1WBLn2SBLn1									
Vol Left, %	0% 100% 0% 81%									
Vol Thru, %	40% 0% 0% 19%									
Vol Right, %	60% 0% 100% 0%									
Sign Control	Stop Stop Stop Stp									
Traffic Vol by Lane	108 86 292 285									
LT Vol	0 86 0 231									
Through Vol	43 0 0 54									
RT Vol	65 0 292 0									
Lane Flow Rate	121 97 328 320									
Geometry Grp	2 7 7 2									
Degree of Util (X)	0.173 0.165 0.45 0.467									
Departure Headway (Hd)	5.125 6.147 4.936 5.249									
Convergence, Y/N	Yes Yes Yes Yes									
Cap	704 579 722 679									
Service Time	3.125 3.94 2.728 3.338									
HCM Lane V/C Ratio	0.172 0.168 0.454 0.471									
HCM Control Delay	9.2 10.2 11.8 12.9									
HCM Lane LOS	A B B B									
HCM 95th-Pile Q	0.6 0.6 2.3 2.5									

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection									
Int Delay, s/veh									
1 2									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	88	1	20	165	4	20			
Future Vol, veh/h	88	1	20	165	4	20			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	93	93	93	93	93	93			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	95	1	22	177	4	22			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	96	0	315	95			
Stage 1	-	-	-	-	95	-			
Stage 2	-	-	-	-	220	-			
Critical Hwy	-	-	4.12	-	6.42	6.22			
Critical Hwy Stg 1	-	-	-	-	5.42	-			
Critical Hwy Stg 2	-	-	-	-	5.42	-			
Follow-up Hwy	-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver	-	-	1498	-	678	962			
Stage 1	-	-	-	-	929	-			
Stage 2	-	-	-	-	817	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1498	-	667	962			
Mov Cap-2 Maneuver	-	-	-	-	667	-			
Stage 1	-	-	-	-	929	-			
Stage 2	-	-	-	-	804	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		0.8		9.1				
HCM LOS					A				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	896	-	-	1498	-				
HCM Lane V/C Ratio	0.029	-	-	0.014	-				
HCM Control Delay (s)	9.1	-	-	7.4	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.1	-	-	0	-				

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

↖ → ↗ ↖ ↗ ↖ ↗ ↖ ↗ ↖													
Movement													
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Traffic Volume (veh/h)	147	26	16	544	37	495	9	1103	272	420	1115	131	
Future Volume (veh/h)	147	26	16	544	37	495	9	1103	272	420	1115	131	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	156	28	17	607	0	0	10	1173	289	447	1186	139	
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap. veh/h	118	72	44	679	0	303	21	1314	409	502	2775	864	
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.57	1.00	1.00	
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583	
Grp Volume(v), veh/h	156	0	45	607	0	0	10	1173	289	447	1186	139	
Grp Sat Flow(s), veh/h	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583	
Q Serve(g, s), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.5	18.2	24.3	0.0	0.0	
Cycle Q Clear(g, c), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.5	18.2	24.3	0.0	0.0	
Prop In Lane	1.00	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	118	0	116	679	0	303	21	1314	409	502	2775	864	
V/C Ratio(X)	1.33	0.00	0.39	0.89	0.00	0.00	0.47	0.89	0.71	0.89	0.43	0.16	
Avail Cap(c, a), veh/h	118	0	116	748	0	334	81	1350	420	502	2775	864	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.89	0.89	0.89	0.89	
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.4	0.0	0.0	54.0	39.3	37.0	22.4	0.0	0.0	
Incr Delay (d2), s/veh	193.4	0.0	2.1	12.4	0.0	0.0	15.3	9.5	9.8	16.3	0.4	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%)veh/h	99	0.0	1.4	10.2	0.0	0.0	0.4	12.6	9.1	13.9	0.1	0.1	
LnGrp Delay(d),s/veh	244.8	0.0	51.3	55.8	0.0	0.0	69.3	48.8	46.8	38.7	0.4	0.4	
LnGrp LOS	F	D	D	E	E	E	E	D	D	D	A	A	
Approach Vol, veh/h	201	1472											
Approach Delay, s/veh	201.4	55.8											
Approach LOS	F	D											
										10.1		B	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	4	5	6	8							
Phs Duration (G+Y+Rc), s	36.9	34.2	12.0	5.3	65.8	26.9							
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8							
Max Green Setting (Gmax), s	30.0	* 29	* 7.3	5.0	54.2	23.2							
Max Q Clear Time (g_c+I1), s	26.3	26.5	9.3	2.6	2.0	20.4							
Green Ext Time (p_c), s	0.7	2.0	0.0	0.0	13.7	0.7							
Intersection Summary													
HCM 2010 Ctrl Delay													
40.4													
HCM 2010 LOS													
D													
Notes													

12/1/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	8	7	355	7	355	7	355	7	355	7	355	7
Traffic Volume (veh/h)	8	8	7	355	5	574	15	1360	377	260	1307	241
Future Volume (veh/h)	8	8	7	355	5	574	15	1360	377	260	1307	241
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	8	7	374	0	607	16	1432	0	274	1376	254
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	41	43	36	827	0	738	730	2152	670	242	1883	524
Arrive On Green	0.02	0.02	0.02	0.23	0.00	0.23	0.42	0.85	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	8	8	7	374	0	607	16	1432	0	274	1376	254
Grp Sat Flow(s), veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	0.5	0.5	0.5	9.9	0.0	20.0	0.3	10.9	0.0	15.0	27.3	14.1
Cycle Q Clear(g.s), s	0.5	0.5	0.5	9.9	0.0	20.0	0.3	10.9	0.0	15.0	27.3	14.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	41	43	36	827	0	738	730	2152	670	242	1883	524
V/C Ratio(X)	0.20	0.19	0.19	0.45	0.00	0.82	0.02	0.67	0.00	1.13	0.82	0.48
Avail Cap(c), veh/h	81	85	72	1258	0	1123	730	2152	670	242	1883	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	36.2	0.0	400	250	5.7	0.0	47.5	33.8	29.3
Incr Delay (d2), s/veh	2.3	2.1	2.5	0.4	0.0	3.1	0.0	1.1	0.0	98.3	4.5	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/InQ	0.3	0.2	0.4	0.9	0.0	9.0	0.1	5.0	0.0	13.9	13.4	6.6
LnGrp Delay(d), s/veh	55.1	54.8	55.3	36.6	0.0	43.1	25.0	6.8	0.0	145.8	38.3	32.5
LnGrp LOS	E	D	E	D	D	C	C	A	F	D	C	C
Approach Vol, veh/h	23	981	1448	1904								
Approach Delay, s/veh	55.0	40.6	7.0	53.0								
Approach LOS	E	D	D	A								
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+Rc), s	9.0	52.3	7.2	29.1	42.2							
Change Period (Y+Rc), s	4.0	5.8	*4.7	5.8	*5.8							
Max Green Setting (Gmax), s	30.7	*5.0	*5.0	*41	39.0							
Max Q Clear Time (g_c+1/16), s	12.9	2.5	2.3	29.3	22.0							
Green Ext Time (p_c), s	0.0	9.1	0.0	2.0	7.1							
Intersection Summary												
HCM 2010 Ctrl Delay	34.9											
HCM 2010 LOS	C											
Notes												

Health Club within the Shops at Rossmoor

Existing (2016) Full Occupancy

Saturday Peak Hour

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

Intersection #3 Seal Beach Blvd/Lampson Ave											

Cycle (sec):	100	Critical Vol./Cap.(X):									
Loss Time (sec):	10	Average Delay (sec/veh):									
Optimal Cycle:	61	Level of Service:									

Street Name:	Seal Beach Blvd	Lampson Ave									
Approach:	North Bound	South Bound	East Bound	West Bound							
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0

Volume Module:	0 1544	360 509 1459	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Base Vol:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Growth Adj:	0 1544	360 509 1459	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Initial Bse:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
User Adj:	0 1544	360 509 1459	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
PHF Adj:	0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93
PHF Volume:	0 1660	387 547 1569	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 1660	387 547 1569	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Volume:	0 1660	387 547 1569	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
OvAdjVol:	0 1660	387 547 1569	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0

Saturation Flow Module:	1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700
Sat/Lane:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Adjustment:	0.00 3.00	1.00 2.00 3.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Lanes:	0 5100	1700 3400 5100	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Final Sat.:	0.00 0.33	0.23 0.16 0.31	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Capacity Analysis Module:	0.00 0.33	0.23 0.16 0.31	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Vol/Sat:	0.00 0.33	0.23 0.16 0.31	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
OvAdjV/S:	0.00 0.33	0.23 0.16 0.31	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Crit Moves:	0.00 0.33	0.23 0.16 0.31	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr																

Cycle (sec):	100	Critical Vol./Cap.(X):		0.654												
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx												
Optimal Cycle:	45	Level Of Service:		B												

Street Name:	Seal Beach Blvd	North Bound		South Bound		East Bound		St. Cloud Dr		West Bound						
Approach:		L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Movement:		L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:		Protected		Protected		Split Phase		Split Phase		Include						
Rights:		Include		Include		Ovl		Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1	0	1	0	2	1	0	0	2	1	0	1	0

Volume Module:																
Base Vol:	362	1592	172	17	1376	69	102	2	398	174	35	5				
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	1.00	1.00	1.00	1.00
Initial Base:	362	1592	172	17	1376	69	102	2	398	174	35	5				
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	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	391	1717	186	18	1484	74	110	2	429	188	38	5				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	391	1717	186	18	1484	74	110	2	429	188	38	5				
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	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	1.00	1.00	1.00	1.00
FinalVolume:	391	1717	186	18	1484	74	110	2	429	188	38	5				
OvAdjVol:									39							

Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	1.00	1.00	1.00	1.00
Lanes:	2.00	2.71	0.29	1.00	2.86	0.14	0.98	0.02	2.00	1.62	0.33	0.05				
Final Sat.:	3400	4603	497	1700	4856	244	1667	33	3400	2764	556	79				

Capacity Analysis Module:																
Vol/Sat:	0.11	0.37	0.37	0.01	0.31	0.31	0.07	0.07	0.13	0.07	0.07	0.07	0.07	0.07	0.07	0.07
OvAdjV/S:									0.01							
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****

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

Intersection #5 Seal Beach Blvd/Towne Center Dr																

Cycle (sec):	100	Critical Vol./Cap.(X):		0.841												
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx												
Optimal Cycle:	77	Level Of Service:		D												

Street Name:	Seal Beach Blvd	North Bound		South Bound		East Bound		Towne Center Dr		West Bound						
Approach:		L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Movement:		L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:		Protected		Protected		Permitted		Permitted								
Rights:		Include		Include		Include		Include								
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0	1	0

Volume Module:																
Base Vol:	291	1223	108	92	1063	151	119	83	243	173	89	88				
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:	291	1223	108	92	1063	151	119	83	243	173	89	88				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	307	1290	114	97	1121	159	126	88	256	182	94	93				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	307	1290	114	97	1121	159	126	88	256	182	94	93				
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:	307	1290	114	97	1121	159	126	88	256	182	94	93				

Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
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	2.76	0.24	1.00	2.63	0.37	1.00	0.25	0.75	1.00	0.50	0.50				
Final Sat.:	1700	4686	414	1700	4466	634	1700	433	1267	1700	855	845				

Capacity Analysis Module:																
Vol/Sat:	0.18	0.28	0.28	0.06	0.25	0.25	0.07	0.20	0.20	0.11	0.11	0.11				
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****				

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way															

Cycle (sec):	100	Critical Vol./Cap.(X):		0.673		0.632									
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx		xxxxxx									
Optimal Cycle:	47	Level Of Service:		B		B									

Street Name:	Seal Beach Blvd	Rossmoor Center Way													
Approach:	North Bound	South Bound		East Bound		West Bound									
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R								
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected								
Rights:	Include	Include	Include	Include	Include	Include	Include								
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0								
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0								
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0								

Volume Module:															
Base Vol:	203 1410	15	25 1398	229	188	4	151	19	2	14					
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	1.00 1.00	1.00					
Initial Bse:	203 1410	15	25 1398	229	188	4	151	19	2	14					
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	1.00 1.00	1.00					
PHF Adj:	0.97 0.97	0.97	0.97 0.97	0.97	0.97 0.97	0.97	0.97 0.97	0.97	0.97 0.97	0.97					
PHF Volume:	208 1448	15	26 1435	235	193	4	155	20	2	14					
Reduct Vol:	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0					
Reduced Vol:	208 1448	15	26 1435	235	193	4	155	20	2	14					
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	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	1.00 1.00	1.00					
Final Volume:	208 1448	15	26 1435	235	193	4	155	20	2	14					

Saturation Flow Module:															
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700					
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	1.00 1.00	1.00					
Lanes:	1.00 2.97	0.03	1.00 2.58	0.42	1.00 0.03	0.97	1.00 0.13	0.87	1.00 0.13	0.87					
Final Sat.:	1700 5046	54	1700 4382	718	1700	44	1656	1700	213	1487					

Capacity Analysis Module:															
Vol/Sat:	0.12 0.29	0.29	0.02 0.33	0.33	0.11 0.09	0.09	0.01 0.01	0.01	0.01	0.01					
Crit Moves:	****	****	****	****	****	****	****	****	****	****					

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd															

Cycle (sec):	100	Critical Vol./Cap.(X):		0.632		0.632									
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx		xxxxxx									
Optimal Cycle:	43	Level Of Service:		B		B									

Street Name:	Seal Beach Blvd-Los Alamitos Blvd	Bradbury Rd													
Approach:	North Bound	South Bound		East Bound		West Bound									
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R								
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected								
Rights:	Include	Include	Include	Include	Include	Include	Include								
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0								
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0								
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0								

Volume Module:															
Base Vol:	111 1374	44	17 1496	120	167	8	96	63	7	12					
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	1.00 1.00	1.00					
Initial Bse:	111 1374	44	17 1496	120	167	8	96	63	7	12					
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	1.00 1.00	1.00					
PHF Adj:	0.98 0.98	0.98	0.98 0.98	0.98	0.98 0.98	0.98	0.98 0.98	0.98	0.98 0.98	0.98					
PHF Volume:	113 1402	45	17 1527	122	170	8	98	64	7	12					
Reduct Vol:	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0					
Reduced Vol:	113 1402	45	17 1527	122	170	8	98	64	7	12					
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	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	1.00 1.00	1.00					
Final Volume:	113 1402	45	17 1527	122	170	8	98	64	7	12					

Saturation Flow Module:															
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700					
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	1.00 1.00	1.00					
Lanes:	1.00 2.91	0.09	1.00 2.78	0.22	1.00 0.08	0.92	1.00 0.10	0.90	1.00 0.10	0.90					
Final Sat.:	1700 4942	158	1700 4721	379	1700	131	1569	1530	1700	1700					

Capacity Analysis Module:															
Vol/Sat:	0.07 0.28	0.28	0.01 0.32	0.32	0.10 0.06	0.06	0.04 0.04	0.04	0.04	0.01					
Crit Moves:	****	****	****	****	****	****	****	****	****	****					

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection										
1										
Int Delay, s/veh										
Movement										
Traffic Vol, veh/h	456	1	43	420	4	44				
Future Vol, veh/h	456	1	43	420	4	44				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	94	94	94	94	94	94				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	485	1	46	447	4	47				
Major/Minor										
Major1										
Major2										
Minor1										
Minor2										
Conflicting Flow All	0	0	486	0	801	243				
Stage 1	-	-	-	-	486	-				
Stage 2	-	-	-	-	315	-				
Critical Hdwy	-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1	-	-	-	-	5.84	-				
Critical Hdwy Stg 2	-	-	-	-	5.84	-				
Follow-up Hdwy	-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver	-	-	1073	-	322	758				
Stage 1	-	-	-	-	584	-				
Stage 2	-	-	-	-	713	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1073	-	304	758				
Mov Cap-2 Maneuver	-	-	-	-	304	-				
Stage 1	-	-	-	-	584	-				
Stage 2	-	-	-	-	672	-				
Approach										
EB										
WB										
NB										
HCM Control Delay, s										
10.8										
HCM LOS										
B										
Minor Lane/Major Mvmt										
NBLn1										
EBT										
EBR										
WBL										
WBT										
Capacity (veh/h)	674	-	-	1073	-	-				
HCM Lane V/C Ratio	0.076	-	-	0.043	-	-				
HCM Control Delay (s)	10.8	-	-	8.5	0.2	-				
HCM Lane LOS	B	-	-	A	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	-				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection										
Intersection Delay, s/veh										8.8
Intersection LOS										A
Movement										
Traffic Vol, veh/h	0	35	4	38	0	3	5	5	0	38
Future Vol, veh/h	0	35	4	38	0	3	5	5	0	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	4	41	0	3	5	5	0	41
Number of Lanes	0	0	1	0	0	0	1	0	0	2
Approach										
EB	EB	WB	WB	EB	NB	NB	NB	NB	NB	NB
Opposing Approach										
Opposing Lanes	1				1					2
Conflicting Approach Left										
Conflicting Lanes Left	2				2					1
Conflicting Approach Right										
Conflicting Lanes Right	2				2					1
HCM Control Delay										
	8.6				8.2					8.9
HCM LOS										
	A				A					A
Lane										
NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2					
Vol Left, %	30%	0%	45%	23%	6%	0%				
Vol Thru, %	70%	93%	5%	38%	94%	85%				
Vol Right, %	0%	7%	49%	38%	0%	15%				
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	127	96	77	13	125	139				
LT Vol	38	0	35	3	7	0				
Through Vol	89	89	4	5	118	118				
RT Vol	0	7	38	5	0	21				
Lane Flow Rate	138	104	84	14	135	151				
Geometry Grp	7	7	2	2	7	7				
Degree of Util (X)	0.198	0.144	0.115	0.02	0.189	0.204				
Departure Headway (Hd)	5.182	4.979	4.926	5.055	5.024	4.889				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes				
Cap	693	719	727	706	715	735				
Service Time	2.914	2.712	2.961	3.1	2.755	2.62				
HCM Lane V/C Ratio	0.199	0.145	0.116	0.02	0.189	0.205				
HCM Control Delay										
	9.2	8.6	8.6	8.2	8.9	8.9				
HCM Lane LOS										
	A	A	A	A	A	A				
HCM 95th-tile Q										
	0.7	0.5	0.4	0.1	0.7	0.8				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR		
Traffic Vol, veh/h	0	7	235	21		
Future Vol, veh/h	0	7	235	21		
Peak Hour Factor	0.92	0.92	0.92	0.92		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	8	255	23		
Number of Lanes	0	0	2	0		
Approach						
Opposing Approach	SB					
Opposing Lanes	NB					
Conflicting Approach Left	WB					
Conflicting Lanes Left	1					
Conflicting Approach Right	EB					
Conflicting Lanes Right	1					
HCM Control Delay	8.9					
HCM LOS	A					
Lane						

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh 9.7																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	42	63	0	18	51	43	0	47	130	29	0	45	161	33
Future Vol, veh/h	0	42	42	63	0	18	51	43	0	47	130	29	0	45	161	33
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	47	70	0	20	57	48	0	52	144	32	0	50	179	37
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		NB		SB									
Opposing Approach	WB		EB		SB		NB									
Opposing Lanes	1		1		2		2									
Conflicting Approach Left	SB		NB		WB		WB									
Conflicting Lanes Left	2		2		1		1									
Conflicting Approach Right	NB		SB		WB		EB									
Conflicting Lanes Right	2		2		1		1									
HCM Control Delay	9.8		9.5		9.7		9.8									
HCM LOS	A		A		A		A									
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	42%		0%		29%		16%		36%		0%					
Vol Thru, %	58%		69%		29%		46%		64%		71%					
Vol Right, %	0%		31%		43%		38%		0%		29%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	112		94		147		112		126		114					
LT Vol	47		0		42		18		45		0					
Through Vol	65		65		42		51		81		81					
RT Vol	0		29		63		43		0		33					
Lane Flow Rate	124		104		163		124		139		126					
Geometry Grp	7		7		2		2		7		7					
Degree of Util (X)	0.203		0.158		0.232		0.182		0.225		0.19					
Departure Headway (Hd)	5.875		5.444		5.229		5.272		5.8		5.413					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	614		661		691		682		622		666					
Service Time	3.588		3.157		3.229		3.295		3.512		3.125					
HCM Lane V/C Ratio	0.202		0.157		0.236		0.182		0.223		0.189					
HCM Control Delay	10.1		9.2		9.8		9.5		10.2		9.4					
HCM Lane LOS	B		A		A		A		B		A					
HCM 95th-ile Q	0.8		0.6		0.9		0.7		0.9		0.7					

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing + Full Occupancy Saturday Peak Hour 02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	8.9											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	71	94
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	71	94
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	73	97
Number of Lanes	0	0	1	0	0	1	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	8.7				9.3				8.6			
HCM LOS	A				A				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	0%	85%	0%	44%	0%	44%	0%
Vol Thru, %	92%	27%	75%	15%	0%	56%	96%	0%	56%	96%
Vol Right, %	0%	73%	20%	0%	100%	0%	4%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	130	20	135	69	81	47	0	47	0
LT Vol	3	0	1	115	0	36	0	0	36	0
Through Vol	36	36	15	20	0	45	45	0	45	45
RT Vol	0	94	4	0	69	0	2	0	69	0
Lane Flow Rate	40	134	21	139	71	84	48	0	48	0
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.059	0.177	0.031	0.221	0.091	0.129	0.071	0.091	0.129	0.071
Departure Headway (Hd)	5.33	4.779	5.453	5.729	4.599	5.54	5.266	4.599	5.54	5.266
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	749	654	626	777	646	676	777	646	676
Service Time	3.069	2.518	3.509	3.472	2.341	3.281	3.027	2.341	3.281	3.027
HCM Lane V/C Ratio	0.06	0.179	0.032	0.222	0.091	0.13	0.071	0.091	0.13	0.071
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4	7.8	9.1	8.4
HCM Lane LOS	A	A	A	B	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.6	0.1	0.8	0.3	0.4	0.2	0.3	0.4	0.2

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing + Full Occupancy Saturday Peak Hour 02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	8.9											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	71	94
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	71	94
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	73	97
Number of Lanes	0	0	1	0	0	1	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	8.7				9.3				8.6			
HCM LOS	A				A				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	0%	85%	0%	44%	0%	44%	0%
Vol Thru, %	92%	27%	75%	15%	0%	56%	96%	0%	56%	96%
Vol Right, %	0%	73%	20%	0%	100%	0%	4%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	130	20	135	69	81	47	0	47	0
LT Vol	3	0	1	115	0	36	0	0	36	0
Through Vol	36	36	15	20	0	45	45	0	45	45
RT Vol	0	94	4	0	69	0	2	0	69	0
Lane Flow Rate	40	134	21	139	71	84	48	0	48	0
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.059	0.177	0.031	0.221	0.091	0.129	0.071	0.091	0.129	0.071
Departure Headway (Hd)	5.33	4.779	5.453	5.729	4.599	5.54	5.266	4.599	5.54	5.266
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	749	654	626	777	646	676	777	646	676
Service Time	3.069	2.518	3.509	3.472	2.341	3.281	3.027	2.341	3.281	3.027
HCM Lane V/C Ratio	0.06	0.179	0.032	0.222	0.091	0.13	0.071	0.091	0.13	0.071
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4	7.8	9.1	8.4
HCM Lane LOS	A	A	A	B	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.6	0.1	0.8	0.3	0.4	0.2	0.3	0.4	0.2

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol. veh/h	0	82	16	0	10	118	0	26	17			
Future Vol. veh/h	0	82	16	0	10	118	0	26	17			
Peak Hour Fador	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	90	18	0	11	130	0	29	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EB			WB			NB					
Opposing Approach	WB			EB			NB					
Opposing Lanes	1			1			0					
Conflicting Approach Left				NB			EB					
Conflicting Lanes Left	0			1			1					
Conflicting Approach Right	NB						WB					
Conflicting Lanes Right	1			0			1					
HCM Control Delay	7.6			8			7.6					
HCM LOS	A			A			A					
Lane	NBLn1			EBLn1			WBLn1					
Vol Left, %	60%			0%			8%					
Vol Thru, %	0%			84%			92%					
Vol Right, %	40%			16%			0%					
Sign Control	Stop			Stop			Stop					
Traffic Vol by Lane	43			98			128					
LT Vol	26			0			10					
Through Vol	0			82			118					
RT Vol	17			16			0					
Lane Flow Rate	47			108			141					
Geometry Grp	1			1			1					
Degree of Util (X)	0.057			0.12			0.161					
Departure Headway (Hd)	4.353			4.025			4.114					
Convergence, Y/N	Yes			Yes			Yes					
Cap	828			883			866					
Service Time	2.353			2.086			2.165					
HCM Lane V/C Ratio	0.057			0.122			0.163					
HCM Control Delay	7.6			7.6			8					
HCM Lane LOS	A			A			A					
HCM 95th-tile Q	0.2			0.4			0.6					

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh 18																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96	60	24
Future Vol, veh/h	0	21	100	36	0	214	93	106	0	43	64	215	0	96	60	24
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	106	38	0	228	99	113	0	46	68	229	0	102	64	26
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB			WB			NB			SB						
Opposing Approach	WB			EB			SB			NB						
Opposing Lanes	1			2			1			1						
Conflicting Approach Left	SB			NB			EB			WB						
Conflicting Lanes Left	1			1			2			1						
Conflicting Approach Right	NB			SB			WB			EB						
Conflicting Lanes Right	1			1			1			2						
HCM Control Delay	11.1			24			16.3			13.2						
HCM LOS	B			C			C			B						
Lane	NBLn1			EBLn1			WBLn1			SBLn1						
Vol Left, %	13%			30%			0%			52%						
Vol Thru, %	20%			70%			58%			23%						
Vol Right, %	67%			0%			42%			26%						
Sign Control	Stop			Stop			Stop			Stop						
Traffic Vol by Lane	322			71			86			413						
LT Vol	43			21			0			214						
Through Vol	64			50			50			93						
RT Vol	215			0			36			106						
Lane Flow Rate	343			76			91			439						
Geometry Grp	2			7			5			2						
Degree of Util (X)	0.561			0.151			0.172			0.735						
Departure Headway (Hd)	5.894			7.205			6.753			6.026						
Convergence, Y/N	Yes			Yes			Yes			Yes						
Cap	610			497			530			598						
Service Time	3.941			4.963			4.511			4.071						
HCM Lane V/C Ratio	0.562			0.153			0.172			0.734						
HCM Control Delay	16.3			11.3			10.9			24						
HCM Lane LOS	C			B			B			C						
HCM 95th-tile Q	3.5			0.5			0.6			6.3						

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 16												
Intersection LOS C												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	132	394	0	69	101	0	339	52			
Future Vol, veh/h	0	132	394	0	69	101	0	339	52			
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	136	406	0	71	104	0	349	54			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB			NB			SB					
Opposing Approach				SB			NB					
Opposing Lanes	0			1			1					
Conflicting Approach Left	NB						WB					
Conflicting Lanes Left	1			0			2					
Conflicting Approach Right	SB			WB								
Conflicting Lanes Right	1			2			0					
HCM Control Delay	15.4			10.9			18.9					
HCM LOS	C			B			C					
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0% 100% 0% 87%											
Vol Thru, %	41% 0% 0% 13%											
Vol Right, %	59% 0% 100% 0%											
Sign Control	Stop Stop Stop											
Traffic Vol by Lane	170 132 394 391											
LT Vol	0 132 0 339											
Through Vol	69 0 0 52											
RT Vol	101 0 394 0											
Lane Flow Rate	175 136 406 403											
Geometry Grp	2 7 7 2											
Degree of Util (X)	0.275 0.253 0.617 0.647											
Departure Headway (Hd)	5.656 6.685 5.468 5.777											
Convergence, Y/N	Yes Yes Yes Yes											
Cap	633 538 658 625											
Service Time	3.709 4.429 3.212 3.819											
HCM Lane V/C Ratio	0.276 0.253 0.617 0.645											
HCM Control Delay	10.9 11.7 16.7 18.9											
HCM Lane LOS	B B C C											
HCM 95th-ile Q	1.1 1 4.3 4.7											

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection												
Int Delay, s/veh						2.4						
Movement												
Traffic Vol, veh/h	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	99	0	44	123	5	39						
Future Vol, veh/h	99	0	44	123	5	39						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	92	92	92	92	92	92						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	108	0	48	134	5	42						
Major/Minor	Major1		Major2		Minor1							
Conflicting Flow All	0	0	108	0	337	108						
Stage 1	-	-	-	-	108	-						
Stage 2	-	-	-	-	229	-						
Critical Hdwy	-	-	4.12	-	6.42	6.22						
Critical Hdwy Stg 1	-	-	-	-	5.42	-						
Critical Hdwy Stg 2	-	-	-	-	5.42	-						
Follow-up Hdwy	-	-	2.218	-	3.518	3.318						
Pot Cap-1 Maneuver	-	-	1483	-	658	946						
Stage 1	-	-	-	-	916	-						
Stage 2	-	-	-	-	809	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1483	-	635	946						
Mov Cap-2 Maneuver	-	-	-	-	635	-						
Stage 1	-	-	-	-	916	-						
Stage 2	-	-	-	-	781	-						
Approach	EB		WB		NB							
HCM Control Delay, s	0		2		9.2							
HCM LOS					A							
Minor Lane/Major Mvmt	NBLn1		EBT		WBL		WBT					
Capacity (veh/h)	896		-		1483		-					
HCM Lane V/C Ratio	0.053		-		0.032		-					
HCM Control Delay (s)	9.2		-		7.5		0					
HCM Lane LOS	A		-		A		A					
HCM 95th %ile Q(veh)	0.2		-		0.1		-					

HCM 2010 Signalized Intersection Summary

12/1/2016

HCM 2010 Signalized Intersection Summary

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	87	28	16	696	44	533	14	1058	166	438	1455	72
Future Volume (veh/h)	87	28	16	696	44	533	14	1058	166	438	1455	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	96	31	18	799	0	0	15	1163	182	481	1599	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	861	0	384	30	1234	384	704	3250	1012
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.27	0.43	0.43
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/hln	96	0	49	799	0	0	15	1163	182	481	1599	79
Grp Sat Flow(s), veh/hln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.7	10.8	26.8	25.1	3.2
Cycle Q Clear(g.c), s	5.5	0.0	3.0	24.2	0.0	0.0	0.9	24.7	10.8	26.8	25.1	3.2
Prop In Lane	1.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	861	0	384	30	1234	384	704	3250	1012
V/C Ratio(X)	1.08	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.68	0.49	0.08
Avail Cap(c.a), veh/h	89	0	87	861	0	384	30	1234	384	704	3250	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.6	34.2	18.5	12.3
Incr Delay (d2), s/veh	119.6	0.0	7.8	15.4	0.0	0.0	12.7	15.1	4.1	2.0	0.4	0.1
Initial Q Delay(d3), s/veh	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	5.6	0.0	1.6	13.7	0.0	0.0	0.6	13.2	5.2	13.5	11.9	1.5
LnGrp Delay(d), s/veh	172.3	0.0	58.9	56.1	0.0	0.0	66.3	55.9	39.8	36.2	18.9	12.4
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	B	B
Approach Vol, veh/h	145			799			1360				2159	
Approach Delay, s/veh	134.0			56.1			53.9				22.5	
Approach LOS	F			E			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	49.4	32.5		10.2	5.8	76.1						
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8						
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7						
Max Q Clear Time (g_c+I), s	28.8	26.7		7.5	2.9	27.1						
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	14.6						
Intersection Summary												
HCM 2010 Ctrl Delay				41.7								
HCM 2010 LOS				D								
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	10	11	5	367	53	561	110	1211	348	335	1581	465
Future Volume (veh/h)	10	11	5	367	53	561	110	1211	348	335	1581	465
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	12	6	408	0	662	122	1346	0	372	1757	517
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	47	50	42	891	0	795	527	1855	578	306	1872	583
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.31	0.73	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/hln	11	12	6	408	0	662	122	1346	0	372	1757	517
Grp Sat Flow(s), veh/hln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g.s), s	0.7	0.7	0.4	10.7	0.0	21.8	2.9	16.7	0.0	19.0	36.7	33.7
Cycle Q Clear(g.c), s	0.7	0.7	0.4	10.7	0.0	21.8	2.9	16.7	0.0	19.0	36.7	33.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	47	50	42	891	0	795	527	1855	578	306	1872	583
V/C Ratio(X)	0.23	0.24	0.14	0.46	0.00	0.83	0.23	0.73	0.00	1.21	0.94	0.89
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	527	1855	578	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.58	0.58	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.4	52.3	34.8	0.0	39.0	33.3	11.7	0.0	45.5	33.5	32.6
Incr Delay (d2), s/veh	2.5	2.5	1.5	0.4	0.0	3.8	0.1	1.5	0.0	12.5	10.6	17.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	0.4	0.2	0.2	5.3	0.0	9.9	1.4	7.7	0.0	19.7	18.9	17.5
LnGrp Delay(d), s/veh	54.9	54.9	53.8	35.2	0.0	42.8	33.5	13.2	0.0	168.0	44.1	50.5
LnGrp LOS	D	D	D	D	D	C	C	B	F	D	D	D
Approach Vol, veh/h	29			1070			1468			2646		
Approach Delay, s/veh	54.7			39.9			14.9			62.8		
Approach LOS	D			D			B			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	43.0	45.9		7.6	22.6	46.3						
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8						
Max Green Setting (Gmax), s	26.7	* 26.7		* 5.0	5.0	* 41						
Max Q Clear Time (g_c+I), s	18.7	26.7		2.7	4.9	38.7				23.8		
Green Ext Time (p_c), s	0.0	5.1		0.0	0.0	1.8				3.9		
Intersection Summary												
HCM 2010 Ctrl Delay				44.5								
HCM 2010 LOS				D								
Notes												

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Health Club within the Shops at Rossmore
Existing (2016) Full Occupancy Plus Project
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.816
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted
Rights: Ovl Include Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1475 305 304 1679 0 0 0 0 702 0 614
Growth Adj: 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 1475 305 304 1679 0 0 0 0 702 0 614
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
PHF Volume: 0 1624 336 335 1849 0 0 0 0 773 0 676
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1624 336 335 1849 0 0 0 0 773 0 676
PCE Adj: 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
FinalVolume: 0 1624 336 335 1849 0 0 0 0 773 0 676
OvlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00
Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.32 0.20 0.10 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.40
OvlAdjV/S: 0.00 0.32 0.20 0.10 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.40
Crit Moves: ****

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Health Club within the Shops at Rossmore
Existing (2016) Full Occupancy Plus Project
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.634
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected
Rights: Include Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 378 1670 47 4 1333 46 106 3 568 65 13 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 378 1670 47 4 1333 46 106 3 568 65 13 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88
PHF Volume: 430 1900 53 5 1516 52 121 3 646 74 15 2
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 430 1900 53 5 1516 52 121 3 646 74 15 2
PCE Adj: 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
FinalVolume: 430 1900 53 5 1516 52 121 3 646 74 15 2
OvlAdjVol: 216

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 2.92 0.08 1.00 2.90 0.10 0.97 0.03 2.00 1.63 0.32 0.05
Final Sat.: 3400 4960 140 1700 4930 170 1653 47 3400 2763 552 85

Capacity Analysis Module:

Vol/Sat: 0.13 0.38 0.38 0.00 0.31 0.31 0.07 0.07 0.19 0.03 0.03 0.03
OvlAdjV/S: 0.13 0.38 0.38 0.00 0.31 0.31 0.07 0.07 0.19 0.03 0.03 0.03
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy Plus Project
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.503

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 34 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 56 1638 31 21 1367 25 21 4 14 24 2 21

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: 56 1638 31 21 1367 25 21 4 14 24 2 21

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90

PHF Volume: 62 1812 34 23 1512 28 23 4 15 27 2 23

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 62 1812 34 23 1512 28 23 4 15 27 2 23

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

Final Volume: 62 1812 34 23 1512 28 23 4 15 27 2 23

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.94 0.06 1.00 2.95 0.05 1.00 0.22 0.78 1.00 0.09 0.91

Final Sat.: 1700 5005 95 1700 5008 92 1700 378 1322 1700 148 1552

Capacity Analysis Module:

Vol/Sat: 0.04 0.36 0.01 0.30 0.30 0.01 0.01 0.01 0.02 0.01 0.01 0.01

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy Plus Project
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 36 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 76 1599 15 19 1372 81 88 7 89 17 10 39

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: 76 1599 15 19 1372 81 88 7 89 17 10 39

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92

PHF Volume: 83 1748 16 21 1499 89 96 8 97 19 11 43

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 83 1748 16 21 1499 89 96 8 97 19 11 43

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

Final Volume: 83 1748 16 21 1499 89 96 8 97 19 11 43

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.97 0.03 1.00 2.83 0.17 1.00 0.07 0.93 1.00 0.20 0.80

Final Sat.: 1700 5053 47 1700 4816 284 1700 124 1576 1700 347 1353

Capacity Analysis Module:

Vol/Sat: 0.05 0.35 0.35 0.01 0.31 0.31 0.06 0.06 0.06 0.01 0.03 0.03

Crit Moves: ****

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.733
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - I - R L - I - R L - I - R L - I - R
Control: Protected Protected Protected Permitted Permitted Permitted Permitted
Rights: Include Include Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 0 1
Volume Module:
Base Vol: 146 1532 26 14 1341 155 270 18 97 70 22 23
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: 146 1532 26 14 1341 155 270 18 97 70 22 23
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94
PHF Volume: 156 1639 28 15 1434 166 289 19 104 75 24 25
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 156 1639 28 15 1434 166 289 19 104 75 24 25
M/F Adj: 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: 156 1639 28 15 1434 166 289 19 104 75 24 25
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.95 0.05 1.00 2.69 0.31 1.00 0.16 0.84 0.76 0.24 1.00
Final Sat.: 1700 5015 85 1700 4572 528 1700 266 1434 1293 407 1700
Capacity Analysis Module:
Vol/Sat: 0.09 0.33 0.33 0.01 0.31 0.31 0.17 0.07 0.07 0.04 0.06 0.01
Crit Moves: ****

HCM 2010 TWSC
8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection										1.3	
Int Delay, s/veh											
Movement											
Traffic Vol, veh/h											
Future Vol, veh/h											
Conflicting Peds, #/hr											
Sign Control											
RT Channelized											
Storage Length											
Veh in Median Storage, #											
Grade, %											
Peak Hour Factor											
Heavy Vehicles, %											
Mvmt Flow											
Major/Minor											
Conflicting Flow All											
Stage 1											
Stage 2											
Critical Hdwy											
Critical Hdwy Stg 1											
Critical Hdwy Stg 2											
Follow-up Hdwy											
Pct Cap-1 Maneuver											
Stage 1											
Stage 2											
Platoon blocked, %											
Mov Cap-1 Maneuver											
Mov Cap-2 Maneuver											
Stage 1											
Stage 2											
Approach											
HCM Control Delay, s											
HCM LOS											
Minor Lane/Major Mvmt											
Capacity (veh/h)											
HCM Lane V/C Ratio											
HCM Control Delay (s)											
HCM Lane LOS											
HCM 95th %ile Q(veh)											

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh													11.4
Intersection LOS													B
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	54	7	126	0	2	4	1	0	108	168	2	
Future Vol, veh/h	0	54	7	126	0	2	4	1	0	108	168	2	
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	68	9	159	0	3	5	1	0	137	213	3	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	
Approach													
Opposing Approach	EB		WB		WB		EB		NB		SB		
Opposing Lanes	1		1		1		1		2		2		
Conflicting Approach Left	SB		NB		NB		EB		EB		EB		
Conflicting Lanes Left	2		2		2		1		1		1		
Conflicting Approach Right	NB		SB		SB		WB		WB		WB		
Conflicting Lanes Right	2		2		2		1		1		1		
HCM Control Delay	11.4		9.4		9.4		11.8		11.8		B		
HCM LOS	B		A		A		B		B		B		
Lane													
NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2								
Vol Left, %	56%	0%	29%	29%	0%	0%							
Vol Thru, %	44%	98%	4%	57%	100%	78%							
Vol Right, %	0%	2%	67%	14%	0%	22%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	192	86	187	7	191	123							
LT Vol	108	0	54	2	0	0							
Through Vol	84	84	7	4	191	96							
RT Vol	0	2	126	1	0	27							
Lane Flow Rate	243	109	237	9	242	155							
Geometry Grp	7	7	2	2	7	7							
Degree of Util (X)	0.407	0.173	0.355	0.015	0.384	0.239							
Departure Headway (Hd)	6.027	5.726	5.4	6.239	5.707	5.551							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	598	627	668	573	632	647							
Service Time	3.754	3.453	3.431	4.287	3.434	3.278							
HCM Lane V/C Ratio	0.406	0.174	0.355	0.016	0.383	0.24							
HCM Control Delay	12.8	9.7	11.4	9.4	12	10							
HCM Lane LOS	B	A	B	A	B	A							
HCM 95th-tile Q	2	0.6	1.6	0	1.8	0.9							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection															
Intersection Delay, s/veh															
Intersection LOS															
Movement															
	SBU	SBL	SBT	SBR		SBU	SBL	SBT	SBR		SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	0	287	27		0	0	287	27		0	0	287	27	
Future Vol, veh/h	0	0	287	27		0	0	287	27		0	0	287	27	
Peak Hour Factor	0.92	0.79	0.79	0.79		0.92	0.79	0.79	0.79		0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2		2	2	2	2		2	2	2	2	
Mvmt Flow	0	0	363	34		0	0	363	34		0	0	363	34	
Number of Lanes	0	0	2	0		0	0	2	0		0	0	2	0	
Approach															
Opposing Approach		SB		SB		NB		NB		WB		WB		WB	
Opposing Lanes		2		2		2		2		1		1		1	
Conflicting Approach Left		WB		WB		WB		WB		WB		WB		WB	
Conflicting Lanes Left		1		1		1		1		1		1		1	
Conflicting Approach Right		EB		EB		EB		EB		EB		EB		EB	
Conflicting Lanes Right		1		1		1		1		1		1		1	
HCM Control Delay		11.2		11.2		11.2		11.2		11.2		11.2		11.2	
HCM LOS		B		B		B		B		B		B		B	
Lane															

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection																	
Intersection Delay, s/veh		12															
Intersection LOS		B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	97	62	88	0	14	43	32	0	39	181	22	0	25	203	65	
Future Vol, veh/h	0	97	62	88	0	14	43	32	0	39	181	22	0	25	203	65	
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	117	75	106	0	17	52	39	0	47	218	27	0	30	245	78	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		SB		NB								SB		
Opposing Lanes	1		1		2		2								NB		
Conflicting Approach Left	SB		NB		EB		WB								WB		
Conflicting Lanes Left	2		2		1		1								1		
Conflicting Approach Right	NB		SB		WB		EB								EB		
Conflicting Lanes Right	2		2		1		1								1		
HCM Control Delay	13.8		10.5		11.3		11.5								11.5		
HCM LOS	B		B		B		B								B		
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2		
Vol Left, %	30%		0%		39%		16%		20%		0%						
Vol Thru, %	70%		80%		25%		48%		80%		61%						
Vol Right, %	0%		20%		36%		36%		0%		39%						
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop						
Traffic Vol by Lane	130		113		247		89		127		167						
LT Vol	39		0		97		14		25		0						
Through Vol	91		91		62		43		102		102						
RT Vol	0		22		88		32		0		65						
Lane Flow Rate	156		136		298		107		152		201						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.279		0.231		0.471		0.18		0.267		0.33						
Departure Headway (Hd)	6.439		6.146		5.694		6.058		6.309		5.931						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	555		581		631		589		567		604						
Service Time	4.2		3.907		3.751		4.134		4.067		3.688						
HCM Lane V/C Ratio	0.281		0.234		0.472		0.182		0.268		0.333						
HCM Control Delay	11.7		10.8		13.8		10.5		11.4		11.6						
HCM Lane LOS	B		B		B		B		B		B						
HCM 95th-tile Q	1.1		0.9		2.5		0.7		1.1		1.4						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing Full Occupancy + Project AM Peak Hour
02/22/2017

Intersection													
Intersection Delay, s/veh		12.8											
Intersection LOS		B											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	5	24	2	0	135	18	146	0	0	140	219	
Future Vol, veh/h	0	5	24	2	0	135	18	146	0	0	140	219	
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	6	30	3	0	171	23	185	0	0	177	277	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													NB
Opposing Approach	WB		EB		WB		EB				SB		
Opposing Lanes	2		1		1		2				2		
Conflicting Approach Left	SB		NB		NB		WB				EB		
Conflicting Lanes Left	2		2		2		2				1		
Conflicting Approach Right	NB		SB		SB		WB				WB		
Conflicting Lanes Right	2		2		2		2				2		
HCM Control Delay	10.9		12.5		12.5		13.6				13.6		
HCM LOS	B		B		B		B				B		
Lane													NBLn1
Vol Left, %	0%		0%		16%		88%		0%		53%		0%
Vol Thru, %	100%		18%		77%		12%		0%		47%		97%
Vol Right, %	0%		82%		6%		0%		100%		0%		3%
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Vol by Lane	93		266		31		153		146		141		69
LT Vol	0		0		5		135		0		74		0
Through Vol	93		47		24		18		0		67		67
RT Vol	0		219		2		0		146		0		2
Lane Flow Rate	118		336		39		194		185		178		87
Geometry Grp	7		7		6		7		7		7		7
Degree of Util (X)	0.205		0.529		0.079		0.376		0.299		0.332		0.155
Departure Headway (Hd)	6.244		5.658		7.21		6.993		5.826		6.726		6.437
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes
Cap	573		636		494		515		615		534		555
Service Time	4		3.413		5.292		4.74		3.582		4.491		4.202
HCM Lane V/C Ratio	0.206		0.528		0.079		0.377		0.301		0.333		0.157
HCM Control Delay	10.6		14.6		10.9		13.9		11.1		12.8		10.4
HCM Lane LOS	B		B		B		B		B		B		B
HCM 95th-ile Q	0.8		3.1		0.3		1.7		1.3		1.4		0.5

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	74	133	2	
Future Vol, veh/h	0	74	133	2	
Peak Hour Factor	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	94	168	3	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	12				
HCM LOS	B				

Intersection											
Intersection Delay, s/veh 7.7											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	99	10	0	6	86	0	7	12		
Future Vol, veh/h	0	99	10	0	6	86	0	7	12		
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	116	12	0	7	101	0	8	14		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		WB		NB				
Opposing Approach	WB		EB		EB		0				
Opposing Lanes	1		1		1		0				
Conflicting Approach Left			NB		NB		EB				
Conflicting Lanes Left	0		1		1		1				
Conflicting Approach Right	NB						WB				
Conflicting Lanes Right	1		0		0		1				
HCM Control Delay	7.7		7.7		7.7		7.2				
HCM LOS	A		A		A		A				
Lane	NBLn1EBLn1WBLn1										
Vol Left, %	37%			0%			7%				
Vol Thru, %	0%			91%			93%				
Vol Right, %	63%			9%			0%				
Sign Control	Stop			Stop			Stop				
Traffic Vol by Lane	19			109			92				
LT Vol	7			0			6				
Through Vol	0			99			86				
RT Vol	12			10			0				
Lane Flow Rate	22			128			108				
Geometry Grp	1			1			1				
Degree of Util (X)	0.026			0.142			0.123				
Departure Headway (Hd)	4.133			3.999			4.082				
Convergence, Y/N	Yes			Yes			Yes				
Cap	871			894			876				
Service Time	2.133			2.034			2.118				
HCM Lane V/C Ratio	0.025			0.143			0.123				
HCM Control Delay	7.2			7.7			7.7				
HCM Lane LOS	A			A			A				
HCM 95th-tile Q	0.1			0.5			0.4				

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																				
Intersection Delay, s/veh 8.9																				
Intersection LOS A																				
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR				
Traffic Vol. veh/h	0	35	121	14	0	73	81	51	0	13	16	31	0	59	16	15				
Future Vol. veh/h	0	35	121	14	0	73	81	51	0	13	16	31	0	59	16	15				
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	38	130	15	0	78	87	55	0	14	17	33	0	63	17	16				
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1				
Approach	EB				WB				NB				SB							
Opposing Approach	WB				EB				SB				NB							
Opposing Lanes	1				2				1				1							
Conflicting Approach Left	SB				NB				EB				WB							
Conflicting Lanes Left	1				1				2				1							
Conflicting Approach Right	NB				SB				WB				EB							
Conflicting Lanes Right	1				1				1				2							
HCM Control Delay	8.7				9.4				8.2				8.8							
HCM LOS	A				A				A				A							
Lane	NBLn1				EBLn1				EBLn2				WBLn1				SBLn1			
Vol Left, %	22%				37%				0%				36%				66%			
Vol Thru, %	27%				63%				81%				40%				18%			
Vol Right, %	52%				0%				19%				25%				17%			
Sign Control	Stop				Stop				Stop				Stop				Stop			
Traffic Vol by Lane	60				96				75				205				90			
LT Vol	13				35				0				73				59			
Through Vol	16				61				61				81				16			
RT Vol	31				0				14				51				15			
Lane Flow Rate	65				103				80				220				97			
Geometry Grp	2				7				7				5				2			
Degree of Util (X)	0.085				0.151				0.111				0.28				0.134			
Departure Headway (Hd)	4.744				5.301				4.984				4.573				4.991			
Convergence, Y/N	Yes				Yes				Yes				Yes				Yes			
Cap	752				676				718				785				716			
Service Time	2.79				3.039				2.722				2.608				3.035			
HCM Lane V/C Ratio	0.086				0.152				0.111				0.28				0.135			
HCM Control Delay	8.2				9				8.3				9.4				8.8			
HCM Lane LOS	A				A				A				A				A			
HCM 95th-ile Q	0.3				0.5				0.4				1.1				0.5			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15			
Future Vol, veh/h	0	71	37	0	16	32	0	28	15			
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	82	43	0	18	37	0	32	17			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	8.1				7.1				7.7			
HCM LOS	A				A				A			
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0% 100% 0% 65%											
Vol Thru, %	33% 0% 0% 35%											
Vol Right, %	67% 0% 100% 0%											
Sign Control	Stop Stop Stop Stop											
Traffic Vol by Lane	48 71 37 43											
LT Vol	0 71 0 28											
Through Vol	16 0 0 15											
RT Vol	32 0 37 0											
Lane Flow Rate	55 82 43 49											
Geometry Grp	2 7 7 2											
Degree of Util (X)	0.06 0.118 0.047 0.061											
Departure Headway (Hd)	3.887 5.216 4.014 4.428											
Convergence, Y/N	Yes Yes Yes Yes											
Cap	924 685 885 814											
Service Time	1.899 2.97 1.768 2.43											
HCM Lane V/C Ratio	0.06 0.12 0.049 0.06											
HCM Control Delay	7.1 8.7 7 7.7											
HCM Lane LOS	A A A A											
HCM 95th-Pile Q	0.2 0.4 0.1 0.2											

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection									
2									
Int Delay, s/veh									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	110	0	32	95	0	34			
Future Vol, veh/h	110	0	32	95	0	34			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	89	89	89	89	89	89			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	124	0	36	107	0	38			
Major/Minor	Major1	Major2	Minor1						
Conflicting Flow All	0	0	124	0	303	124			
Stage 1	-	-	-	-	124	-			
Stage 2	-	-	-	-	179	-			
Critical Hwy	-	-	4.12	-	6.42	6.22			
Critical Hwy Stg 1	-	-	-	-	5.42	-			
Critical Hwy Stg 2	-	-	-	-	5.42	-			
Follow-up Hwy	-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver	-	-	1463	-	689	927			
Stage 1	-	-	-	-	902	-			
Stage 2	-	-	-	-	852	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1463	-	671	927			
Mov Cap-2 Maneuver	-	-	-	-	671	-			
Stage 1	-	-	-	-	902	-			
Stage 2	-	-	-	-	830	-			
Approach	EB	WB	NB						
HCM Control Delay, s	0	1.9	9.1						
HCM LOS	A								
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	927	-	-	1463	-				
HCM Lane V/C Ratio	0.041	-	-	0.025	-				
HCM Control Delay (s)	9.1	-	-	7.5	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-				

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4T		4			4	4T	4	4	4T	4
Traffic Volume (veh/h)	166	30	20	321	35	529	11	1457	361	529	1074	127
Future Volume (veh/h)	166	30	20	321	35	529	11	1457	361	529	1074	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qtb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hIn	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	171	31	21	357	0	0	11	1502	372	545	1107	131
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	416	0	186	23	1593	496	582	3279	1021
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.66	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	171	0	52	357	0	0	11	1502	372	545	1107	131
Grp Sat Flow(s),veh/hIn	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.7	23.2	30.1	0.0	0.0
Cycle Q Clear(g, c), s	7.9	0.0	3.1	10.9	0.0	0.0	0.7	31.7	23.2	30.1	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	416	0	186	23	1593	496	582	3279	1021
V/C Ratio(X)	1.34	0.00	0.42	0.86	0.00	0.00	0.48	0.94	0.75	0.94	0.34	0.13
Avail Cap(c.a), veh/h	127	0	125	426	0	190	81	1600	498	582	3279	1021
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	33.9	17.9	0.0	0.0
Incr Delay (d2), s/veh	197.2	0.0	2.2	15.6	0.0	0.0	14.6	12.5	10.0	20.8	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/hIn	10.8	0.0	1.6	6.2	0.0	0.0	0.4	16.6	11.5	17.6	0.1	0.1
LnGrp Delay(d),s/veh	248.3	0.0	51.0	63.2	0.0	0.0	68.5	49.3	43.9	38.7	0.2	0.2
LnGrp LOS	F	D	E	E	E	E	D	D	D	D	A	A
Approach Vol, veh/h	223	357	1885									
Approach Delay, s/veh	202.3	63.2	48.3									
Approach LOS	F	E	D									
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	41.9	40.3	12.6	5.4	76.7	18.7						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8						
Max Green Setting (Gmax), s	34.0	* 35	* 7.9	5.0	63.6	13.2						
Max Q Clear Time (g_c+I1), s	32.1	33.7	9.9	2.7	2.0	12.9						
Green Ext Time (p_c), s	0.5	0.8	0.0	0.0	13.6	0.1						
Intersection Summary												
HCM 2010 Ctrl Delay	42.4											
HCM 2010 LOS	D											
Notes												

12/1/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	79	72	87	195	15	683	41	1560	555	323	1460	373
Future Volume (veh/h)	79	72	87	195	15	683	41	1560	555	323	1460	373
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	81	74	90	201	0	714	42	1608	0	333	1505	385
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	930	0	830	491	1890	588	242	1775	553
Arrive On Green	0.05	0.05	0.05	0.26	0.00	0.26	0.29	0.74	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	81	74	90	201	0	714	42	1608	0	333	1505	385
Grp Sat Flow(s), veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	5.0	4.3	5.0	4.9	0.0	23.6	1.0	24.3	0.0	15.0	30.1	23.0
Cycle Q Clear(g.s), s	5.0	4.3	5.0	4.9	0.0	23.6	1.0	24.3	0.0	15.0	30.1	23.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	930	0	830	491	1890	588	242	1775	553
V/C Ratio(X)	1.00	0.87	1.25	0.22	0.00	0.86	0.09	0.85	0.00	1.38	0.85	0.70
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	491	1890	588	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.53	0.53	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.2	52.5	31.8	0.0	38.7	34.1	12.0	0.0	47.5	33.1	30.8
Incr Delay (d2), s/veh	101.5	58.3	187.7	0.1	0.0	5.3	0.0	2.8	0.0	193.3	5.2	7.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	7	3.6	5.9	2.4	0.0	10.9	0.5	11.2	0.0	20.3	14.9	11.1
LnGrp Delay(d), s/veh	154.0	110.5	240.2	31.9	0.0	44.0	34.1	14.8	0.0	240.8	38.3	37.9
LnGrp LOS	F	F	F	C	C	D	C	B	F	D	D	D
Approach Vol, veh/h	245	172.5	915	413	15.3	15.3	15.3	15.3	68.6	68.6	68.6	68.6
Approach Delay, s/veh	172.5	172.5	915	413	15.3	15.3	15.3	15.3	68.6	68.6	68.6	68.6
Approach LOS	F	F	D	D	D	D	D	D	B	B	E	E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+Rc), s	9.0	9.0	9.0	21.5	44.2				34.6			
Change Period (Y+Rc), s	4.0	4.0	4.0	5.8	5.8				5.8			
Max Green Setting (Gmax), s	30.7	30.7	30.7	5.0	5.0				39.0			
Max Q Clear Time (g_c+1/4), s	26.3	26.3	26.3	7.0	30.2				25.6			
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	1.7	6.3			3.2			
Intersection Summary												
HCM 2010 Ctrl Delay									51.2			
HCM 2010 LOS									D			
Notes												

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

Intersection #3 Seal Beach Blvd/Lampson Ave												
Cycle (sec):	100	Critical Vol./Cap.(X): 0.804										
Loss Time (sec):	10	Average Delay (sec/veh): xxxxxx										
Optimal Cycle:	68	Level of Service: D										

Street Name:	Seal Beach Blvd	North Bound	South Bound	East Bound	West Bound							
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	3	0	1	2	0	3	0	0	0	0

Volume Module:	0	1737	544	641	1625	0	0	0	0	540	0	469
Base Vol:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Adj:	0	1737	544	641	1625	0	0	0	0	540	0	469
Initial Bse:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
User Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	0	1778	557	656	1663	0	0	0	0	553	0	480
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vcl:	0	1778	557	656	1663	0	0	0	0	553	0	480
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	1778	557	656	1663	0	0	0	0	553	0	480
OvAdjVol:	0	1778	557	656	1663	0	0	0	0	553	0	480

Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	3.00	1.00	2.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	5100	1700	3400	5100	0	0	0	0	3400	0	1700

Capacity Analysis Module:												
Vol/Sat:	0.00	0.35	0.33	0.19	0.33	0.00	0.00	0.00	0.00	0.16	0.00	0.28
OvAdjV/S:	0.00	0.35	0.33	0.19	0.33	0.00	0.00	0.00	0.00	0.16	0.00	0.28
Crit Moves:	0.00	0.35	0.33	0.19	0.33	0.00	0.00	0.00	0.00	0.16	0.00	0.28

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Health Club within the Shops at Rossmore
Existing (2016) Full Occupancy Plus Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.727

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 54 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase

Rights: Include Include Ovl Include

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 410 1675 132 5 1691 66 86 0 388 193 31 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 410 1675 132 5 1691 66 86 0 388 193 31 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 441 1801 142 5 1818 71 92 0 417 208 33 5

Reduc Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 441 1801 142 5 1818 71 92 0 417 208 33 5

PCE Adj: 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

FinalVolume: 441 1801 142 5 1818 71 92 0 417 208 33 5

OrlAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.78 0.22 1.00 2.89 0.11 1.00 0.00 2.00 1.69 0.27 0.04

Final Sat.: 3400 4727 373 1700 4908 192 1700 0 3400 2866 460 74

Capacity Analysis Module:

Vol/Sat: 0.13 0.38 0.38 0.00 0.37 0.37 0.05 0.00 0.12 0.07 0.07 0.07

OrlAdjV/S: 0.00

Crit Moves: ****

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Health Club within the Shops at Rossmore
Existing (2016) Full Occupancy Plus Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.757

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 58 Level Of Service: C

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Include Include

Rights: Include Include

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 205 1448 84 78 1406 94 100 28 185 139 47 59

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 205 1448 84 78 1406 94 100 28 185 139 47 59

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 217 1531 89 82 1486 99 106 30 196 147 50 62

Reduc Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 217 1531 89 82 1486 99 106 30 196 147 50 62

PCE Adj: 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

FinalVolume: 217 1531 89 82 1486 99 106 30 196 147 50 62

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56

Final Sat.: 1700 4820 280 1700 4780 320 1700 223 1477 1700 754 946

Capacity Analysis Module:

Vol/Sat: 0.13 0.32 0.32 0.05 0.31 0.31 0.06 0.13 0.13 0.09 0.07 0.07

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy Plus Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.733

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 54 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 192 1535 24 36 1576 222 208 1 155 15 1 16

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: 192 1535 24 36 1576 222 208 1 155 15 1 16

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 203 1624 25 38 1668 235 220 1 164 16 1 17

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 203 1624 25 38 1668 235 220 1 164 16 1 17

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

Final Volume: 203 1624 25 38 1668 235 220 1 164 16 1 17

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.95 0.05 1.00 2.63 0.37 1.00 0.01 0.99 1.00 0.06 0.94

Final Sat.: 1700 5021 79 1700 4470 630 1700 11 1689 1700 100 1600

Capacity Analysis Module:

Vol/Sat: 0.12 0.32 0.32 0.02 0.37 0.37 0.13 0.10 0.10 0.01 0.01 0.01

Crit Moves: ****

Existing Full Occ + P PM Mon Feb 20, 2017 15:13:32 Page 6-1

Health Club within the Shops at Rossmoor
Existing (2016) Full Occupancy Plus Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.690

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 49 Level Of Service: B

Street Name: Seal Beach Blvd-Los Alamitos Blvd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 130 1528 57 19 1730 170 162 9 88 48 3 11

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: 130 1528 57 19 1730 170 162 9 88 48 3 11

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97

PHF Volume: 134 1570 59 20 1778 175 166 9 90 49 3 11

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 134 1570 59 20 1778 175 166 9 90 49 3 11

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

Final Volume: 134 1570 59 20 1778 175 166 9 90 49 3 11

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

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 2.69 0.11 1.00 2.73 0.27 1.00 0.09 0.91 0.94 0.06 1.00

Final Sat.: 1700 4917 183 1700 4644 456 1700 158 1542 1600 100 1700

Capacity Analysis Module:

Vol/Sat: 0.08 0.32 0.32 0.01 0.38 0.38 0.10 0.06 0.06 0.03 0.03 0.01

Crit Moves: ****

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection		1.2									
Int Delay, s/veh											
Movement		EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h		446	7	53	457	3	49				
Future Vol, veh/h		446	7	53	457	3	49				
Conflicting Peds, #/hr		0	0	0	0	0	0				
Sign Control		Free	Free	Free	Free	Stop	Stop				
RT Channelized		-	None	-	None	-	None				
Storage Length		-	-	-	-	0	-				
Veh in Median Storage, #		0	-	-	0	0	-				
Grade, %		0	-	-	0	0	-				
Peak Hour Factor		90	90	90	90	90	90				
Heavy Vehicles, %		2	2	2	2	2	2				
Mvmt Flow		496	8	59	508	3	54				
Major/Minor		Major1					Minor1				
Conflicting Flow All		0	0	503	0	871	252				
Stage 1		-	-	-	-	499	-				
Stage 2		-	-	-	-	372	-				
Critical Hdwy		-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1		-	-	-	-	5.84	-				
Critical Hdwy Stg 2		-	-	-	-	5.84	-				
Follow-up Hdwy		-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver		-	-	1058	-	290	748				
Stage 1		-	-	-	-	575	-				
Stage 2		-	-	-	-	667	-				
Platoon blocked, %		-	-	-	-	-	-				
Mov Cap-1 Maneuver		-	-	1058	-	267	748				
Mov Cap-2 Maneuver		-	-	-	-	267	-				
Stage 1		-	-	-	-	575	-				
Stage 2		-	-	-	-	615	-				
Approach		EB					WB				
HCM Control Delay, s		0					1.2				
HCM LOS							B				
Minor Lane/Major Mvmt		NBLn1		EBT		EBR		WBL		WBT	
Capacity (veh/h)		678		-		-		1058		-	
HCM Lane V/C Ratio		0.085		-		-		0.056		-	
HCM Control Delay (s)		10.8		-		-		8.6		0.3	
HCM Lane LOS		B		-		-		A		A	
HCM 95th %tile Q(veh)		0.3		-		-		0.2		-	

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection		9.6									
Intersection Delay, s/veh											
Intersection LOS		A									
Movement		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL
Traffic Vol, veh/h		0	30	5	47	0	3	6	10	0	67
Future Vol, veh/h		0	30	5	47	0	3	6	10	0	67
Peak Hour Factor		0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84
Heavy Vehicles, %		2	2	2	2	2	2	2	2	2	2
Mvmt Flow		0	36	6	56	0	4	7	12	0	80
Number of Lanes		0	0	1	0	0	0	1	0	0	2
Approach		EB					WB				
Opposing Approach		WB					EB				
Opposing Lanes		1					1				
Conflicting Approach Left		SB					NB				
Conflicting Lanes Left		2					2				
Conflicting Approach Right		NB					SB				
Conflicting Lanes Right		2					2				
HCM Control Delay		9.1					8.6				
HCM LOS		A					A				
Lane		NBLn1		NBLn2		EBLn1		EBLn2		SBLn1	
Vol Left, %		38%		0%		37%		16%		6%	
Vol Thru, %		62%		96%		6%		32%		94%	
Vol Right, %		0%		4%		57%		53%		0%	
Sign Control		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane		176		113		82		19		125	
LT Vol		67		0		30		3		7	
RT Vol		0		4		47		10		0	
Lane Flow Rate		209		134		98		23		149	
Geometry Grp		7		7		2		2		7	
Degree of Util (X)		0.311		0.191		0.141		0.033		0.215	
Departure Headway (Hr)		5.353		5.136		5.189		5.31		5.205	
Convergence, Y/N		Yes		Yes		Yes		Yes		Yes	
Cap		669		696		687		668		717	
Service Time		3.106		2.889		3.25		3.388		2.956	
HCM Lane V/C Ratio		0.312		0.193		0.143		0.034		0.217	
HCM Control Delay		10.5		9.1		9.1		8.6		9.4	
HCM Lane LOS		B		A		A		A		A	
HCM 95th %tile Q		1.3		0.7		0.5		0.1		0.8	

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	7	236	44	
Future Vol, veh/h	0	7	236	44	
Peak Hour Factor	0.92	0.84	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	8	281	52	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	9.5				
HCM LOS	A				
Lane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh10.3																
Intersection LOS																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	37	55	0	38	41	73	0	30	132	29	0	46	181	40
Future Vol, veh/h	0	42	37	55	0	38	41	73	0	30	132	29	0	46	181	40
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	44	65	0	45	49	87	0	36	157	35	0	55	215	48
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		NB		SB									
Opposing Approach	WB		EB		SB		NB									
Opposing Lanes	1		1		2		2									
Conflicting Approach Left	SB		NB		EB		WB									
Conflicting Lanes Left	2		2		1		1									
Conflicting Approach Right	NB		SB		WB		EB									
Conflicting Lanes Right	2		2		1		1									
HCM Control Delay	10.3		10.4		10		10.5									
HCM LOS	B		B		A		B									
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2										
Vol Left, %	31%	0%	31%	25%	34%	0%										
Vol Thru, %	69%	69%	28%	27%	66%	69%										
Vol Right, %	0%	31%	41%	48%	0%	31%										
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop										
Traffic Vol by Lane	96	95	134	152	137	131										
LT Vol	30	0	42	38	46	0										
Through Vol	66	66	37	41	91	91										
RT Vol	0	29	55	73	0	40										
Lane Flow Rate	114	113	160	181	162	155										
Geometry Grp	7	7	2	2	7	7										
Degree of Util (X)	0.193	0.18	0.243	0.271	0.27	0.241										
Departure Headway (Hd)	6.09	5.715	5.479	5.388	5.983	5.595										
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes										
Cap	590	628	654	666	601	642										
Service Time	3.827	3.452	3.518	3.425	3.718	3.329										
HCM Lane V/C Ratio	0.193	0.18	0.245	0.272	0.27	0.241										
HCM Control Delay	10.3	9.7	10.3	10.4	10.9	10.1										
HCM Lane LOS	B	A	B	B	B	B										
HCM 95th-ile Q	0.7	0.7	0.9	1.1	1.1	0.9										

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	17	2	0	148	25	64	0	5	105	106
Traffic Vol, veh/h	0	1	17	2	0	148	25	64	0	5	105	106
Future Vol, veh/h	0	1	17	2	0	148	25	64	0	5	105	106
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	20	2	0	170	29	74	0	6	121	122
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	9.4				11				9.5			
HCM LOS	A				B				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	0%	86%	39%	0%	0%	0%	0%
Vol Thru, %	91%	33%	85%	14%	0%	61%	95%	0%	5%	0%
Vol Right, %	0%	67%	10%	0%	100%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	159	20	173	64	104	66	0	0	0
LT Vol	5	0	1	148	0	41	0	0	0	0
Through Vol	53	53	17	25	0	63	63	0	0	0
RT Vol	0	106	2	0	64	0	3	0	0	0
Lane Flow Rate	66	182	23	199	74	120	76	0	0	0
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.104	0.259	0.039	0.336	0.101	0.194	0.118	0.194	0.118	0.118
Departure Headway (Hd)	5.638	5.121	6.116	6.081	4.946	5.829	5.598	5.829	5.598	5.598
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	630	694	589	587	716	610	634	610	634	634
Service Time	3.422	2.905	4.116	3.873	2.737	3.621	3.389	3.621	3.389	3.389
HCM Lane V/C Ratio	0.105	0.262	0.039	0.339	0.103	0.197	0.12	0.197	0.12	0.12
HCM Control Delay	9.1	9.7	9.4	12	8.3	10	9.1	10	9.1	9.1
HCM Lane LOS	A	A	A	B	A	A	A	A	A	A
HCM 95th-tile Q	0.3	1	0.1	1.5	0.3	0.7	0.4	0.7	0.4	0.4

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	10.1											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	17	2	0	148	25	64	0	5	105	106
Traffic Vol, veh/h	0	1	17	2	0	148	25	64	0	5	105	106
Future Vol, veh/h	0	1	17	2	0	148	25	64	0	5	105	106
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	20	2	0	170	29	74	0	6	121	122
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	9.4				11				9.5			
HCM LOS	A				B				A			

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 8.1												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol. veh/h	0	90	24	0	22	136	0	32	11			
Future Vol. veh/h	0	90	24	0	22	136	0	32	11			
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	100	27	0	24	151	0	36	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EB	WB	EB	WB	WB	EB	NB	NB				
Opposing Approach	WB	EB										
Opposing Lanes	1	1					0					
Conflicting Approach Left		NB					EB					
Conflicting Lanes Left	0	1					1					
Conflicting Approach Right	NB						WB					
Conflicting Lanes Right	1	0					1					
HCM Control Delay	7.8	8.3					7.9					
HCM LOS	A	A					A					
Lane	NBLn1	EBLn1	WBLn1									
Vol Left, %	74%	0%	14%									
Vol Thru, %	0%	79%	86%									
Vol Right, %	26%	21%	0%									
Sign Control	Stop	Stop	Stop									
Traffic Vol by Lane	43	114	158									
LT Vol	32	0	22									
Through Vol	0	90	136									
RT Vol	11	24	0									
Lane Flow Rate	48	127	176									
Geometry Grp	1	1	1									
Degree of Util (X)	0.061	0.142	0.202									
Departure Headway (Hd)	4.582	4.023	4.141									
Convergence, Y/N	Yes	Yes	Yes									
Cap	786	880	858									
Service Time	2.582	2.101	2.204									
HCM Lane V/C Ratio	0.061	0.144	0.205									
HCM Control Delay	7.9	7.8	8.3									
HCM Lane LOS	A	A	A									
HCM 95th-tile Q	0.2	0.5	0.8									

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 15.8												
Intersection LOS C												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBL
Traffic Vol. veh/h	0	22	121	27	0	183	170	84	0	43	44	178
Future Vol. veh/h	0	22	121	27	0	183	170	84	0	43	44	178
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	126	28	0	191	177	88	0	45	46	185
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0
Approach												
Approach	EB	WB	EB	WB	EB	WB	NB	NB	SB	SB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	WB	WB	WB	WB
Opposing Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	SB	SB	SB	SB	SB	SB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1	2	2	2	2	2	2
Conflicting Approach Right	NB	NB	NB	NB	NB	NB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	1	1	1	1
HCM Control Delay	10.4	10.4	20.9	20.9	10.4	10.4	11.5	11.5	11.5	11.5	11.5	11.5
HCM LOS	B	B	C	C	B	B	B	B	B	B	B	B
Lane												
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	EBLn1	WBLn1	SBLn1	EBLn1	WBLn1	SBLn1	EBLn1
Vol Left %	16%	27%	0%	42%	54%	16%	27%	0%	42%	54%	16%	27%
Vol Thru %	17%	73%	69%	39%	24%	17%	73%	69%	39%	24%	17%	73%
Vol Right %	67%	0%	31%	19%	22%	67%	0%	31%	19%	22%	67%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	285	83	88	437	139	285	83	88	437	139	285	83
LT Vol	43	22	0	183	75	43	22	0	183	75	43	22
Through Vol	44	61	61	170	34	44	61	61	170	34	44	61
RT Vol	178	0	27	84	30	178	0	27	84	30	178	0
Lane Flow Rate	276	86	91	455	145	276	86	91	455	145	276	86
Geometry Grp	2	7	7	5	2	2	7	7	5	2	2	7
Degree of Util (X)	0.433	0.158	0.158	0.704	0.251	0.433	0.158	0.158	0.704	0.251	0.433	0.158
Departure Headway (Hd)	5.644	6.603	6.246	5.571	6.253	5.644	6.603	6.246	5.571	6.253	5.644	6.603
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	632	540	570	646	569	632	540	570	646	569	632	540
Service Time	3.722	4.39	4.034	3.637	4.347	3.722	4.39	4.034	3.637	4.347	3.722	4.39
HCM Lane V/C Ratio	0.437	0.159	0.16	0.704	0.255	0.437	0.159	0.16	0.704	0.255	0.437	0.159
HCM Control Delay	13	10.6	10.2	20.9	11.5	13	10.6	10.2	20.9	11.5	13	10.6
HCM Lane LOS	B	B	B	C	B	B	B	B	C	B	B	B
HCM 95th-tile Q	2.2	0.6	0.6	5.7	1	2.2	0.6	0.6	5.7	1	2.2	0.6

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 11.6												
Intersection LOS B												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SB	SB	SB	SB	SB	SB
Traffic Vol, veh/h	0	86	292	0	43	65	0	231	54			
Future Vol, veh/h	0	86	292	0	43	65	0	231	54			
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.92	0.89	0.89			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	97	328	0	48	73	0	260	61			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB	WB	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach												
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB				0				WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB				0			
Conflicting Lanes Right	1				2				0			
HCM Control Delay	11.4				9.2				12.9			
HCM LOS	B				A				B			
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%			100%			0%			81%		
Vol Thru, %	40%			0%			0%			19%		
Vol Right, %	60%			0%			100%			0%		
Sign Control	Stop			Stop			Stop			Stop		
Traffic Vol by Lane	108			86			292			285		
LT Vol	0			86			0			231		
Through Vol	43			0			0			54		
RT Vol	65			0			292			0		
Lane Flow Rate	121			97			328			320		
Geometry Grp	2			7			7			2		
Degree of Util (X)	0.173			0.165			0.45			0.467		
Departure Headway (Hd)	5.125			6.147			4.936			5.249		
Convergence, Y/N	Yes			Yes			Yes			Yes		
Cap	704			579			722			679		
Service Time	3.125			3.94			2.728			3.338		
HCM Lane V/C Ratio	0.172			0.168			0.454			0.471		
HCM Control Delay	9.2			10.2			11.8			12.9		
HCM Lane LOS	A			B			B			B		
HCM 95th-tile Q	0.6			0.6			2.3			2.5		

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection												
Int Delay, s/veh 3.2												
Movement												
Traffic Vol, veh/h	EBT	EBR	WBL	WBT	NBL	NBR						
88	1		84	165	4	69						
Future Vol, veh/h	88	1	84	165	4	69						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	93	93	93	93	93	93						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	95	1	90	177	4	74						
Major/Minor												
Major1	Major2		Minor1									
Conflicting Flow All	0	0	96	0	453	95						
Stage 1	-	-	-	-	95	-						
Stage 2	-	-	-	-	358	-						
Critical Hdwy	-	-	4.12	-	6.42	6.22						
Critical Hdwy Stg 1	-	-	-	-	5.42	-						
Critical Hdwy Stg 2	-	-	-	-	5.42	-						
Follow-up Hdwy	-	-	2.218	-	3.518	3.318						
Pot Cap-1 Maneuver	-	-	1498	-	565	962						
Stage 1	-	-	-	-	929	-						
Stage 2	-	-	-	-	707	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1498	-	527	962						
Mov Cap-2 Maneuver	-	-	-	-	527	-						
Stage 1	-	-	-	-	929	-						
Stage 2	-	-	-	-	660	-						
Approach												
EB	WB		NB									
HCM Control Delay, s	0	2.5	9.3									
HCM LOS	A											
Minor Lane/Major Mvmt												
NBLn1	EBT	EBR	WBL	WBT								
920	-	-	1498	-								
Capacity (veh/h)												
HCM Lane V/C Ratio	0.085	-	0.06	-								
HCM Control Delay (s)	9.3	-	7.6	0								
HCM Lane LOS	A	-	A	A								
HCM 95th %ile Q(veh)	0.3	-	0.2	-								

HCM 2010 Signalized Intersection Summary
1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB	4TB	4TB	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	147	26	16	544	37	500	9	1107	272	429	1120	131
Future Volume (veh/h)	147	26	16	544	37	500	9	1107	272	429	1120	131
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	156	28	17	607	0	0	10	1178	289	456	1191	139
Adj No. of Lanes	0	2	0	2	0	2	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	679	0	303	21	1317	410	501	2775	864
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.56	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	156	0	45	607	0	0	10	1178	289	456	1191	139
Grp Sat Flow(s), veh/hln	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.6	18.2	25.3	0.0	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.4	0.0	0.0	0.6	24.6	18.2	25.3	0.0	0.0
Prop In Lane	1.00	0.00	0.38	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	679	0	303	21	1317	410	501	2775	864
V/C Ratio(X)	1.33	0.00	0.39	0.89	0.00	0.00	0.47	0.89	0.71	0.91	0.43	0.16
Avail Cap(c.a), veh/h	118	0	116	748	0	334	81	1350	420	501	2775	864
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	0.88
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.4	0.0	0.0	54.0	39.3	37.0	22.7	0.0	0.0
Incr Delay (d2), s/veh	193.4	0.0	2.1	12.4	0.0	0.0	15.3	9.7	9.8	18.8	0.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	9.9	0.0	1.4	10.2	0.0	0.0	0.4	12.6	9.1	14.8	0.1	0.1
LnGrp Delay(d), s/veh	244.8	0.0	51.3	55.8	0.0	0.0	69.3	49.0	46.7	41.5	0.4	0.4
LnGrp LOS	F	D	D	E	E	E	E	D	D	D	A	A
Approach Vol, veh/h	201			607			1477				1786	
Approach Delay, s/veh	201.4			55.8			48.7				10.9	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.9	34.3		12.0	5.3	65.8		26.9				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	27.3	26.6		9.3	2.6	2.0		20.4				
Green Ext Time (p_c), s	0.6	1.9		0.0	0.0	13.9		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				40.7								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	9	8	7	355	5	581	15	1369	377	266	1321	243
Future Volume (veh/h)	9	8	7	355	5	581	15	1369	377	266	1321	243
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	9	8	7	374	0	615	16	1441	0	280	1391	256
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	42	44	37	836	0	746	712	2136	665	242	1694	527
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.41	0.84	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	9	8	7	374	0	615	16	1441	0	280	1391	256
Grp Sat Flow(s), veh/hln	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	0.5	0.5	0.5	9.9	0.0	20.3	0.3	11.5	0.0	15.0	27.6	14.1
Cycle Q Clear(g.c), s	0.5	0.5	0.5	9.9	0.0	20.3	0.3	11.5	0.0	15.0	27.6	14.1
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	42	44	37	836	0	746	712	2136	665	242	1694	527
V/C Ratio(X)	0.21	0.18	0.19	0.45	0.00	0.82	0.02	0.67	0.00	1.16	0.82	0.49
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	712	2136	665	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.66	0.66	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	35.9	0.0	39.9	25.7	6.0	0.0	47.5	33.7	29.2
Incr Delay (d2), s/veh	2.5	2.0	2.4	0.4	0.0	3.2	0.0	1.2	0.0	107.0	4.6	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	3.0	0.2	0.2	4.9	0.0	9.2	0.1	5.3	0.0	14.5	13.6	6.7
LnGrp Delay(d), s/veh	55.2	54.6	55.0	36.3	0.0	43.1	25.7	7.2	0.0	154.5	38.3	32.4
LnGrp LOS	E	D	E	D	D	D	C	A	F	D	C	C
Approach Vol, veh/h	24			989			1457				1927	
Approach Delay, s/veh	55.0			40.5			7.4				54.4	
Approach LOS	D			D			A				D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	59.0	52.0		7.3	28.6	42.4		31.7				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	30.7	30.7		* 5.0	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	13.5	25.5	23.6	2.5	2.3	29.6		22.3				
Green Ext Time (p_c), s	0.0	9.0		0.0	2.0	7.0		3.6				
Intersection Summary												
HCM 2010 Ctrl Delay				35.7								
HCM 2010 LOS				D								
Notes												

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

Intersection #3 Seal Beach Blvd/Lampson Ave																																			

Cycle (sec):	100	Critical Vol./Cap.(X):		0.781																															
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx																															
Optimal Cycle:	63	Level Of Service:		C																															

Street Name:	Seal Beach Blvd	Lampson Ave																																	
Approach:	North Bound	South Bound	East Bound	West Bound																															
Movement:	L - T - R	L - T - R	L - T - R	L - T - R																															
Control:	Protected	Protected	Protected	Permitted																															
Rights:	Ovl	Include	Include	Ovl																															
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0																															
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0																															
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	2 0 0 0 1																															

Volume Module:																																			
Base Vol:	0 1561 360	516 1480	0 0 0	0 360 0 557																															
Growth Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00																															
Initial Base:	0 1561 360	516 1480	0 0 0	0 360 0 557																															
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00																															
PHF Adj:	0.93 0.93	0.93 0.93	0.93 0.93	0.93 0.93 0.93																															
PHF Volume:	0 1678 387	555 1591	0 0 0	0 387 0 599																															
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0																															
Reduced Vol:	0 1678 387	555 1591	0 0 0	0 387 0 599																															
PCE Adj:	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																															
FinalVolume:	0 1678 387	555 1591	0 0 0	0 387 0 599																															
OvAdjVol:																																			

Saturation Flow Module:																																			
Sat/Lane:	1700 1700	1700 1700	1700 1700	1700 1700 1700																															
Adjustment:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00																															
Lanes:	0.00 3.00	2.00 3.00	0.00 0.00	0.00 2.00 0.00																															
Final Sat.:	0 5100 1700	3400 5100	0 0 0	0 3400 0 1700																															

Capacity Analysis Module:																																			
Vol/Sat:	0.00 0.33 0.23	0.16 0.31	0.00 0.00	0.00 0.11 0.00																															
OvAdjV/S:																																			
Crit Moves:	****	****	****	****																															

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr																	

Cycle (sec):	100	Critical Vol./Cap.(X):		0.660													
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx													
Optimal Cycle:	45	Level Of Service:		B													

Street Name:	Seal Beach Blvd	St. Cloud Dr															
Approach:	North Bound	South Bound	East Bound	West Bound													
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R												
Control:	Protected	Protected	Protected	Split Phase	Split Phase												
Rights:	Include	Include	Ovl														
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0												
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0												
Lanes:	2 0 2 1 0	1 0 2 1 0	0 1 0 0 2	1 0 1 0 2	1 0 1 0 0												

Volume Module:																	
Base Vol:	364 1613 172	17 1401	69 102 2	401 174 35	5												
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 Base:	364 1613 172	17 1401	69 102 2	401 174 35	5												
User Adj:	1.00 1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00												
PHF Adj:	0.93 0.93	0.93 0.93	0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93												
PHF Volume:	393 1740 186	18 1511 74	110 2 433	188 38 5	0												
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0 0	0												
Reduced Vol:	393 1740 186	18 1511 74	110 2 433	188 38 5	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:	393 1740 186	18 1511 74	110 2 433	188 38 5	0												
OvAdjVol:																	

Saturation Flow Module:																	
Sat/Lane:	1700 1700	1700 1700	1700 1700	1700 1700 1700	1700 1700 1700												
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:	2.00 2.71 0.29	1.00 2.86 0.14	0.98 0.02 2.00	1.62 0.33 0.05	0.05												
Final Sat.:	3400 4609 491	1700 4861 239	1667 33 3400	2764 556 79	0												

Capacity Analysis Module:																	
Vol/Sat:	0.12 0.38 0.38	0.01 0.31	0.07 0.07	0.13 0.07 0.07	0.07 0.07 0.07												
OvAdjV/S:																	
Crit Moves:	****	****	****	****	****												

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way																

Cycle (sec):	100	Critical Vol./Cap.(X):								0.705						
Loss Time (sec):	10	Average Delay (sec/veh):								xxxxxx						
Optimal Cycle:	51	Level of Service:								C						

Street Name:	Seal Beach Blvd				Rossmoor Center Way											
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----																
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0	1	
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----																
Volume Module:																
Base Vol:	224	1410	15	25	1398	249	213	4	176	19	2	14				
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	1.00	1.00	1.00	
Initial Bse:	224	1410	15	25	1398	249	213	4	176	19	2	14				
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	1.00	1.00	1.00	
PBF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
PHF Volume:	230	1448	15	26	1435	256	219	4	181	20	2	14				
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	230	1448	15	26	1435	256	219	4	181	20	2	14				
PLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MCE Adj:	1.00	1.00	1.00	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:	230	1448	15	26	1435	256	219	4	181	20	2	14				
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----																
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
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	1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03	1.00	2.55	0.45	1.00	0.02	0.98	1.00	0.13	0.87				
Final Sat :	1700	5046	54	1700	4329	771	1700	38	1662	1700	213	1487				
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----																
Capacity Analysis Module:																
Vol/Sat:	0.14	0.29	0.29	0.02	0.33	0.33	0.13	0.11	0.11	0.01	0.01	0.01				
Crit Moves:	*****															

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

Intersection #5 Seal Beach Blvd/Towne Center Dr *****															
Cycle (sec):	100	Critical Vol./Cap.(X): 0.846													
Loss Time (sec):	10	Average Delay (sec/veh): xxxxxx													
Optimal Cycle:	79	Level of Service: D													

Street Name:	Seal Beach Blvd	Towne Center Dr													
Approach:	North Bound	South Bound	East Bound				West Bound								
Movement:	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R	
Control:	Protected	Protected	Protected				Permitted				Permitted				
Rights:	Include	Include	Include				Include				Include				
Mn. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y-R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0	1
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Volume Module:															
Base Vol.	291	1244	108	92	1088	151	119	83	243	173	89	88			
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	1.00	1.00	1.00
Initial Bse:	291	1244	108	92	1088	151	119	83	243	173	89	88			
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	1.00	1.00	1.00
PBF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	307	1312	114	97	1148	159	126	88	256	182	94	93			
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Convert Vol:	307	1312	114	97	1148	159	126	88	256	182	94	93			
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	1.00	1.00	1.00
MFLF Adj:	1.00	1.00	1.00	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:	307	1312	114	97	1148	159	126	88	256	182	94	93			
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Saturation Flow Module:															
Sat Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	1.00	1.00	1.00
Lanes:	1.00	2.76	0.24	1.00	2.63	0.37	1.00	0.25	0.75	1.00	0.50	0.50	0.50	0.50	0.50
Final Sat.:	1700	4693	407	1700	4478	622	1700	433	1267	1700	855	845			
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----															
Capacity Analysis Module:															
Vol/Sat:	0.18	0.28	0.28	0.06	0.26	0.26	0.07	0.20	0.20	0.11	0.11	0.11	0.11	0.11	0.11
Crit Moves:	**	**	**	*	**	**	*	*	*	*	*	*	*	*	*

Existing Full Occ + P SaturMon Feb 20, 2017 15:13:51 Page 6-1

Health Club within the Shops at Rossmore
Existing (2016) Full Occupancy Plus Project
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.636

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 43 Level Of Service: B

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 111 1399 44 17 1516 120 167 8 96 63 7 12

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 1399 44 17 1516 120 167 8 96 63 7 12

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98

PHF Volume: 113 1428 45 17 1547 122 170 8 98 64 7 12

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 113 1428 45 17 1547 122 170 8 98 64 7 12

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

M/F Adj: 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 1428 45 17 1547 122 170 8 98 64 7 12

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjusment: 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 2.91 0.09 1.00 2.78 0.22 1.00 0.08 0.92 0.90 0.10 1.00

Final Sat.: 1700 4944 156 1700 4726 374 1700 131 1569 1530 170 1700

Capacity Analysis Module:

Vol/Sat: 0.07 0.29 0.01 0.33 0.33 0.10 0.06 0.06 0.04 0.04 0.01

Crit Moves: ****

Intersection											
1											
Init Delay, s/veh											
Movement											
Traffic Vol, veh/h	459	1	43	422	4	44					
Future Vol, veh/h	459	1	43	422	4	44					
Conflicting Peds, #/hr	0	0	0	0	0	0					
Sign Control	Free	Free	Free	Free	Stop	Stop					
RT Channelized	-	None	-	None	-	None					
Storage Length	-	-	-	-	0	-					
Veh in Median Storage, #	0	-	-	0	0	-					
Grade, %	0	-	-	0	0	-					
Peak Hour Factor	94	94	94	94	94	94					
Heavy Vehicles, %	2	2	2	2	2	2					
Mvmt Flow	488	1	46	449	4	47					
Major/Minor											
Conflicting Flow All	0	0	489	0	805	245					
Stage 1	-	-	-	-	489	-					
Stage 2	-	-	-	-	-	316					
Critical Hdwy	-	-	4.14	-	7.54	6.94					
Critical Hdwy Stg 1	-	-	-	-	6.54	-					
Critical Hdwy Stg 2	-	-	-	-	6.54	-					
Follow-up Hdwy	-	-	2.22	-	3.52	3.32					
Pot Cap-1 Maneuver	-	-	1070	-	274	755					
Stage 1	-	-	-	-	529	-					
Stage 2	-	-	-	-	670	-					
Platoon blocked, %	-	-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	1070	-	262	755					
Mov Cap-2 Maneuver	-	-	-	-	262	-					
Stage 1	-	-	-	-	529	-					
Stage 2	-	-	-	-	632	-					
Approach											
EB	EB	WB	WB	NB	NB						
HCM Control Delay, s	0	1	1	11	11						
HCM LOS				B	B						
Minor Lane/Major Mvmt											
NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	653	-	-	1070	-						
HCM Lane V/C Ratio	0.078	-	-	0.043	-						
HCM Control Delay (s)	11	-	-	8.5	0.2						
HCM Lane LOS	B	-	-	A	A						
HCM 95th %ile Q(veh)	0.3	-	-	0.1	-						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh													8.8
Intersection LOS													A
Movement													
Traffic Vol, veh/h	0	35	5	38	0	4	6	5	0	38	179	7	7
Future Vol, veh/h	0	35	5	38	0	4	6	5	0	38	179	7	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	5	41	0	4	7	5	0	41	195	8	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0
Approach													
Approach	EB	EB	WB	WB	EB	WB	EB	NB	NB	SB	SB	EB	EB
Opposing Approach	WB	WB	EB	EB	WB	WB	EB	WB	WB	EB	EB	WB	WB
Opposing Lanes	1	1	1	1	1	1	1	2	2	2	2	2	2
Conflicting Approach Left	SB	SB	NB	NB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Left	2	2	2	2	2	2	2	1	1	1	1	1	1
Conflicting Approach Right	NB	NB	SB	SB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	2	2	2	2	2	2	2	1	1	1	1	1	1
HCM Control Delay	8.6	8.6	8.3	8.3	8.3	8.3	8.3	8.9	8.9	8.9	8.9	8.9	8.9
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A
Lane													
Lane	NBLn1	NBLn2	NBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1
Vol Left, %	30%	0%	45%	27%	6%	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	70%	93%	6%	40%	94%	85%	85%	85%	85%	85%	85%	85%	85%
Vol Right, %	0%	7%	49%	33%	0%	15%	15%	15%	15%	15%	15%	15%	15%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	97	78	15	126	140	140	140	140	140	140	140	140
LT Vol	38	0	35	4	7	0	0	0	0	0	0	0	0
Through Vol	90	90	5	6	119	119	119	119	119	119	119	119	119
RT Vol	0	7	38	5	0	21	21	21	21	21	21	21	21
Lane Flow Rate	139	105	85	16	136	152	152	152	152	152	152	152	152
Geometry Grp	7	7	2	2	7	7	7	7	7	7	7	7	7
Degree of Utlr (X)	0.2	0.145	0.116	0.023	0.191	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.206
Departure Headway (Hd)	5.194	4.933	4.941	5.105	5.036	4.902	4.902	4.902	4.902	4.902	4.902	4.902	4.902
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	692	719	725	699	712	732	732	732	732	732	732	732	732
Service Time	2.925	2.724	2.977	3.15	2.766	2.632	2.632	2.632	2.632	2.632	2.632	2.632	2.632
HCM Lane V/C Ratio	0.201	0.146	0.117	0.023	0.191	0.208	0.208	0.208	0.208	0.208	0.208	0.208	0.208
HCM Control Delay	9.2	8.6	8.6	8.3	9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
HCM Lane LOS	A	A	A	A	A	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh													
Intersection LOS													
Movement													
Traffic Vol, veh/h	0	7	237	21	0	7	237	21	0	7	237	21	21
Future Vol, veh/h	0	7	237	21	0	7	237	21	0	7	237	21	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	258	23	0	8	258	23	0	8	258	23	23
Number of Lanes	0	0	2	0	0	0	2	0	0	0	2	0	0
Approach													
Approach	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Opposing Approach	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Opposing Lanes	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Left	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Right	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	1	1	1	1	1
HCM Control Delay	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9	8.9
HCM LOS	A	A	A	A	A	A	A	A	A	A	A	A	A
Lane													
Lane	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh 9.8																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	43	63	0	20	53	45	0	47	130	31	0	46	161	33
Future Vol, veh/h	0	42	43	63	0	20	53	45	0	47	130	31	0	46	161	33
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	48	70	0	22	59	50	0	52	144	34	0	51	179	37
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2
Approach	EB		WB		NB		SB		NB		SB		SB		SB	
Opposing Approach	WB		EB		SB		NB		SB		NB		SB		NB	
Opposing Lanes	1		1		2		2		2		2		2		2	
Conflicting Approach Left	SB		NB		EB		WB		EB		WB		EB		WB	
Conflicting Lanes Left	2		2		1		1		1		1		1		1	
Conflicting Approach Right	NB		SB		WB		EB		WB		EB		WB		EB	
Conflicting Lanes Right	2		2		1		1		1		1		1		1	
HCM Control Delay	9.9		9.6		9.7		9.7		9.7		9.7		9.9		9.9	
HCM LOS	A		A		A		A		A		A		A		A	
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2	
Vol Left, %	42%		0%		28%		17%		36%		0%		0%		0%	
Vol Thru, %	58%		68%		29%		45%		64%		71%		0%		96%	
Vol Right, %	0%		32%		43%		38%		0%		29%		0%		4%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	112		96		148		118		127		114		0		0	
LT Vol	47		0		42		20		46		0		0		0	
Through Vol	65		65		43		53		81		81		0		0	
RT Vol	0		31		63		45		0		33		0		0	
Lane Flow Rate	124		107		164		131		141		126		0		0	
Geometry Grp	7		7		2		2		7		7		7		7	
Degree of Utl (X)	0.204		0.162		0.234		0.193		0.228		0.191		0.129		0.072	
Departure Headway (Hd)	5.904		5.462		5.258		5.291		5.831		5.441		5.54		5.288	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Cap	610		659		687		679		618		662		646		676	
Service Time	3.619		3.177		3.258		3.314		3.545		3.156		3.284		3.032	
HCM Lane V/C Ratio	0.203		0.162		0.239		0.193		0.228		0.19		0.13		0.072	
HCM Control Delay	10.1		9.2		9.9		9.6		10.3		9.4		0.13		0.13	
HCM Lane LOS	B		A		A		A		B		A		A		A	
HCM 95th-tile Q	0.8		0.6		0.9		0.7		0.9		0.7		0.4		0.4	

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Existing + Full Occupancy + P Saturday Peak Hour
02/22/2017

Intersection																
Intersection Delay, s/veh 8.9																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR				
Lane Configurations																
Traffic Vol, veh/h	0	1	15	4	0	115	20	69	0	3	73	94				
Future Vol, veh/h	0	1	15	4	0	115	20	69	0	3	73	94				
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	1	15	4	0	119	21	71	0	3	75	97				
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0				
Approach	EB		WB		WB		NB		NB		SB					
Opposing Approach	WB		EB		EB		SB		SB		SB					
Opposing Lanes	2		1		1		2		2		2					
Conflicting Approach Left	SB		NB		NB		EB		EB		EB					
Conflicting Lanes Left	2		2		2		1		1		1					
Conflicting Approach Right	NB		SB		SB		WB		WB		WB					
Conflicting Lanes Right	2		2		2		2		2		2					
HCM Control Delay	8.7		9.3		9.3		8.6		8.6		8.6					
HCM LOS	A		A		A		A		A		A					
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2	
Vol Left, %	8%		0%		5%		85%		0%		44%		0%		0%	
Vol Thru, %	92%		28%		75%		15%		0%		56%		96%		96%	
Vol Right, %	0%		72%		20%		0%		100%		0%		4%		4%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	40		131		20		135		69		82		48		0	
LT Vol	3		0		1		115		0		36		0		0	
Through Vol	37		37		15		20		0		46		46		0	
RT Vol	0		94		4		0		69		0		2		0	
Lane Flow Rate	41		135		21		139		71		84		49		0	
Geometry Grp	7		7		6		7		7		7		7		7	
Degree of Util (X)	0.06		0.179		0.031		0.222		0.091		0.129		0.072		0.072	
Departure Headway (Hd)	5.33		4.785		5.46		5.736		4.605		5.54		5.288		5.288	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Cap	671		748		653		625		775		646		676		676	
Service Time	3.07		2.524		3.517		3.479		2.348		3.284		3.032		3.032	
HCM Lane V/C Ratio	0.061		0.18		0.032		0.222		0.092		0.13		0.072		0.072	
HCM Control Delay	8.4		8.6		8.7		10.1		7.8		9.1		8.4		8.4	
HCM Lane LOS	A		A		A		B		A		A		A		A	
HCM 95th-tile Q	0.2		0.6		0.1		0.8		0.3		0.4		0.2		0.2	

HCM 2010 AWSC
11: Montecito Road & Bradbury Road Existing + Full Occupancy + P Saturday Peak Hour 02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement					
Lane Configurations	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	36	91	2	
Future Vol, veh/h	0	36	91	2	
Peak Hour Factor	0.92	0.97	0.97	0.97	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	37	94	2	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	8.8				
HCM LOS	A				

HCM 2010 AWSC
12: West Road & Rossmoor Center Way 12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement												
	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	82	21	0	10	118	0	32	17			
Future Vol, veh/h		82	21	0	10	118	0	32	17			
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	90	23	0	11	130	0	35	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach												
	EB		WB		WB		NB					
Opposing Approach	WB		EB		EB		0					
Opposing Lanes	1		1		1		0					
Conflicting Approach Left			NB		NB		EB					
Conflicting Lanes Left	0		1		1		1					
Conflicting Approach Right	NB				0		WB					
Conflicting Lanes Right	1				0		1					
HCM Control Delay	7.7		8		7.7		8					
HCM LOS	A		A		A		A					
Lane												
	NBLn1		EBLn1WBLn1									
Vol Left, %	65%		0%		8%							
Vol Thru, %	0%		80%		92%							
Vol Right, %	35%		20%		0%							
Sign Control	Stop		Stop		Stop							
Traffic Vol by Lane	49		103		128							
LT Vol	32		0		10							
Through Vol	0		82		118							
RT Vol	17		21		0							
Lane Flow Rate	54		113		141							
Geometry Grp	1		1		1							
Degree of Util (X)	0.066		0.126		0.161							
Departure Headway (Hd)	4.403		4.013		4.131							
Convergence, Y/N	Yes		Yes		Yes							
Cap	818		884		862							
Service Time	2.403		2.08		2.188							
HCM Lane V/C Ratio	0.066		0.128		0.164							
HCM Control Delay	7.7		7.7		8							
HCM Lane LOS	A		A		A							
HCM 95th-ile Q	0.2		0.4		0.6							

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection		3.8									
Int Delay, s/veh											
Movement											
	EBT	EBR	WBL	WBT	NBL	NBR					
Traffic Vol, veh/h	99	0	85	123	5	89					
Future Vol, veh/h	99	0	85	123	5	89					
Conflicting Peds, #/hr	0	0	0	0	0	0					
Sign Control	Free	Free	Free	Free	Stop	Stop					
RT Channelized	-	None	-	None	-	None					
Storage Length	-	-	-	-	0	-					
Veh in Median Storage, #	0	-	-	0	0	-					
Grade, %	0	-	-	0	0	-					
Peak Hour Factor	92	92	92	92	92	92					
Heavy Vehicles, %	2	2	2	2	2	2					
Mvmt Flow	108	0	92	134	5	97					
Major/Minor											
	Major1		Major2		Minor1						
Conflicting Flow All	0	0	108	0	426	108					
Stage 1	-	-	-	-	108	-					
Stage 2	-	-	-	-	318	-					
Critical Hwy	-	-	4.12	-	6.42	6.22					
Critical Hwy Stg 1	-	-	-	-	5.42	-					
Critical Hwy Stg 2	-	-	-	-	5.42	-					
Follow-up Hwy	-	-	2.218	-	3.518	3.318					
Pot Cap-1 Maneuver	-	-	1483	-	585	946					
Stage 1	-	-	-	-	916	-					
Stage 2	-	-	-	-	738	-					
Platoon blocked, %	-	-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	1483	-	546	946					
Mov Cap-2 Maneuver	-	-	-	-	546	-					
Stage 1	-	-	-	-	916	-					
Stage 2	-	-	-	-	689	-					
Approach											
	EB		WB		NB						
HCM Control Delay, s	0		3.1		9.5						
HCM LOS					A						
Minor Lane/Major Mvmt											
	NBLn1	EBT	EBR	WBL	WBT						
Capacity (veh/h)	911	-	-	1483	-						
HCM Lane V/C Ratio	0.112	-	-	0.062	-						
HCM Control Delay (s)	9.5	-	-	7.6	0						
HCM Lane LOS	A	-	-	A	A						
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-						

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	88	28	16	703	44	539	14	1067	168	440	1467	73
Future Volume (veh/h)	88	28	16	703	44	539	14	1067	168	440	1467	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	97	31	18	807	0	0	15	1173	185	484	1612	80
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	867	0	387	30	1234	384	734	3337	1039
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.28	0.44	0.44
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	97	0	49	807	0	0	15	1173	185	484	1612	80
Grp Sat Flow(s), veh/h	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.8	3.2
Cycle Q Clear(g, c), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.8	3.2
Prop In Lane	1.00	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	867	0	387	30	1234	384	734	3337	1039
V/C Ratio(X)	1.09	0.00	0.56	0.93	0.00	0.00	0.51	0.95	0.48	0.66	0.48	0.08
Avail Cap(c.a), veh/h	89	0	87	867	0	396	81	1234	384	734	3337	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	41.0	35.7	32.9	17.5	11.5
Incr Delay (d2), s/veh	123.2	0.0	7.8	15.9	0.0	0.0	12.7	16.2	4.3	1.6	0.4	0.1
Initial Q Delay(d3), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	5.7	0.0	1.6	13.9	0.0	0.0	0.6	13.5	5.3	13.3	11.7	1.4
LnGrp Delay(d), s/veh	175.6	0.0	58.9	56.6	0.0	0.0	66.3	57.2	40.0	34.5	17.9	11.6
LnGrp LOS	F	E	E	E	E	E	E	D	C	C	B	B
Approach Vol, veh/h	146	807										
Approach Delay, s/veh	136.4	56.6										
Approach LOS	F	E										
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	51.3	32.5	10.2	5.8	78.0	32.7						
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7	4.0	5.8	5.8						
Max Green Setting (Gmax), s	30.0	* 27	* 5.5	5.0	51.7	27.5						
Max Q Clear Time (g_c+I1), s	28.5	27.0	7.5	2.9	26.8	26.5						
Green Ext Time (p_c), s	0.3	0.0	0.0	0.0	14.9	0.4						
Intersection Summary												
HCM 2010 Ctrl Delay	41.7											
HCM 2010 LOS	D											
Notes												

12/1/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	9	11	5	371	54	565	111	1222	351	338	1593	469
Future Volume (veh/h)	9	11	5	371	54	565	111	1222	351	338	1593	469
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	12	6	412	0	668	123	1358	0	376	1770	521
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	46	49	41	898	0	802	520	1848	575	306	1875	584
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.30	0.73	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	10	12	6	412	0	668	123	1358	0	376	1770	521
Grp Sat Flow(s), veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	0.6	0.7	0.4	10.8	0.0	22.0	3.0	17.2	0.0	19.0	37.1	34.1
Cycle Q Clear(g.s), s	0.6	0.7	0.4	10.8	0.0	22.0	3.0	17.2	0.0	19.0	37.1	34.1
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	49	41	898	0	802	520	1848	575	306	1875	584
V/C Ratio(X)	0.22	0.25	0.15	0.46	0.00	0.83	0.24	0.73	0.00	1.23	0.94	0.89
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	520	1848	575	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.57	0.57	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	52.4	34.7	0.0	38.9	33.6	11.9	0.0	45.5	33.6
Incr Delay (d2), s/veh	2.3	2.6	1.6	0.4	0.0	3.9	0.1	1.5	0.0	12.6	11.2	18.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/InQ	3	0.4	0.2	5.3	0.0	10.0	1.4	8.0	0.0	20.1	19.3	17.9
LnGrp Delay(d), s/veh	54.8	55.1	53.9	35.1	0.0	42.8	33.7	13.4	0.0	173.1	44.8	51.2
LnGrp LOS	D	E	D	D	D	D	C	B	F	D	D	D
Approach Vol, veh/h	28	1080	1481	2667								
Approach Delay, s/veh	54.7	39.8	15.1	64.2								
Approach LOS	D	D	B	E								
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	45.8	7.6	22.4	46.4	33.6							
Change Period (Y+Rc), s	4.0	5.8	5.8	5.8	5.8							
Max Green Setting (Gmax), s	26.7	5.0	5.0	41.0	39.0							
Max Q Clear Time (g_c+d), s	19.2	2.7	5.0	39.1	24.0							
Green Ext Time (p_c), s	0.0	4.9	0.0	0.0	1.5	3.9						

Intersection Summary

HCM 2010 Ctrl Delay 45.3

HCM 2010 LOS D

Notes

Health Club within The Shops at Rossmoor TIA 5:00 pm 3/23/2016 Opening Year AM Peak Hour

LSA Associates, Inc. - DL

Opening Year NP AM Mon Feb 20, 2017 15:14:26 Page 2-1

Health Club within the Shops at Rossmoor

Opening Year (2018) No Project

AM Peak Hour

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

Intersection #3 Seal Beach Blvd/Lampson Ave												

Cycle (sec):	100	Critical Vol./Cap.(X):										
Loss Time (sec):	10	Average Delay (sec/veh):										
Optimal Cycle:	72	Level of Service:										

Street Name:	Seal Beach Blvd	Lampson Ave										
Approach:	North Bound	South Bound	East Bound	West Bound								
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	
Rights:	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	

Volume Module:	0 1491 308 336 1709	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	
Base Vol:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Growth Adj:	0 1491 308 336 1709	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	
Initial Bse:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
User Adj:	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91
PHF Adj:	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91	0.91 0.91 0.91 0.91 0.91
PHF Volume:	0 1642 339 370 1882	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	
Reduced Vol:	0 1642 339 370 1882	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 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 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 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 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
Final Volume:	0 1642 339 370 1882	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	
OvAdjVol:	0 1642 339 370 1882	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	

Saturation Flow Module:	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700	1700 1700 1700 1700 1700
Sat/Lane:	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00
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 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00 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 0 0 3.00 1.00	2.00 3.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Final Sat.:	0 5100 1700 3400 5100	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	

Capacity Analysis Module:	0.00 0.32 0.20 0.11 0.37	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Vol/Sat:	0.00 0.32 0.20 0.11 0.37	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
OvAdjVol/S:	0 1642 339 370 1882	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	
Crit Moves:	0 1642 339 370 1882	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	

0.29												

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Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
AM Peak Hour

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.650
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0
Volume Module:
Base Vol: 381 1687 47 4 1390 53 107 3 573 66 13 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 381 1687 47 4 1390 53 107 3 573 66 13 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88
PHF Volume: 433 1919 53 5 1581 60 122 3 652 75 15 2
Reduc Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 433 1919 53 5 1581 60 122 3 652 75 15 2
PCE Adj: 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
FinalVolume: 433 1919 53 5 1581 60 122 3 652 75 15 2
OvAdjVol:
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05
Final Sat.: 3400 4962 138 1700 4913 187 1654 46 3400 2770 546 84
Capacity Analysis Module:
Vol/Sat: 0.13 0.39 0.39 0.00 0.32 0.32 0.07 0.07 0.19 0.03 0.03 0.03
OvAdjV/S:
Crit Moves: *****

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Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
AM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.507
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Include Include
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 56 1655 31 21 1424 32 21 4 14 24 2 21
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 56 1655 31 21 1424 32 21 4 14 24 2 21
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 62 1831 34 23 1575 35 23 4 15 27 2 23
Reduc Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 62 1831 34 23 1575 35 23 4 15 27 2 23
PCE Adj: 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
FinalVolume: 62 1831 34 23 1575 35 23 4 15 27 2 23
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.94 0.06 1.00 2.93 0.07 1.00 0.22 0.78 1.00 0.09 0.91
Final Sat.: 1700 5006 94 1700 4988 112 1700 378 1322 1700 148 1552
Capacity Analysis Module:
Vol/Sat: 0.04 0.37 0.37 0.01 0.32 0.32 0.01 0.01 0.02 0.01 0.01 0.01
Crit Moves: *****

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Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
AM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Include Permitted Permitted
Rights: Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 66 1627 15 19 1447 71 78 7 79 17 10 39
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 66 1627 15 19 1447 71 78 7 79 17 10 39
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 72 1778 16 21 1581 78 85 8 86 19 11 43
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 72 1778 16 21 1581 78 85 8 86 19 11 43
PCE Adj: 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
Final Volume: 72 1778 16 21 1581 78 85 8 86 19 11 43
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.97 0.03 1.00 2.86 0.14 1.00 0.08 0.92 1.00 0.20 0.80
Final Sat.: 1700 5053 47 1700 4861 239 1700 138 1562 1700 347 1353
Capacity Analysis Module:
Vol/Sat: 0.04 0.35 0.35 0.01 0.33 0.33 0.05 0.06 0.06 0.01 0.03 0.03
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
AM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.759
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Street Name: Seal Beach Blvd-Los Alamitos Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Include Permitted Permitted
Rights: Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 147 1548 26 29 1405 172 282 18 98 71 22 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 147 1548 26 29 1405 172 282 18 98 71 22 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94
PHF Volume: 157 1656 28 31 1503 184 302 19 105 76 24 31
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 157 1656 28 31 1503 184 302 19 105 76 24 31
PCE Adj: 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
Final Volume: 157 1656 28 31 1503 184 302 19 105 76 24 31
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.95 0.05 1.00 2.67 0.33 1.00 0.16 0.84 0.76 0.24 1.00
Final Sat.: 1700 5016 84 1700 4544 556 1700 264 1436 1298 402 1700
Capacity Analysis Module:
Vol/Sat: 0.09 0.33 0.33 0.02 0.33 0.33 0.18 0.07 0.07 0.04 0.06 0.02
Crit Moves: ****

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection										
Int Delay, s/veh		1.3								
Movement										
Traffic Vol, veh/h	611	4	28	407	8	71				
Future Vol, veh/h	611	4	28	407	8	71				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	79	79	79	79	79	79				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	773	5	35	515	10	90				
Major/Minor										
Major1		Major2		Minor1						
Conflicting Flow All	0	0	778	0	1104	389				
Stage 1	-	-	-	-	776	-				
Stage 2	-	-	-	-	328	-				
Critical Hdwy	-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1	-	-	-	-	5.84	-				
Critical Hdwy Stg 2	-	-	-	-	5.84	-				
Follow-up Hdwy	-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver	-	-	834	-	205	610				
Stage 1	-	-	-	-	414	-				
Stage 2	-	-	-	-	702	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	834	-	193	610				
Mov Cap-2 Maneuver	-	-	-	-	193	-				
Stage 1	-	-	-	-	414	-				
Stage 2	-	-	-	-	661	-				
Approach										
EB		WB		NB						
HCM Control Delay, s		0.8		14						
HCM LOS		B		B						
Minor Lane/Major Mvmt										
NBLn1	EBT	EBR	WBL	WBT						
500	-	-	834	-						
Capacity (veh/h)	0.2	-	0.042	-						
HCM Lane V/C Ratio	0.2	-	0.042	-						
HCM Control Delay (s)	14	-	9.5	0.2						
HCM Lane LOS	B	-	A	A						
HCM 95th %tile Q(veh)	0.7	-	0.1	-						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection										
Intersection Delay, s/veh		11.5								
Intersection LOS		B								
Movement										
EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT
Traffic Vol, veh/h	0	55	6	127	0	2	3	1	0	109
Future Vol, veh/h	0	55	6	127	0	2	3	1	0	109
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.92	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	8	161	0	3	4	1	0	138
Number of Lanes	0	0	1	0	0	0	1	0	0	2
Approach										
	EB		WB		WB		EB		NB	
Opposing Approach	WB				EB				SB	
Opposing Lanes	1				1				2	
Conflicting Approach Left	SB				NB				EB	
Conflicting Lanes Left	2				2				1	
Conflicting Approach Right	NB				SB				WB	
Conflicting Lanes Right	2				2				1	
HCM Control Delay	11.4				9.4				11.9	
HCM LOS	B				A				B	
Lane										
	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2		
Vol Left, %	56%	0%	29%	33%	0%	0%				
Vol Thru, %	44%	98%	3%	50%	100%	78%				
Vol Right, %	0%	2%	68%	17%	0%	22%				
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	194	87	188	6	193	123				
LT Vol	109	0	55	2	0	0				
Through Vol	85	85	6	3	193	96				
RT Vol	0	2	127	1	0	27				
Lane Flow Rate	245	109	238	8	244	156				
Geometry Grp	7	7	2	2	7	7				
Degree of Utl (X)	0.411	0.174	0.358	0.013	0.387	0.241				
Departure Headway (Hd)	6.034	5.733	5.409	6.253	5.714	5.559				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes				
Cap	598	626	666	571	632	646				
Service Time	3.761	3.46	3.439	4.301	3.441	3.286				
HCM Lane V/C Ratio	0.41	0.174	0.357	0.014	0.386	0.241				
HCM Control Delay	12.9	9.7	11.4	9.4	12	10.1				
HCM Lane LOS	B	A	B	A	B	B				
HCM 95th-tile Q	2	0.6	1.6	0	1.8	0.9				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	0	289	27	
Future Vol, veh/h	0	0	289	27	
Peak Hour Factor	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	0	366	34	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach				SB	
Opposing Lanes				NB	
Conflicting Approach Left				WB	
Conflicting Lanes Left				1	
Conflicting Approach Right				EB	
Conflicting Lanes Right				1	
HCM Control Delay				11.3	
HCM LOS				B	
ane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection																	
Intersection Delay, s/veh 12																	
Intersection LOS B																	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	98	62	89	0	13	42	31	0	39	183	21	0	24	205	66	
Future Vol, veh/h	0	98	62	89	0	13	42	31	0	39	183	21	0	24	205	66	
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	118	75	107	0	16	51	37	0	47	220	25	0	29	247	80	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2	
Approach	EB		WB		NB		SB		NB		SB		SB				
Opposing Approach	WB		EB		SB		NB		SB		NB		SB				
Opposing Lanes	1		1		2		2		2		2		2				
Conflicting Approach Left	SB		NB		EB		WB		EB		WB		WB				
Conflicting Lanes Left	2		2		1		1		1		1		1				
Conflicting Approach Right	NB		SB		WB		EB		WB		EB		EB				
Conflicting Lanes Right	2		2		1		1		1		1		1				
HCM Control Delay	13.8		10.4		11.3		11.6		11.3		11.6		11.6				
HCM LOS	B		B		B		B		B		B		B				
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2						
Vol Left, %	30%		0%		39%		15%		19%		0%						
Vol Thru, %	70%		81%		25%		49%		81%		61%						
Vol Right, %	0%		19%		36%		36%		0%		39%						
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop						
Traffic Vol by Lane	131		113		249		86		127		169						
LT Vol	39		0		98		13		24		0						
Through Vol	92		92		62		42		103		103						
RT Vol	0		21		89		31		0		66						
Lane Flow Rate	157		136		300		104		152		203						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.281		0.232		0.475		0.175		0.267		0.334						
Departure Headway (Hd)	6.436		6.15		5.694		6.072		6.302		5.927						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	557		581		630		587		568		605						
Service Time	4.201		3.915		3.752		4.149		4.064		3.689						
HCM Lane V/C Ratio	0.282		0.234		0.476		0.177		0.268		0.336						
HCM Control Delay	11.7		10.8		13.8		10.4		11.4		11.7						
HCM Lane LOS	B		B		B		B		B		B						
HCM 95th-ile Q	1.1		0.9		2.6		0.6		1.1		1.5						

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year AM Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	12.9											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	5	24	2	0	136	18	147	0	0	140	221
Future Vol, veh/h	0	5	24	2	0	136	18	147	0	0	140	221
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	172	23	186	0	0	177	280
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	EB	WB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	10.9	12.6	12.6	13.7	13.7
HCM LOS	B	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	0%	53%	0%	53%	0%	53%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%	47%	97%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	268	31	154	147	142	69	147	142	69
LT Vol	0	0	5	136	0	75	0	75	0	0
Through Vol	93	47	24	18	0	67	67	67	67	67
RT Vol	0	221	2	0	147	0	2	147	0	2
Lane Flow Rate	118	339	39	195	186	179	87	186	179	87
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.205	0.534	0.079	0.379	0.302	0.335	0.155	0.302	0.335	0.155
Departure Headway (Hd)	6.257	5.67	7.227	6.994	5.837	6.742	6.462	5.837	6.742	6.462
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	572	634	493	513	532	554	554	532	554	554
Service Time	4.012	3.425	5.313	4.751	3.593	4.507	4.216	3.593	4.507	4.216
HCM Lane V/C Ratio	0.206	0.535	0.079	0.38	0.303	0.336	0.157	0.303	0.336	0.157
HCM Control Delay	10.6	14.8	10.9	14	11.1	12.9	10.4	11.1	12.9	10.4
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	3.2	0.3	1.8	1.3	1.5	0.5	1.3	1.5	0.5

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year AM Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	12.9											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	5	24	2	0	136	18	147	0	0	140	221
Future Vol, veh/h	0	5	24	2	0	136	18	147	0	0	140	221
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	6	30	3	0	172	23	186	0	0	177	280
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	WB	WB	NB	NB
Opposing Approach	WB	EB	EB	WB	SB
Opposing Lanes	2	1	1	2	2
Conflicting Approach Left	SB	NB	NB	EB	EB
Conflicting Lanes Left	2	2	2	1	1
Conflicting Approach Right	NB	SB	SB	WB	WB
Conflicting Lanes Right	2	2	2	2	2
HCM Control Delay	10.9	12.6	12.6	13.7	13.7
HCM LOS	B	B	B	B	B

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	16%	0%	53%	0%	53%	0%	53%	0%
Vol Thru, %	100%	17%	77%	12%	0%	47%	97%	0%	47%	97%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	268	31	154	147	142	69	147	142	69
LT Vol	0	0	5	136	0	75	0	75	0	0
Through Vol	93	47	24	18	0	67	67	67	67	67
RT Vol	0	221	2	0	147	0	2	147	0	2
Lane Flow Rate	118	339	39	195	186	179	87	186	179	87
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.205	0.534	0.079	0.379	0.302	0.335	0.155	0.302	0.335	0.155
Departure Headway (Hd)	6.257	5.67	7.227	6.994	5.837	6.742	6.462	5.837	6.742	6.462
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	572	634	493	513	532	554	554	532	554	554
Service Time	4.012	3.425	5.313	4.751	3.593	4.507	4.216	3.593	4.507	4.216
HCM Lane V/C Ratio	0.206	0.535	0.079	0.38	0.303	0.336	0.157	0.303	0.336	0.157
HCM Control Delay	10.6	14.8	10.9	14	11.1	12.9	10.4	11.1	12.9	10.4
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B
HCM 95th-tile Q	0.8	3.2	0.3	1.8	1.3	1.5	0.5	1.3	1.5	0.5

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection										
Intersection Delay, s/veh 7.7										
Intersection LOS A										
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR	
Traffic Vol, veh/h	0	100	7	0	6	87	0	4	12	
Future Vol, veh/h	0	100	7	0	6	87	0	4	12	
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	118	8	0	7	102	0	5	14	
Number of Lanes	0	1	0	0	0	1	0	1	0	
Approach										
Approach	EB			WB			NB			
Opposing Approach	WB			EB			NB			
Opposing Lanes	1			1			0			
Conflicting Approach Left				NB			EB			
Conflicting Lanes Left	0			1			1			
Conflicting Approach Right	NB						WB			
Conflicting Lanes Right	1			0			1			
HCM Control Delay	7.7			7.7			7.1			
HCM LOS	A			A			A			
Lane										
Lane	NBLn1			EBLn1			WBLn1			
Vol Left, %	25%			0%			6%			
Vol Thru, %	0%			93%			94%			
Vol Right, %	75%			7%			0%			
Sign Control	Stop			Stop			Stop			
Traffic Vol by Lane	16			107			93			
LT Vol	4			0			6			
Through Vol	0			100			87			
RT Vol	12			7			0			
Lane Flow Rate	19			126			109			
Geometry Grp	1			1			1			
Degree of Util (X)	0.021			0.14			0.124			
Departure Headway (Hd)	4.036			4.01			4.075			
Convergence, Y/N	Yes			Yes			Yes			
Cap	892			893			879			
Service Time	2.036			2.04			2.106			
HCM Lane V/C Ratio	0.021			0.141			0.124			
HCM Control Delay	7.1			7.7			7.7			
HCM Lane LOS	A			A			A			
HCM 95th-tile Q	0.1			0.5			0.4			

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh 8.7															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	35	99	14	0	74	59	52	0	13	16	31	0	60	16
Future Vol, veh/h	0	35	99	14	0	74	59	52	0	13	16	31	0	60	16
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	106	15	0	80	63	56	0	14	17	33	0	65	17
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1
Approach	EB			WB			NB			SB					
Opposing Approach	WB			EB			SB			NB					
Opposing Lanes	1			2			1			1					
Conflicting Approach Left	SB			NB			EB			WB					
Conflicting Lanes Left	1			1			2			1					
Conflicting Approach Right	NB			SB			WB			EB					
Conflicting Lanes Right	1			1			1			2					
HCM Control Delay	8.6			9.1			8.1			8.7					
HCM LOS	A			A			A			A					
Lane	NBLn1			EBLn1			WBLn1			SBLn1					
Vol Left, %	22%			41%			0%			66%					
Vol Thru, %	27%			59%			78%			32%					
Vol Right, %	52%			0%			22%			16%					
Sign Control	Stop			Stop			Stop			Stop					
Traffic Vol by Lane	60			85			64			185					
LT Vol	13			35			0			74					
Through Vol	16			50			50			59					
RT Vol	31			0			14			52					
Lane Flow Rate	65			91			68			199					
Geometry Grp	2			7			7			5					
Degree of Util (X)	0.083			0.134			0.094			0.25					
Departure Headway (Hd)	4.638			5.301			4.938			4.532					
Convergence, Y/N	Yes			Yes			Yes			Yes					
Cap	771			676			725			792					
Service Time	2.677			3.035			2.672			2.564					
HCM Lane V/C Ratio	0.084			0.135			0.094			0.251					
HCM Control Delay	8.1			8.9			8.2			9.1					
HCM Lane LOS	A			A			A			A					
HCM 95th-tile Q	0.3			0.5			0.3			1					

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15			
Future Vol, veh/h	0	71	37	0	16	32	0	28	15			
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	82	43	0	18	37	0	32	17			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	8.1				7.1				7.7			
HCM LOS	A				A				A			
Lane	NBLn1WBLn1WBLn2				SBLn1							
Vol Left, %	0%				0%				65%			
Vol Thru, %	33%				0%				35%			
Vol Right, %	67%				100%				0%			
Sign Control	Stop				Stop				Stop			
Traffic Vol by Lane	48				71				43			
LT Vol	0				71				0			
Through Vol	16				0				15			
RT Vol	32				0				37			
Lane Flow Rate	55				82				49			
Geometry Grp	2				7				2			
Degree of Util (X)	0.06				0.118				0.047			
Departure Headway (Hd)	3.897				5.216				4.014			
Convergence, Y/N	Yes				Yes				Yes			
Cap	924				685				885			
Service Time	1.899				2.97				1.768			
HCM Lane V/C Ratio	0.06				0.12				0.049			
HCM Control Delay	7.1				8.7				7.7			
HCM Lane LOS	A				A				A			
HCM 95th-ile Q	0.2				0.4				0.1			

Intersection												
Int Delay, s/veh 0.7												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	111	0	9	96	0	11						
Future Vol, veh/h	111	0	9	96	0	11						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	89	89	89	89	89	89						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	125	0	10	108	0	12						
Major/Minor												
	Major1			Major2			Minor1					
Conflicting Flow All	0	0	125	0	253	125						
Stage 1	-	-	-	-	125	-						
Stage 2	-	-	-	-	128	-						
Critical Hdwy	-	-	4.12	-	6.42	6.22						
Critical Hdwy Stg 1	-	-	-	-	5.42	-						
Critical Hdwy Stg 2	-	-	-	-	5.42	-						
Follow-up Hdwy	-	-	2.218	-	3.518	3.318						
Pot Cap-1 Maneuver	-	-	1462	-	736	926						
Stage 1	-	-	-	-	901	-						
Stage 2	-	-	-	-	892	-						
Platoon blocked, %	-	-	-	-	898	-						
Mov Cap-1 Maneuver	-	-	1462	-	731	926						
Mov Cap-2 Maneuver	-	-	-	-	731	-						
Stage 1	-	-	-	-	901	-						
Stage 2	-	-	-	-	892	-						
Approach												
	EB			WB			NB					
HCM Control Delay, s	0			0.6			8.9					
HCM LOS				A			A					
Minor Lane/Major Mvmt												
	NBLn1			EBT			WBL					
Capacity (veh/h)	926			-			1462					
HCM Lane V/C Ratio	0.013			-			0.007					
HCM Control Delay (s)	8.9			-			7.5					
HCM Lane LOS	A			-			A					
HCM 95th %ile Q(veh)	0			-			0					

HCM 2010 Signalized Intersection Summary 1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	188	30	20	324	35	530	11	1464	365	529	1080	128
Traffic Volume (veh/h)	188	30	20	324	35	530	11	1464	365	529	1080	128
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	173	31	21	360	0	0	11	1509	376	545	1113	132
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	419	0	187	23	1595	497	583	3284	1023
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31	0.66	1.00	1.00
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	173	0	52	360	0	0	11	1509	376	545	1113	132
Grp Sat Flow(s), veh/hln	1774	0	1739	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	31.9	23.5	30.0	0.0	0.0
Cycle Q Clear(g, c), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	31.9	23.5	30.0	0.0	0.0
Prop In Lane	1.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	419	0	187	23	1595	497	583	3284	1023
V/C Ratio(X)	1.36	0.00	0.42	0.86	0.00	0.00	0.48	0.95	0.76	0.93	0.34	0.13
Avail Cap(c, a), veh/h	127	0	125	426	0	190	81	1600	498	583	3284	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.8	34.0	17.8	0.0	0.0
Incr Delay (d2), s/veh	203.5	0.0	2.2	15.9	0.0	0.0	14.6	12.9	10.3	20.3	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	11.1	0.0	1.6	6.3	0.0	0.0	0.4	16.7	11.7	17.5	0.1	0.1
LnGrp Delay(d), s/veh	254.5	0.0	51.0	63.5	0.0	0.0	68.5	49.8	44.3	38.1	0.2	0.2
LnGrp LOS	F	D	E	E	D	E	E	D	D	D	A	A
Approach Vol, veh/h	225			360				1896			1790	
Approach Delay, s/veh	207.5			63.5				48.8			11.8	
Approach LOS	F			E				D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	42.0	40.3		12.6	5.4	76.8		18.8				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2				
Max Q Clear Time (g_c+I1), s	32.0	33.9		9.9	2.7	2.0		13.0				
Green Ext Time (p_c), s	0.5	0.6		0.0	0.0	13.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	42.9											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary 2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	78	73	88	197	15	683	41	1564	561	1323	1464	375
Traffic Volume (veh/h)	78	73	88	197	15	683	41	1564	561	1323	1464	375
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	80	75	91	203	0	714	42	1612	0	333	1509	387
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	930	0	830	489	1890	588	242	1777	553
Arrive On Green	0.05	0.05	0.05	0.26	0.00	0.26	0.28	0.74	0.00	0.14	0.35	0.36
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	80	75	91	203	0	714	42	1612	0	333	1509	387
Grp Sat Flow(s), veh/hln	1863	1863	1863	1863	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g, s), s	5.0	4.4	5.0	4.9	0.0	23.6	1.0	24.5	0.0	15.0	30.2	23.1
Cycle Q Clear(g, c), s	5.0	4.4	5.0	4.9	0.0	23.6	1.0	24.5	0.0	15.0	30.2	23.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	930	0	830	489	1890	588	242	1777	553
V/C Ratio(X)	0.99	0.89	1.26	0.22	0.00	0.86	0.09	0.85	0.00	1.38	0.85	0.70
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	489	1890	588	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.52	0.52	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.2	52.5	31.8	0.0	38.7	34.1	12.0	0.0	47.5	33.1	30.8	0.0
Incr Delay (d2), s/veh	97.4	61.6	192.8	0.1	0.0	5.3	0.0	2.8	0.0	193.3	5.3	7.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.7	6.0	2.4	0.0	10.9	0.5	11.2	0.0	20.3	15.0	11.2	0.0
LnGrp Delay(d), s/veh	149.9	113.8	245.3	31.9	0.0	44.0	34.2	14.8	0.0	240.8	38.4	38.0
LnGrp LOS	F	F	F	C	D	C	D	B	F	D	D	D
Approach Vol, veh/h	246			917				1654			2229	
Approach Delay, s/veh	174.2			41.3				15.3			68.5	
Approach LOS	F			D				B			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	46.7	9.7	21.4	44.2				34.6				
Change Period (Y+Rc), s	5.8	* 4.7	5.8	* 5.8				5.8				
Max Green Setting (Gmax), s	30.7	* 5.0	5.0	* 41				39.0				
Max Q Clear Time (g_c+I1), s	26.5	7.0	3.0	32.2				25.6				
Green Ext Time (p_c), s	3.3	0.0	3.3	0.0	1.7	6.3		3.2				
Intersection Summary												
HCM 2010 Ctrl Delay	51.3											
HCM 2010 LOS	D											
Notes												

Opening Year NP PM Mon Feb 20, 2017 15:14:44 Page 2-1
Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
PM Peak Hour

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

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.807
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 68 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Permitted
Rights: Ovl Include Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:
Base Vol: 0 1744 549 640 1628 0 0 0 0 545 0 481
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 1744 549 640 1628 0 0 0 0 545 0 481
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 0 1785 562 655 1666 0 0 0 0 558 0 492
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1785 562 655 1666 0 0 0 0 558 0 492
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 1785 562 655 1666 0 0 0 0 558 0 492
OvlAdjVol: 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00
Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:
Vol/Sat: 0.00 0.35 0.33 0.19 0.33 0.00 0.00 0.00 0.00 0.16 0.00 0.29
OvlAdjV/S: 0.00 0.35 0.33 0.19 0.33 0.00 0.00 0.00 0.00 0.16 0.00 0.29
Crit Moves: ****

Opening Year NP PM Mon Feb 20, 2017 15:14:44 Page 3-1
Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
PM Peak Hour

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.734
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected
Rights: Include Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:
Base Vol: 410 1691 133 5 1690 70 95 0 389 195 31 5
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: 410 1691 133 5 1690 70 95 0 389 195 31 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 441 1818 143 5 1817 75 102 0 418 210 33 5
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 441 1818 143 5 1817 75 102 0 418 210 33 5
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: 441 1818 143 5 1817 75 102 0 418 210 33 5
OvlAdjVol: 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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: 2.00 2.78 0.22 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04
Final Sat.: 3400 4728 372 1700 4897 203 1700 0 3400 2870 456 74

Capacity Analysis Module:
Vol/Sat: 0.13 0.38 0.38 0.00 0.37 0.37 0.06 0.00 0.12 0.07 0.07 0.07
OvlAdjV/S: 0.13 0.38 0.38 0.00 0.37 0.37 0.06 0.00 0.12 0.07 0.07 0.07
Crit Moves: ****

Opening Year NP PM Mon Feb 20, 2017 15:14:44 Page 4-1
Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
PM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Include Permitted Permitted
Rights: Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 207 1470 85 79 1406 95 101 28 187 140 47 60
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 1470 85 79 1406 95 101 28 187 140 47 60
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 219 1554 90 84 1486 100 107 30 198 148 50 63
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 219 1554 90 84 1486 100 107 30 198 148 50 63
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: 219 1554 90 84 1486 100 107 30 198 148 50 63

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.64 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56
Final Sat.: 1700 4821 279 1700 4777 323 1700 221 1479 1700 747 953

Capacity Analysis Module:
Vol/Sat: 0.13 0.32 0.32 0.05 0.31 0.31 0.06 0.13 0.13 0.09 0.07 0.07
Crit Moves: ****

Opening Year NP PM Mon Feb 20, 2017 15:14:44 Page 5-1
Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
PM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: B

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Include Permitted Permitted
Rights: Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 161 1591 24 36 1603 192 186 1 131 15 1 16
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 1591 24 36 1603 192 186 1 131 15 1 16
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 170 1684 25 38 1696 203 197 1 139 16 1 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 170 1684 25 38 1696 203 197 1 139 16 1 17
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: 170 1684 25 38 1696 203 197 1 139 16 1 17

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.96 0.04 1.00 2.68 0.32 1.00 0.01 0.99 1.00 0.06 0.94
Final Sat.: 1700 5024 76 1700 4554 546 1700 13 1687 1700 100 1600

Capacity Analysis Module:
Vol/Sat: 0.10 0.34 0.34 0.02 0.37 0.37 0.12 0.08 0.08 0.01 0.01 0.01
Crit Moves: ****

Opening Year NP PM Mon Feb 20, 2017 15:14:44 Page 6-1

Health Club within the Shops at Rossmore
Opening Year (2018) No Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.698
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: B

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - I - R L - I - R L - I - R L - I - R

Control: Protected Protected Protected Permitted Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 131 1560 58 24 1726 177 173 9 89 48 3 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: 131 1560 58 24 1726 177 173 9 89 48 3 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: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 135 1603 60 25 1774 182 178 9 91 49 3 21
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 135 1603 60 25 1774 182 178 9 91 49 3 21
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
M/F Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 135 1603 60 25 1774 182 178 9 91 49 3 21

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.69 0.11 1.00 2.72 0.28 1.00 0.09 0.91 0.94 0.06 1.00
Final Sat.: 1700 4917 183 1700 4626 474 1700 156 1544 1600 100 1700

Capacity Analysis Module:
Vol/Sat: 0.08 0.33 0.33 0.01 0.38 0.38 0.10 0.06 0.06 0.03 0.03 0.01
Crit Moves: ****

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HCM 2010 TWSC 8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection		1.2									
Int Delay, s/veh											
Movement	EBT	EBR	WBL	WBT	NBL	NBR					
Traffic Vol, veh/h	447	7	54	458	3	49					
Future Vol, veh/h	447	7	54	458	3	49					
Conflicting Peds, #/hr	0	0	0	0	0	0					
Sign Control	Free	Free	Free	Free	Stop	Stop					
RT Channelized	- None	- None	- None	- None	-	None					
Storage Length	-	-	-	-	0	-					
Veh in Median Storage, #	0	-	-	0	0	-					
Grade, %	0	-	-	0	0	-					
Peak Hour Factor	90	90	90	90	90	90					
Heavy Vehicles, %	2	2	2	2	2	2					
Mvmt Flow	497	8	60	509	3	54					
Major/Minor	Major1		Major2		Minor1						
Conflicting Flow All	0	0	504	0	875	252					
Stage 1	-	-	-	-	501	-					
Stage 2	-	-	-	-	374	-					
Critical Hdwy	-	-	4.14	-	6.84	6.94					
Critical Hdwy Stg 1	-	-	-	-	5.84	-					
Critical Hdwy Stg 2	-	-	-	-	5.84	-					
Follow-up Hdwy	-	-	2.22	-	3.52	3.32					
Pot Cap-1 Maneuver	-	-	1057	-	289	748					
Stage 1	-	-	-	-	574	-					
Stage 2	-	-	-	-	666	-					
Platoon blocked, %	-	-	-	-	-	-					
Mov Cap-1 Maneuver	-	-	1057	-	266	748					
Mov Cap-2 Maneuver	-	-	-	-	266	-					
Stage 1	-	-	-	-	574	-					
Stage 2	-	-	-	-	613	-					
Approach	EB	WB	WB	NB							
HCM Control Delay, s	0	1.2	1.2	10.8							
HCM LOS	B										
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT						
Capacity (veh/h)	677	-	-	1057	-						
HCM Lane V/C Ratio	0.085	-	-	0.057	-						
HCM Control Delay (s)	10.8	-	-	8.6	0.3						
HCM Lane LOS	B	-	-	A	-						
HCM 95th %ile Q(veh)	0.3	-	-	0.2	-						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh												9.6	
Intersection LOS												A	
Movement													
Traffic Vol, veh/h	0	30	4	47	0	2	5	10	0	68	216	NBT	NBR
Future Vol, veh/h	0	30	4	47	0	2	5	10	0	68	216		3
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	5	56	0	2	6	12	0	81	257	4	4
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	0
Approach													
Approach	EB		EB		WB		WB		EB		NB		SB
Opposing Approach	WB		WB		EB		EB		SB		SB		
Opposing Lanes	1		1		1		1		2		2		
Conflicting Approach Left	SB		SB		NB		NB		EB		EB		
Conflicting Lanes Left	2		2		2		2		1		1		
Conflicting Approach Right	NB		NB		SB		SB		WB		WB		
Conflicting Lanes Right	2		2		2		2		1		1		
HCM Control Delay	9.1		9.1		8.5		8.5		10		10		
HCM LOS	A		A		A		A		A		A		
Lane													
Lane	NBLn1	NBLn2	EBLn1	EBLn1	WBLn1	WBLn1	WBLn2	SBLn1	SBLn2				
Vol Left, %	39%	0%	37%	12%	6%	0%	0%						
Vol Thru, %	61%	97%	5%	29%	94%	73%							
Vol Right, %	0%	3%	58%	59%	0%	27%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	176	111	81	17	125	162							
LT Vol	68	0	30	2	7	0							
Through Vol	108	108	4	5	118	118							
RT Vol	0	3	47	10	0	44							
Lane Flow Rate	210	132	96	20	149	193							
Geometry Grp	7	7	2	2	7	7							
Degree of Util (X)	0.311	0.188	0.139	0.03	0.215	0.266							
Departure Headway (Hd)	5.345	5.131	5.178	5.258	5.191	4.972							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	670	696	689	675	689	719							
Service Time	3.096	2.883	3.237	3.335	2.942	2.723							
HCM Lane V/C Ratio	0.313	0.19	0.139	0.03	0.216	0.268							
HCM Control Delay	10.5	9.1	9.1	8.5	9.4	9.5							
HCM Lane LOS	B	A	A	A	A	A							
HCM 95th-tile Q	1.3	0.7	0.5	0.1	0.8	1.1							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh													
Intersection LOS													
Movement													
	SBU	SBL	SBT	SBR									
Traffic Vol, veh/h	0	7	236	44									
Future Vol, veh/h	0	7	236	44									
Peak Hour Factor	0.92	0.84	0.84	0.84									
Heavy Vehicles, %	2	2	2	2									
Mvmt Flow	0	8	281	52									
Number of Lanes	0	0	2	0									
Approach													
Opposing Approach	SB		SB										
Opposing Lanes	NB		NB										
Conflicting Approach Left	WB		WB										
Conflicting Lanes Left	1		1										
Conflicting Approach Right	EB		EB										
Conflicting Lanes Right	1		1										
HCM Control Delay	9.5		9.5										
HCM LOS	A		A										
Lane													

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection																	
Intersection Delay, s/veh 10.3																	
Intersection LOS B																	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	42	35	56	0	36	39	72	0	30	133	26	0	44	183	40	
Future Vol, veh/h	0	42	35	56	0	36	39	72	0	30	133	26	0	44	183	40	
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	50	42	67	0	43	46	86	0	36	158	31	0	52	218	48	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		NB		SB								NB		
Opposing Lanes	1		1		2		2								2		
Conflicting Approach Left	SB		NB		EB		WB								WB		
Conflicting Lanes Left	2		2		1		1								1		
Conflicting Approach Right	NB		SB		WB		EB								EB		
Conflicting Lanes Right	2		2		1		1								1		
HCM Control Delay	10.2		10.3		9.9		10.5								10.5		
HCM LOS	B		B		A		B								B		
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2		
Vol Left, %	31%		0%		32%		24%		32%		0%		0%		0%		
Vol Thru, %	69%		72%		26%		27%		68%		70%		68%		70%		
Vol Right, %	0%		28%		42%		49%		0%		30%		0%		30%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	97		93		133		147		136		132						
LT Vol	30		0		42		36		44		0						
Through Vol	67		67		35		39		92		92						
RT Vol	0		26		56		72		0		40						
Lane Flow Rate	115		110		158		175		161		157						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.193		0.174		0.24		0.261		0.267		0.242						
Departure Headway (Hd)	6.061		5.704		5.449		5.365		5.948		5.567						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes		
Cap	592		629		659		669		605		645						
Service Time	3.797		3.44		3.486		3.402		3.679		3.299						
HCM Lane V/C Ratio	0.194		0.175		0.24		0.262		0.266		0.243						
HCM Control Delay	10.2		9.6		10.2		10.3		10.8		10.1						
HCM Lane LOS	B		A		B		B		B		B						
HCM 95th-tile Q	0.7		0.6		0.9		1		1.1		0.9						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Opening Year PM Peak Hour
02/22/2017

Intersection													
Intersection Delay, s/veh		10.1											
Intersection LOS		B											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	1	17	2	0	149	25	65	0	5	104	107	
Future Vol, veh/h	0	1	17	2	0	149	25	65	0	5	104	107	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	1	20	2	0	171	29	75	0	6	120	123	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													
Opposing Approach	WB		EB		WB		NB		WB		SB		
Opposing Lanes	2		1		1		2		2		2		
Conflicting Approach Left	SB		NB		WB		EB		WB		SB		
Conflicting Lanes Left	2		2		2		1		1		1		
Conflicting Approach Right	NB		SB		WB		WB		WB		WB		
Conflicting Lanes Right	2		2		2		2		2		2		
HCM Control Delay	9.4		11		9.4		11		9.5		9.5		
HCM LOS	A		B		B		B		A		A		
Lane													
Vol Left, %	9%		0%		5%		0%		40%		0%		
Vol Thru, %	91%		33%		85%		14%		0%		60%		
Vol Right, %	0%		67%		10%		0%		100%		0%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	57		159		20		174		65		104		
LT Vol	5		0		1		149		0		41		
Through Vol	52		52		17		25		0		63		
RT Vol	0		107		2		0		65		0		
Lane Flow Rate	66		183		23		200		75		119		
Geometry Gp	7		7		6		7		7		7		
Degree of Util (X)	0.103		0.26		0.039		0.338		0.103		0.193		
Departure Headway (Hd)	5.644		5.124		6.117		6.08		4.945		5.839		
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		
Cap	630		694		589		586		716		609		
Service Time	3.428		2.908		4.117		3.871		2.734		3.629		
HCM Lane V/C Ratio	0.105		0.264		0.039		0.341		0.105		0.195		
HCM Control Delay	9.1		9.7		9.4		12		8.3		10		
HCM Lane LOS	A		A		A		B		A		A		
HCM 95th-Hile Q	0.3		1		0.1		1.5		0.3		0.7		

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year PM Peak Hour
02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	41	125	3	
Future Vol, veh/h	0	41	125	3	
Peak Hour Factor	0.92	0.87	0.87	0.87	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	47	144	3	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	9.7				
HCM LOS	A				

HCM 2010 AWSC
12: West Road & Rossmoor Center Way

12/1/2016

Intersection											
Intersection Delay, s/veh 8											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	91	17	0	22	137	0	26	11		
Future Vol, veh/h	0	91	17	0	22	137	0	26	11		
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	101	19	0	24	152	0	29	12		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		WB		NB				
Opposing Approach	WB		EB		EB		0				
Opposing Lanes	1		1		1		0				
Conflicting Approach Left			NB		NB		EB				
Conflicting Lanes Left	0		1		1		1				
Conflicting Approach Right	NB				0		WB				
Conflicting Lanes Right	1		0		0		1				
HCM Control Delay	7.8		8.2		8.2		7.8				
HCM LOS	A		A		A		A				
Lane	NBLn1EBLn1WBLn1										
Vol Left, %	70% 0% 14%										
Vol Thru, %	0% 84% 86%										
Vol Right, %	30% 16% 0%										
Sign Control	Stop Stop Stop										
Traffic Vol by Lane	37 108 159										
LT Vol	26 0 22										
Through Vol	0 91 137										
RT Vol	11 17 0										
Lane Flow Rate	41 120 177										
Geometry Grp	1 1 1										
Degree of Util (X)	0.052 0.135 0.202										
Departure Headway (Hd)	4.536 4.046 4.125										
Convergence, Y/N	Yes Yes Yes										
Cap	794 877 864										
Service Time	2.536 2.115 2.18										
HCM Lane V/C Ratio	0.052 0.137 0.205										
HCM Control Delay	7.8 7.8 8.2										
HCM Lane LOS	A A A										
HCM 95th-ile Q	0.2 0.5 0.8										

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																	
Intersection Delay, s/veh13.2																	
Intersection LOS		B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol. veh/h	0	22	73	27	0	185	107	85	0	43	44	180	0	76	34	30	
Future Vol. veh/h	0	22	73	27	0	185	107	85	0	43	44	180	0	76	34	30	
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	23	76	28	0	193	111	89	0	45	46	188	0	79	35	31	
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1	
Approach		EB		WB		NB		SB									
Opposing Approach		WB		EB		SB		NB									
Opposing Lanes		1		2		1		1									
Conflicting Approach Left		SB		NB		EB		WB									
Conflicting Lanes Left		1		1		2		1									
Conflicting Approach Right		NB		SB		WB		EB									
Conflicting Lanes Right		1		1		1		2									
HCM Control Delay		9.7		16		12		10.7									
HCM LOS		A		C		B		B									
Lane		NBLn1		EBLn1		EBLn2		WBLn1		SBLn1							
Vol Left, %		16%		38%		0%		49%		54%							
Vol Thru, %		16%		62%		57%		28%		24%							
Vol Right, %		67%		0%		43%		23%		21%							
Sign Control		Stop		Stop		Stop		Stop		Stop							
Traffic Vol by Lane		267		59		64		377		140							
LT Vol		43		22		0		185		76							
Through Vol		44		37		37		107		34							
RT Vol		180		0		27		85		30							
Lane Flow Rate		278		61		66		393		146							
Geometry Grp		2		7		7		5		2							
Degree of Util (X)		0.408		0.11		0.11		0.59		0.237							
Departure Headway (Hd)		5.278		6.478		5.984		5.409		5.85							
Convergence, Y/N		Yes		Yes		Yes		Yes		Yes							
Cap		679		551		597		668		611							
Service Time		3.333		4.238		3.743		3.454		3.915							
HCM Lane V/C Ratio		0.409		0.111		0.111		0.588		0.239							
HCM Control Delay		12		10		9.5		16		10.7							
HCM Lane LOS		B		A		A		C		B							
HCM 95th-tile Q		2		0.4		0.4		3.9		0.9							

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection																	
Intersection Delay, s/veh11.8																	
Intersection LOS		B															
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT								
Traffic Vol, veh/h	0	86	295	0	43	66	0	233	55								
Future Vol, veh/h	0	86	295	0	43	66	0	233	55								
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.92	0.89	0.89								
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2								
Mvmt Flow	0	97	331	0	48	74	0	262	62								
Number of Lanes	0	1	1	0	1	0	0	0	1								
Approach	WB		NB		SB												
Opposing Approach					SB		NB										
Opposing Lanes	0		1		1		1										
Conflicting Approach Left	NB						WB										
Conflicting Lanes Left	1				0		2										
Conflicting Approach Right	SB				WB												
Conflicting Lanes Right	1				2		0										
HCM Control Delay	11.5		9.2		13.1												
HCM LOS	B		A		B												
Lane	NBLn1WBLn1WBLn2SBLn1																
Vol Left, %	0%		100%		0%		81%										
Vol Thru, %	39%		0%		0%		19%										
Vol Right, %	61%		0%		100%		0%										
Sign Control	Stop		Stop		Stop		Stop										
Traffic Vol by Lane	109		86		295		288										
LT Vol	0		86		0		233										
Through Vol	43		0		0		55										
RT Vol	66		0		295		0										
Lane Flow Rate	122		97		331		324										
Geometry Grip	2		7		7		2										
Degree of Util (X)	0.175		0.165		0.456		0.473										
Departure Headway (Hd)	5.14		6.16		4.949		5.26										
Convergence, Y/N	Yes		Yes		Yes		Yes										
Cap	702		577		719		676										
Service Time	3.14		3.955		2.742		3.35										
HCM Lane V/C Ratio	0.174		0.168		0.46		0.479										
HCM Control Delay	9.2		10.2		11.9		13.1										
HCM Lane LOS	A		B		B		B										
HCM 95th-tile Q	0.6		0.6		2.4		2.5										

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection									
1.2									
Int Delay, s/veh									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	89	1	20	167	4	20			
Future Vol, veh/h	89	1	20	167	4	20			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	93	93	93	93	93	93			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	96	1	22	180	4	22			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	97	0	319	96			
Stage 1	-	-	-	-	96	-			
Stage 2	-	-	-	-	223	-			
Critical Hwy	-	-	4.12	-	6.42	6.22			
Critical Hwy Stg 1	-	-	-	-	5.42	-			
Critical Hwy Stg 2	-	-	-	-	5.42	-			
Follow-up Hwy	-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver	-	-	1496	-	674	960			
Stage 1	-	-	-	-	928	-			
Stage 2	-	-	-	-	814	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1496	-	663	960			
Mov Cap-2 Maneuver	-	-	-	-	663	-			
Stage 1	-	-	-	-	928	-			
Stage 2	-	-	-	-	801	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		0.8		9.2				
HCM LOS					A				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	893	-	-	1496	-				
HCM Lane V/C Ratio	0.029	-	-	0.014	-				
HCM Control Delay (s)	9.2	-	-	7.4	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.1	-	-	0	-				

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		4T		4T			4T		4T		4T
Traffic Volume (veh/h)	148	26	16	549	37	504	9	1114	275	428	1126
Future Volume (veh/h)	148	26	16	549	37	504	9	1114	275	428	1126
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	157	28	17	612	0	0	10	1185	293	455	1198
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	684	0	305	21	1320	411	498	2769
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.56	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	1583	1583	1774	5085
Grp Volume(v), veh/h	157	0	45	612	0	0	10	1185	293	455	1198
Grp Sat Flow(s),veh/h	1774	0	1746	1774	0	1583	1774	1695	1583	1774	5085
Q Serve(g.s), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.7	18.5	25.4	0.0
Cycle Q Clear(g.c), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.7	18.5	25.4	0.0
Prop In Lane	1.00	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	684	0	305	21	1320	411	498	2769
V/C Ratio(X)	1.33	0.00	0.39	0.90	0.00	0.00	0.47	0.90	0.71	0.91	0.43
Avail Cap(c.a), veh/h	118	0	116	748	0	334	81	1350	420	498	2769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.89	0.89
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.3	0.0	0.0	54.0	39.3	37.0	22.9	0.0
Incr Delay (d2), s/veh	196.7	0.0	2.1	12.7	0.0	0.0	15.3	9.9	10.1	19.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	10.0	0.0	1.4	10.3	0.0	0.0	0.4	12.7	9.2	14.8	0.1
LnGrp Delay(d),s/veh	248.1	0.0	51.3	56.0	0.0	0.0	69.3	49.2	47.1	42.5	0.4
LnGrp LOS	F	D	D	E	E	E	D	D	D	D	A
Approach Vol, veh/h	202	612									
Approach Delay, s/veh	204.2	56.0									
Approach LOS	F	E									
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	36.7	34.3		12.0	5.3	65.7		27.0			
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8			
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2			
Max Q Clear Time (g_c+I1), s	27.4	26.7		9.3	2.6	2.0		20.5			
Green Ext Time (p_c), s	0.5	1.8		0.0	0.0	14.0		0.7			
Intersection Summary											
HCM 2010 Ctrl Delay	41.1										
HCM 2010 LOS	D										
Notes											

12/1/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	8	8	7	359	5	585	15	1377	381	266	1324	243
Future Volume (veh/h)	8	8	7	359	5	585	15	1377	381	266	1324	243
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	8	7	378	0	619	16	1449	0	280	1394	256
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	41	43	36	841	0	750	708	2132	664	242	1696	528
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.41	0.84	0.00	0.14	0.33	0.33
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	8	8	7	378	0	619	16	1449	0	280	1394	256
Grp Sat Flow(s), veh/hln	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Served(g.s.), s	0.5	0.5	0.5	10.0	0.0	20.4	0.3	11.8	0.0	15.0	27.7	14.1
Cycle Q Clear(g.c.), s	0.5	0.5	0.5	10.0	0.0	20.4	0.3	11.8	0.0	15.0	27.7	14.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	41	43	36	841	0	750	708	2132	664	242	1696	528
V/C Ratio(X)	0.20	0.19	0.19	0.45	0.00	0.83	0.02	0.68	0.00	1.16	0.82	0.48
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	708	2132	664	242	1682	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.66	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	35.8	0.0	39.8	25.8	6.1	0.0	47.5	33.7	29.1
Incr Delay (d2), s/veh	2.3	2.1	2.5	0.4	0.0	3.2	0.0	1.2	0.0	10.7	4.6	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	0.3	0.2	0.4	0.9	0.0	9.3	0.1	5.3	0.0	14.5	13.6	6.7
LnGrp Delay(d), s/veh	55.1	54.8	55.3	36.2	0.0	43.0	25.8	7.3	0.0	58.2	38.3	32.3
LnGrp LOS	E	D	E	D	D	D	C	A	F	D	C	C
Approach Vol, veh/h	23	23	23	997	0	1465	0	1465	0	1930	0	0
Approach Delay, s/veh	55.0	55.0	55.0	40.5	0	7.5	0	7.5	0	54.4	0	0
Approach LOS	E	E	E	D	D	D	C	A	F	D	C	C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	51.9	7.2	28.4	42.5	31.9						
Change Period (Y+Rc), s	4.0	5.8	*4.7	5.8	*5.8	5.8						
Max Green Setting (Gmax), s	30.7		*5.0	5.0	*41	39.0						
Max Q Clear Time (g.c.-t1), s	13.8	2.5	2.3	29.7	22.4							
Green Ext Time (p.c.), s	9.0	0.0	0.0	2.0	7.0	3.7						
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												
Notes												

Health Club within the Shops at Rossmoor
Opening Year (2018) No Project
Saturday Peak Hour

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

Intersection #3 Seal Beach Blvd/Lampson Ave												

Cycle (sec):	100	Critical Vol./Cap.(X):										
Loss Time (sec):	10	Average Delay (sec/veh):										
Optimal Cycle:	65	Level of Service:										

Street Name:	Seal Beach Blvd	Lampson Ave										
Approach:	North Bound	South Bound	East Bound	West Bound								
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected
Rights:	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 1
Volume Module:												
Base Vol:	0 1578 364	514 1482	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 572
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	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 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 1578 364	514 1482	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 572
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	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00
PHF Adj:	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93 0.93 0.93	0.93
PHF Volume:	0 1697 391	553 1594	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 615
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0
Reduced Vol:	0 1697 391	553 1594	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 615
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	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 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	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 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 1697 391	553 1594	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 615
OvAdjVol:	0 1697 391	553 1594	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 339
Saturation Flow Module:												
Sat/Lane:	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700 1700	1700
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	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 3.00	1.00 2.00	3.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	1.00
Final Sat.:	0 5100	1700 3400	5100 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 1700
Capacity Analysis Module:												
Vol/Sat:	0.00 0.33	0.23 0.16	0.31 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.36
OvAdjV/S:	0.00 0.33	0.23 0.16	0.31 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.20
Crit Moves:	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr																		

Cycle (sec):	100	Critical Vol./Cap.(X):		0.668														
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx														
Optimal Cycle:	46	Level Of Service:		B														

Street Name:	Seal Beach Blvd	St. Cloud Dr																
Approach:	North Bound	South Bound	East Bound	West Bound														
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R							
Control:	Protected	Protected	Split Phase	Split Phase														
Rights:	Include	Include	Ovl	Include														
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0														
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0														
Lanes:	2 0 2 1 0	1 0 2 1 0	0 1 0 0 2	1 0 1 1 0														

Volume Module:																		
Base Vol:	366 1643	174	17 1398	73	111	2	402	176	35	5								
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 Base:	366 1643	174	17 1398	73	111	2	402	176	35	5								
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
PHF Adj:	0.93 0.93	0.93	0.93 0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93								
PHF Volume:	395 1772	188	18 1508	79	120	2	434	190	38	5								
Reduced Vol:	0 0	0	0 0	0	0	0	0	0	0	0								
Reduced Vol:	395 1772	188	18 1508	79	120	2	434	190	38	5								
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:	395 1772	188	18 1508	79	120	2	434	190	38	5								
OvAdjVol:																		

Saturation Flow Module:																		
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700	1700	1700	1700	1700	1700								
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:	2.00 2.71	0.29	1.00 2.85	0.15	0.98 0.02	2.00	1.63 0.32	0.05										
Final Sat.:	3400 4612	488	1700 4847	253	1670	30	3400	2770	551	79								

Capacity Analysis Module:																		
Vol/Sat:	0.12 0.38	0.38	0.01 0.31	0.31	0.07 0.07	0.13	0.07 0.07	0.07	0.07	0.07								
OvAdjV/S:																		
Crit Moves:	****	****	****	****	****	0.01	****	****	****	****								

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

Intersection #5 Seal Beach Blvd/Towne Center Dr																	

Cycle (sec):	100	Critical Vol./Cap.(X):		0.851													
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx													
Optimal Cycle:	80	Level Of Service:		D													

Street Name:	Seal Beach Blvd	Towne Center Dr															
Approach:	North Bound	South Bound	East Bound	West Bound													
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R						
Control:	Protected	Protected	Include	Include	Permitted	Permitted	Include	Permitted	Include	Permitted	Permitted						
Rights:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0						
Min. Green:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0						
Y+R:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0						
Lanes:																	

Volume Module:																	
Base Vol:	294 1278	109	93 1085	152	120	84	245	175	90	89							
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 1278	109	93 1085	152	120	84	245	175	90	89							
User Adj:	1.00 1.00	1.00	1.00 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00							
PHF Adj:	0.95 0.95	0.95	0.95 0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95							
PHF Volume:	310 1348	115	98 1145	160	127	89	258	185	95	94							
Reduct Vol:	0 0	0	0 0	0	0	0	0	0	0	0							
Reduced Vol:	310 1348	115	98 1145	160	127	89	258	185	95	94							
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:	310 1348	115	98 1145	160	127	89	258	185	95	94							

Saturation Flow Module:																	
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700	1700	1700	1700	1700	1700							
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 2.76	0.24	1.00 2.63	0.37	1.00 0.26	0.74	1.00 0.50	0.50									
Final Sat.:	1700 4699	401	1700 4473	627	1700	434	1266	1700	855	845							

Capacity Analysis Module:																	
Vol/Sat:	0.18 0.29	0.29	0.06 0.26	0.26	0.07 0.20	0.20	0.11 0.11	0.11	0.11	0.11							
Crit Moves:	****	****	****	****	****	****	****	****	****	****							

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way																					

Cycle (sec):	100	Critical Vol./Cap.(X):		0.681		0.681															
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx		xxxxxx															
Optimal Cycle:	48	Level Of Service:		B		B															

Street Name: Seal Beach Blvd Rossmoor Center Way																					
Approach: North Bound South Bound East Bound West Bound																					
Movement: L - T - R L - T - R L - T - R L - T - R																					
Control: Protected Protected Protected Protected Protected Protected																					
Rights: Include Include Include Include Include Include																					
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0																					
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0																					
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0																					
Volume Module:																					
Base Vol:	205 1467	15	25 1424	231	190	4	153	19	2	14											
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	1.00											
Initial Bse:	205 1467	15	25 1424	231	190	4	153	19	2	14											
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	1.00											
PHF Adj:	0.97 0.97	0.97	0.97 0.97	0.97	0.97 0.97	0.97	0.97	0.97	0.97	0.97											
PHF Volume:	210 1506	15	26 1462	237	195	4	157	20	2	14											
Reduct Vol:	0 0	0	0 0	0	0 0	0	0	0	0	0											
Reduced Vol:	210 1506	15	26 1462	237	195	4	157	20	2	14											
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	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	1.00											
FinalVolume:	210 1506	15	26 1462	237	195	4	157	20	2	14											
Saturation Flow Module:																					
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700	1700	1700	1700											
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	1.00											
Lanes:	1.00 2.97	0.03	1.00 2.58	0.42	1.00 0.03	0.97	1.00 0.13	0.87													
Final Sat.:	1700 5048	52	1700 4388	712	1700 43	1657	1700 213	1487													
Capacity Analysis Module:																					
Vol/Sat:	0.12 0.30	0.30	0.02 0.33	0.33	0.11 0.09	0.09	0.01 0.01	0.01													
Crit Moves:	****	****	****	****	****	****	****	****													

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.647		0.647					
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx		xxxxxx					
Optimal Cycle:	44	Level Of Service:		B		B					

Street Name:Seal Beach Blvd-Los Alamitos Blvd											
Approach: North Bound South Bound East Bound West Bound											
Movement: L - T - R L - T - R L - T - R L - T - R											
Control: Protected Protected Protected Protected Protected Protected											
Rights: Include Include Include Include Include Include											
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0											
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0											
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1											
Volume Module:											
Base Vol:	112 1430	44	22 1523	126	178	8	97	64	7	21	
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	1.00	
Initial Bse:	112 1430	44	22 1523	126	178	8	97	64	7	21	
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	1.00	
PHF Adj:	0.98 0.98	0.98	0.98 0.98	0.98	0.98 0.98	0.98	0.98	0.98	0.98	0.98	
PHF Volume:	114 1459	45	22 1554	129	182	8	99	65	7	21	
Reduct Vol:	0 0	0	0 0	0	0 0	0	0	0	0	0	
Reduced Vol:	114 1459	45	22 1554	129	182	8	99	65	7	21	
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	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	1.00	
FinalVolume:	114 1459	45	22 1554	129	182	8	99	65	7	21	
Saturation Flow Module:											
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700	1700	1700	1700	
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	1.00	
Lanes:	1.00 2.91	0.09	1.00 2.77	0.23	1.00 0.08	0.92	0.90 0.10	1.00			
Final Sat.:	1700 4948	152	1700 4710	390	1700 130	1570	1532	168	1700		
Capacity Analysis Module:											
Vol/Sat:	0.07 0.29	0.29	0.01 0.33	0.33	0.11 0.06	0.06	0.04 0.04	0.01			
Crit Moves:	****	****	****	****	****	****	****	****			

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection									
1									
Int Delay, s/veh									
Movement									
Traffic Vol, veh/h	461	1	43	424	4	44			
Future Vol, veh/h	461	1	43	424	4	44			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Free	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	94	94	94	94	94	94			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	490	1	46	451	4	47			
Major/Minor									
Conflicting Flow All	0	0	491	0	808	246			
Stage 1	-	-	-	-	491	-			
Stage 2	-	-	-	-	317	-			
Critical Hwy	-	-	4.14	-	7.54	6.94			
Critical Hwy Stg 1	-	-	-	-	6.54	-			
Critical Hwy Stg 2	-	-	-	-	6.54	-			
Follow-up Hwy	-	-	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	1069	-	272	754			
Stage 1	-	-	-	-	528	-			
Stage 2	-	-	-	-	669	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1069	-	260	754			
Mov Cap-2 Maneuver	-	-	-	-	260	-			
Stage 1	-	-	-	-	528	-			
Stage 2	-	-	-	-	631	-			
Approach									
EB	0		WB	1	NB	11			
HCM Control Delay, s									
HCM LOS									
Minor Lane/Major Mvmt									
NBLn1	651		EBL	WB	WBT				
Capacity (veh/h)	-	-	-	1069	-				
HCM Lane V/C Ratio	0.078	-	-	0.043	-				
HCM Control Delay (s)	11	-	-	8.5	0.2				
HCM Lane LOS	B	-	-	A	A				
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection									
Intersection Delay, s/veh									
8.8									
Intersection LOS									
A									
Movement									
Traffic Vol, veh/h	0	35	4	38	0	3	5	5	0
Future Vol, veh/h	0	35	4	38	0	3	5	5	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	4	41	0	3	5	5	0
Number of Lanes	0	0	1	0	0	0	1	0	0
Approach									
EB		WB		WB		NB		NB	
Opposing Approach	WB		EB		EB		SB		
Opposing Lanes	1		1		1		2		
Conflicting Approach Left	SB		SB		NB		EB		
Conflicting Lanes Left	2		2		2		1		
Conflicting Approach Right	NB		NB		SB		WB		
Conflicting Lanes Right	2		2		2		1		
HCM Control Delay	8.6		8.6		8.2		8.9		
HCM LOS	A		A		A		A		
Lane									
NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2		
Vol Left, %	30%	0%	45%	23%	6%	0%	0%		
Vol Thru, %	70%	93%	5%	38%	94%	85%	85%		
Vol Right, %	0%	7%	49%	38%	0%	15%	15%		
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop		
Traffic Vol by Lane	128	97	77	13	126	140	140		
LT Vol	38	0	35	3	7	0	0		
Through Vol	90	90	4	5	119	119	119		
RT Vol	0	7	38	5	0	21	21		
Lane Flow Rate	139	105	84	14	136	152	152		
Geometry Grp	7	7	2	2	7	7	7		
Degree of Utl (X)	0.199	0.145	0.115	0.02	0.19	0.206	0.206		
Departure Headway (Hd)	5.182	4.981	4.931	5.061	5.025	4.891	4.891		
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Cap	693	720	726	705	713	734	734		
Service Time	2.915	2.714	2.968	3.107	2.756	2.622	2.622		
HCM Lane V/C Ratio	0.201	0.146	0.116	0.02	0.191	0.207	0.207		
HCM Control Delay	9.2	8.6	8.6	8.2	8.9	8.9	8.9		
HCM Lane LOS	A	A	A	A	A	A	A		
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8	0.8		

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	7	237	21	
Future Vol, veh/h	0	7	237	21	
Peak Hour Factor	0.92	0.92	0.92	0.92	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	8	258	23	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	8.9				
HCM LOS	A				
lane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh 9.7															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT
Traffic Vol, veh/h	0	42	42	64	0	18	52	43	0	47	131	29	0	45	163
Future Vol, veh/h	0	42	42	64	0	18	52	43	0	47	131	29	0	45	163
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	47	47	71	0	20	58	48	0	52	146	32	0	50	181
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2
Approach	EB		WB		NB		SB								
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB							
Opposing Lanes	1	1	1	1	2	2	2	2							
Conflicting Approach Left	SB	NB	WB	NB	EB	WB	WB	WB							
Conflicting Lanes Left	2	2	1	1	1	1	1	1							
Conflicting Approach Right	NB	SB	WB	WB	EB	WB	EB	EB							
Conflicting Lanes Right	2	2	1	1	1	1	1	1							
HCM Control Delay	9.8	9.8	9.7	9.7	9.7	9.7	9.8	9.8							
HCM LOS	A	A	A	A	A	A	A	A							
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2									
Vol Left, %	42%	0%	28%	16%	36%	0%									
Vol Thru, %	58%	69%	28%	46%	64%	71%									
Vol Right, %	0%	31%	43%	38%	0%	29%									
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop									
Traffic Vol by Lane	113	95	148	113	127	115									
LT Vol	47	0	42	18	45	0									
Through Vol	66	66	42	52	82	82									
RT Vol	0	29	64	43	0	33									
Lane Flow Rate	125	105	164	126	141	127									
Geometry Grp	7	7	2	2	7	7									
Degree of Util (X)	0.204	0.159	0.234	0.184	0.227	0.192									
Departure Headway (Hd)	5.886	5.457	5.238	5.287	5.809	5.425									
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes									
Cap	613	659	689	681	621	664									
Service Time	3.599	3.17	3.238	3.308	3.52	3.136									
HCM Lane V/C Ratio	0.204	0.159	0.238	0.185	0.227	0.191									
HCM Control Delay	10.1	9.2	9.8	9.5	10.2	9.4									
HCM Lane LOS	B	A	A	A	B	A									
HCM 95th-ile Q	0.8	0.6	0.9	0.7	0.9	0.7									

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year Saturday Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	8.9											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	1	15	4	0	116	20	70	0	3	72	95
Future Vol, veh/h	0	1	15	4	0	116	20	70	0	3	72	95
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	15	4	0	120	21	72	0	3	74	98
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	8.7				9.3				8.6			
HCM LOS	A				A				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	0%	85%	0%	44%	0%	44%	0%
Vol Thru, %	92%	27%	75%	15%	15%	0%	56%	96%	56%	96%
Vol Right, %	0%	73%	20%	0%	0%	100%	0%	4%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	131	20	136	70	82	48	48	48	48
LT Vol	3	0	1	116	0	36	0	36	0	36
Through Vol	36	36	15	20	0	46	46	46	46	46
RT Vol	0	95	4	0	70	0	2	2	2	2
Lane Flow Rate	40	135	21	140	72	84	49	49	49	49
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.06	0.18	0.031	0.223	0.092	0.129	0.072	0.072	0.072	0.072
Departure Headway (Hd)	5.335	4.785	5.462	5.737	4.606	5.544	5.292	5.292	5.292	5.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	748	652	625	775	645	675	675	675	675
Service Time	3.074	2.525	3.521	3.481	2.35	3.288	3.036	3.036	3.036	3.036
HCM Lane V/C Ratio	0.06	0.18	0.032	0.224	0.093	0.13	0.073	0.073	0.073	0.073
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4	8.4	8.4	8.4
HCM Lane LOS	A	A	A	B	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.7	0.1	0.8	0.3	0.4	0.2	0.2	0.2	0.2

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year Saturday Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	8.9											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	1	15	4	0	116	20	70	0	3	72	95
Future Vol, veh/h	0	1	15	4	0	116	20	70	0	3	72	95
Peak Hour Factor	0.92	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.92	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	15	4	0	120	21	72	0	3	74	98
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	8.7				9.3				8.6			
HCM LOS	A				A				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	0%	85%	0%	44%	0%	44%	0%
Vol Thru, %	92%	27%	75%	15%	15%	0%	56%	96%	56%	96%
Vol Right, %	0%	73%	20%	0%	0%	100%	0%	4%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	131	20	136	70	82	48	48	48	48
LT Vol	3	0	1	116	0	36	0	36	0	36
Through Vol	36	36	15	20	0	46	46	46	46	46
RT Vol	0	95	4	0	70	0	2	2	2	2
Lane Flow Rate	40	135	21	140	72	84	49	49	49	49
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.06	0.18	0.031	0.223	0.092	0.129	0.072	0.072	0.072	0.072
Departure Headway (Hd)	5.335	4.785	5.462	5.737	4.606	5.544	5.292	5.292	5.292	5.292
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	671	748	652	625	775	645	675	675	675	675
Service Time	3.074	2.525	3.521	3.481	2.35	3.288	3.036	3.036	3.036	3.036
HCM Lane V/C Ratio	0.06	0.18	0.032	0.224	0.093	0.13	0.073	0.073	0.073	0.073
HCM Control Delay	8.4	8.6	8.7	10.1	7.8	9.1	8.4	8.4	8.4	8.4
HCM Lane LOS	A	A	A	B	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.7	0.1	0.8	0.3	0.4	0.2	0.2	0.2	0.2

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol. veh/h	0	83	16	0	10	119	0	26	17			
Future Vol. veh/h	0	83	16	0	10	119	0	26	17			
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	91	18	0	11	131	0	29	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach												
Opposing Approach	WB		EB		WB		NB					
Opposing Lanes	1		1		1		0					
Conflicting Approach Left			NB		EB		EB					
Conflicting Lanes Left	0		1		1		1					
Conflicting Approach Right	NB				WB		WB					
Conflicting Lanes Right	1		0		1		1					
HCM Control Delay	7.7		8		7.6		7.6					
HCM LOS	A		A		A		A					
Lane	NBLn1 EBLn1 WBLn1											
Vol Left, %	60%		0%		8%							
Vol Thru, %	0%		84%		92%							
Vol Right, %	40%		16%		0%							
Sign Control	Stop		Stop		Stop							
Traffic Vol by Lane	43		99		129							
LT Vol	26		0		10							
Through Vol	0		83		119							
RT Vol	17		16		0							
Lane Flow Rate	47		109		142							
Geometry Grp	1		1		1							
Degree of Util (X)	0.057		0.122		0.162							
Departure Headway (Hd)	4.359		4.027		4.115							
Convergence, Y/N	Yes		Yes		Yes							
Cap	826		882		866							
Service Time	2.359		2.088		2.167							
HCM Lane V/C Ratio	0.057		0.124		0.164							
HCM Control Delay	7.6		7.7		8							
HCM Lane LOS	A		A		A							
HCM 95th-tile Q	0.2		0.4		0.6							

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh18.5																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	21	101	36	0	216	94	107	0	43	65	217	0	97	61	24
Future Vol, veh/h	0	21	101	36	0	216	94	107	0	43	65	217	0	97	61	24
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	107	38	0	230	100	114	0	46	69	231	0	103	65	26
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB		WB		WB		NB		NB		SB		SB		SB	
Opposing Approach	WB		EB		EB		SB		SB		NB		NB		NB	
Opposing Lanes	1		2		2		1		1		1		1		1	
Conflicting Approach Left	SB		NB		NB		EB		EB		WB		WB		WB	
Conflicting Lanes Left	1		1		1		2		2		1		1		1	
Conflicting Approach Right	NB		SB		SB		WB		WB		EB		EB		EB	
Conflicting Lanes Right	1		1		1		1		1		2		2		2	
HCM Control Delay	11.1		24.9		24.9		16.6		16.6		13.4		13.4		13.4	
HCM LOS	B		C		C		C		C		B		B		B	
Lane	NBLn1		EBLn1		EBLn2		WBLn1		SBLn1							
Vol Left, %	13%		29%		0%		52%		53%							
Vol Thru, %	20%		71%		58%		23%		34%							
Vol Right, %	67%		0%		42%		26%		13%							
Sign Control	Stop		Stop		Stop		Stop		Stop							
Traffic Vol by Lane	325		72		87		417		182							
LT Vol	43		21		0		216		97							
Through Vol	65		51		51		94		61							
RT Vol	217		0		36		107		24							
Lane Flow Rate	346		76		92		444		194							
Geometry Grp	2		7		7		5		2							
Degree of Util (X)	0.569		0.153		0.174		0.747		0.358							
Departure Headway (Hd)	5.929		7.248		6.799		6.058		6.652							
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes							
Cap	609		494		526		594		540							
Service Time	3.98		5.009		4.559		4.103		4.711							
HCM Lane V/C Ratio	0.568		0.154		0.175		0.747		0.359							
HCM Control Delay	16.6		11.3		11		24.9		13.4							
HCM Lane LOS	C		B		B		C		B							
HCM 95th-tile Q	3.6		0.5		0.6		6.6		1.6							

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 16.3												
Intersection LOS C												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	133	398	0	70	102	0	342	53			
Future Vol, veh/h	0	133	398	0	70	102	0	342	53			
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	137	410	0	72	105	0	353	55			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB			NB			SB					
Opposing Approach				SB			NB					
Opposing Lanes	0			1			1					
Conflicting Approach Left	NB						WB					
Conflicting Lanes Left	1			0			2					
Conflicting Approach Right	SB			WB								
Conflicting Lanes Right	1			2			0					
HCM Control Delay	15.7			11			19.3					
HCM LOS	C			B			C					
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%			100%			0%			87%		
Vol Thru, %	41%			0%			13%			0%		
Vol Right, %	59%			0%			100%			0%		
Sign Control	Stop			Stop			Stop			Stop		
Traffic Vol by Lane	172			133			398			395		
LT Vol	0			133			0			342		
Through Vol	70			0			0			53		
RT Vol	102			0			398			0		
Lane Flow Rate	177			137			410			407		
Geometry Grp	2			7			7			2		
Degree of Util (X)	0.28			0.256			0.626			0.656		
Departure Headway (Hd)	5.683			6.709			5.492			5.798		
Convergence, Y/N	Yes			Yes			Yes			Yes		
Cap	629			535			656			623		
Service Time	3.738			4.453			3.236			3.841		
HCM Lane V/C Ratio	0.281			0.256			0.625			0.653		
HCM Control Delay	11			11.8			17			19.3		
HCM Lane LOS	B			B			C			C		
HCM 95th-ile Q	1.1			1			4.4			4.8		

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection												
Int Delay, s/veh						2.4						
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	100	0	44	124	5	39						
Future Vol, veh/h	100	0	44	124	5	39						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	92	92	92	92	92	92						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	109	0	48	135	5	42						
Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	0			109			339			109		
Stage 1	-			-			-			109		
Stage 2	-			-			230			-		
Critical Hdwy	-			4.12			6.42			6.22		
Critical Hdwy Stg 1	-			-			5.42			-		
Critical Hdwy Stg 2	-			-			5.42			-		
Follow-up Hdwy	-			2.218			3.518			3.318		
Pot Cap-1 Maneuver	-			1481			657			945		
Stage 1	-			-			916			-		
Stage 2	-			-			808			-		
Platoon blocked, %	-			-			-			-		
Mov Cap-1 Maneuver	-			1481			634			945		
Mov Cap-2 Maneuver	-			-			634			-		
Stage 1	-			-			916			-		
Stage 2	-			-			780			-		
Approach	EB			WB			NB					
HCM Control Delay, s	0			2			9.2			A		
HCM LOS												
Minor Lane/Major Mvmt	NBLn1			EBT			WBL			WBT		
Capacity (veh/h)	895			-			1481			-		
HCM Lane V/C Ratio	0.053			-			0.032			-		
HCM Control Delay (s)	9.2			-			7.5			0		
HCM Lane LOS	A			-			A			A		
HCM 95th %ile Q(veh)	0.2			-			0.1			-		

HCM 2010 Signalized Intersection Summary
1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	88	28	16	703	44	542	14	1069	168	444	1469	73
Future Volume (veh/h)	88	28	16	703	44	542	14	1069	168	444	1469	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	97	31	18	807	0	0	15	1175	185	488	1614	80
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	867	0	387	30	1234	384	753	3392	1056
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.28	0.45	0.45
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	97	0	49	807	0	0	15	1175	185	488	1614	80
Grp Sat Flow(s), veh/hln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.5	3.2
Cycle Q Clear(g, c), s	5.5	0.0	3.0	24.5	0.0	0.0	0.9	25.0	11.0	26.5	24.5	3.2
Prop In Lane	1.00	0.00	0.37	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	867	0	387	30	1234	384	753	3392	1056
V/C Ratio(X)	1.09	0.00	0.56	0.93	0.00	0.00	0.51	0.95	0.48	0.65	0.48	0.08
Avail Cap(c, a), veh/h	89	0	87	867	0	396	81	1234	384	753	3392	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	41.0	35.7	32.1	16.9	11.0
Incr Delay (d2), s/veh	123.2	0.0	7.8	15.9	0.0	0.0	12.7	16.4	4.3	1.4	0.4	0.1
Initial Q Delay(d3), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	5.7	0.0	1.6	13.9	0.0	0.0	0.6	13.6	5.3	13.3	11.7	1.4
LnGrp Delay(d), s/veh	175.6	0.0	58.9	56.6	0.0	0.0	66.3	57.4	40.0	33.6	17.3	11.1
LnGrp LOS	F	E	E	E	E	E	E	D	C	B	B	B
Approach Vol, veh/h	146			807			1375			2182		
Approach Delay, s/veh	136.4			56.6			55.2			20.7		
Approach LOS	F	E	E	E	E	E	E	E	E	C	C	C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	52.5	32.5		10.2	5.8	79.2		32.7				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5				
Max Q Clear Time (g_c+I), s	28.5	27.0		7.5	2.9	26.5		26.5				
Green Ext Time (p_c), s	0.3	0.0		0.0	0.0	15.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				41.4								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	10	11	5	371	54	569	111	1227	351	341	1599	470
Future Volume (veh/h)	10	11	5	371	54	569	111	1227	351	341	1599	470
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	12	6	412	0	672	123	1363	0	379	1777	522
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	47	50	42	903	0	806	513	1839	573	306	1876	584
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.30	0.72	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	11	12	6	412	0	672	123	1363	0	379	1777	522
Grp Sat Flow(s), veh/hln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g, s), s	0.7	0.7	0.4	10.8	0.0	22.1	3.0	17.6	0.0	19.0	37.3	34.1
Cycle Q Clear(g, c), s	0.7	0.7	0.4	10.8	0.0	22.1	3.0	17.6	0.0	19.0	37.3	34.1
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	47	50	42	903	0	806	513	1839	573	306	1876	584
V/C Ratio(X)	0.23	0.24	0.14	0.46	0.00	0.83	0.24	0.74	0.00	1.24	0.95	0.89
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	513	1839	573	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.57	0.57	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	52.4	52.3	34.6	0.0	38.8	33.9	12.1	0.0	45.5	33.7	32.7
Incr Delay (d2), s/veh	2.5	2.5	1.5	0.4	0.0	4.0	0.1	1.6	0.0	13.1	11.6	18.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	0.4	0.2	0.2	5.3	0.0	10.1	1.4	8.1	0.0	20.5	19.5	18.0
LnGrp Delay(d), s/veh	54.9	54.9	53.8	35.0	0.0	42.8	34.0	13.7	0.0	177.0	45.3	51.3
LnGrp LOS	D	D	D	C	D	C	D	C	B	F	D	D
Approach Vol, veh/h	29			1084			1486			2678		
Approach Delay, s/veh	54.7			39.8			15.4			65.1		
Approach LOS	D	D	D	D	D	D	B	B	B	E	E	E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	43.0	45.6		7.6	22.2	46.4		33.8				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	26.7	26.7		* 5	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	19.6	19.6		2.7	5.0	39.3		24.1				
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0	1.3		3.9				
Intersection Summary												
HCM 2010 Ctrl Delay				45.8								
HCM 2010 LOS				D								
Notes												

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.826

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 73 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted

Rights: Ovl Include Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1501 308 339 1719 0 0 0 0 709 0 620

Growth Adj: 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 1501 308 339 1719 0 0 0 0 709 0 620

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91

PHF Volume: 0 1653 339 373 1893 0 0 0 0 781 0 683

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1653 339 373 1893 0 0 0 0 781 0 683

PCE Adj: 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

FinalVolume: 0 1653 339 373 1893 0 0 0 0 781 0 683

OvLAdjVol: 0

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00

Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.32 0.20 0.11 0.37 0.00 0.00 0.00 0.00 0.23 0.00 0.40

OvLAdjV/S: 0.29

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
AM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.653

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 45 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Split Phase Split Phase

Rights: Include Include Ovl Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 382 1698 47 4 1401 53 107 3 574 66 13 2

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 382 1698 47 4 1401 53 107 3 574 66 13 2

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88 0.88

PHF Volume: 435 1932 53 5 1594 60 122 3 653 75 15 2

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 435 1932 53 5 1594 60 122 3 653 75 15 2

PCE Adj: 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

FinalVolume: 435 1932 53 5 1594 60 122 3 653 75 15 2

OvLAdjVol: 218

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05

Final Sat.: 3400 4963 137 1700 4914 186 1654 46 3400 2770 546 84

Capacity Analysis Module:

Vol/Sat: 0.13 0.39 0.39 0.00 0.32 0.32 0.07 0.07 0.19 0.03 0.03 0.03

OvLAdjV/S: 0.06

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
AM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.509
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 56 1666 31 21 1435 32 21 4 14 24 2 21
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: 56 1666 31 21 1435 32 21 4 14 24 2 21
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90
PHF Volume: 62 1843 34 23 1587 35 23 4 15 27 2 23
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 62 1843 34 23 1587 35 23 4 15 27 2 23
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 1843 34 23 1587 35 23 4 15 27 2 23

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.95 0.05 1.00 2.93 0.07 1.00 0.22 0.78 1.00 0.09 0.91
Final Sat.: 1700 5007 93 1700 4989 111 1700 378 1322 1700 148 1552

Capacity Analysis Module:
Vol/Sat: 0.04 0.37 0.37 0.01 0.32 0.32 0.01 0.01 0.01 0.02 0.01 0.01
Crit Moves: ****

Opening Year WP AM Mon Feb 20, 2017 15:25:53 Page 5-1
Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
AM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.566
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 77 1627 15 19 1447 82 89 7 90 17 10 39
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 1627 15 19 1447 82 89 7 90 17 10 39
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92 0.92
PHF Volume: 84 1778 16 21 1581 90 97 8 98 19 11 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 84 1778 16 21 1581 90 97 8 98 19 11 43
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: 84 1778 16 21 1581 90 97 8 98 19 11 43

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.97 0.03 1.00 2.84 0.16 1.00 0.07 0.93 1.00 0.20 0.80
Final Sat.: 1700 5053 47 1700 4626 274 1700 123 1577 1700 347 1353

Capacity Analysis Module:
Vol/Sat: 0.05 0.35 0.35 0.01 0.33 0.33 0.06 0.06 0.06 0.01 0.03 0.03
Crit Moves: ****

Opening Year WP AM Mon Feb 20, 2017 15:25:53 Page 6-1

Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
AM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: C

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - I - R L - I - R L - I - R L - I - R

Control: Protected Protected Protected Permitted Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 147 1559 26 29 1416 172 282 18 98 71 22 29
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: 147 1559 26 29 1416 172 282 18 98 71 22 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94
PHF Volume: 157 1667 28 31 1514 184 302 19 105 76 24 31
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 157 1667 28 31 1514 184 302 19 105 76 24 31
M/F Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 157 1667 28 31 1514 184 302 19 105 76 24 31

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.95 0.05 1.00 2.68 0.32 1.00 0.16 0.84 0.76 0.24 1.00
Final Sat.: 1700 5016 84 1700 4548 552 1700 264 1436 1298 402 1700

Capacity Analysis Module:
Vol/Sat: 0.09 0.33 0.33 0.02 0.33 0.33 0.18 0.07 0.07 0.04 0.06 0.02
Crit Moves: ****

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to LSA ASSOC. IRVINE, CA

HCM 2010 TWSC 8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection	1.3									
Int Delay, s/veh										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	612	4	28	408	8	71				
Future Vol, veh/h	612	4	28	408	8	71				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	- None	- None	- None	- None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	79	79	79	79	79	79				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	775	5	35	516	10	90				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0		780		1106					
Stage 1	-		-		777					
Stage 2	-		-		329					
Critical Hwy	-		4.14		7.54					
Critical Hwy Stg 1	-		-		6.54					
Critical Hwy Stg 2	-		-		6.54					
Follow-up Hwy	-		2.22		3.52					
Pot Cap-1 Maneuver	-		833		165					
Stage 1	-		-		356					
Stage 2	-		-		658					
Platoon blocked, %	-		-		-					
Mov Cap-1 Maneuver	-		833		158					
Mov Cap-2 Maneuver	-		-		356					
Stage 1	-		-		619					
Stage 2	-		-		-					
Approach	EB		WB		NB					
HCM Control Delay, s	0		0.8		14.7					
HCM LOS			B							
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)	472	-	-	833	-					
HCM Lane V/C Ratio	0.212	-	-	0.043	-					
HCM Control Delay (s)	14.7	-	-	9.5	0.2					
HCM Lane LOS	B	-	-	A	A					
HCM 95th %ile Q(veh)	0.8	-	-	0.1	-					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh												11.6	
Intersection LOS												B	
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	55	7	127	0	2	4	1	0	109	170	2	
Future Vol, veh/h	0	55	7	127	0	2	4	1	0	109	170	2	
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	70	9	161	0	3	5	1	0	138	215	3	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	2	
Approach	EB		WB		WB		NB		WB		NB		
Opposing Approach	WB		EB		EB		SB		SB		SB		
Opposing Lanes	1		1		1		2		2		2		
Conflicting Approach Left	SB		NB		NB		EB		EB		EB		
Conflicting Lanes Left	2		2		2		1		1		1		
Conflicting Approach Right	NB		SB		SB		WB		WB		WB		
Conflicting Lanes Right	2		2		2		1		1		1		
HCM Control Delay	11.5		9.4		9.4		12		12		12		
HCM LOS	B		A		A		B		B		B		
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn1	SBLn1	SBLn1	SBLn2					
Vol Left, %	56%	0%	29%	29%	0%	0%	0%	0%					
Vol Thru, %	44%	98%	4%	57%	100%	78%							
Vol Right, %	0%	2%	67%	14%	0%	22%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	194	87	189	7	193	124							
LT Vol	109	0	55	2	0	0							
Through Vol	85	85	7	4	193	97							
RT Vol	0	2	127	1	0	27							
Lane Flow Rate	246	110	239	9	245	157							
Geometry Grp	7	7	2	2	7	7							
Degree of Util (X)	0.412	0.176	0.36	0.015	0.389	0.242							
Departure Headway (Hd)	6.045	5.744	5.42	6.269	5.725	5.571							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	597	626	665	570	629	645							
Service Time	3.772	3.471	3.451	4.317	3.452	3.297							
HCM Lane V/C Ratio	0.412	0.176	0.359	0.016	0.39	0.243							
HCM Control Delay	13	9.7	11.5	9.4	12.1	10.1							
HCM Lane LOS	B	A	B	A	B	B							
HCM 95th-tile Q	2	0.6	1.6	0	1.8	0.9							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	0	290	27	
Future Vol, veh/h	0	0	290	27	
Peak Hour Factor	0.92	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2
Mvmt Flow	0	0	367	34	
Number of Lanes	0	0	2	0	
Approach	SB				
Opposing Approach	NB				
Opposing Lanes	2				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	11.3				
HCM LOS	B				
Lane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection																	
Intersection Delay, s/veh		12.1															
Intersection LOS		B															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol. veh/h	0	98	63	89	0	14	43	32	0	39	183	22	0	25	205	66	
Future Vol. veh/h	0	98	63	89	0	14	43	32	0	39	183	22	0	25	205	66	
Peak Hour Factor	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	0.92	0.83	0.83	0.83	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	118	76	107	0	17	52	39	0	47	220	27	0	30	247	80	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		SB		NB										
Opposing Lanes	1		1		2		2										
Conflicting Approach Left	SB		NB		EB		WB										
Conflicting Lanes Left	2		2		1		1										
Conflicting Approach Right	NB		SB		WB		EB										
Conflicting Lanes Right	2		2		1		1										
HCM Control Delay	13.9		10.5		11.3		11.6										
HCM LOS	B		B		B		B										
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2		
Vol Left, %	30%		0%		39%		16%		20%		0%						
Vol Thru, %	70%		81%		25%		48%		80%		61%						
Vol Right, %	0%		19%		36%		36%		0%		39%						
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop						
Traffic Vol by Lane	131		114		250		89		128		169						
LT Vol	39		0		98		14		25		0						
Through Vol	92		92		63		43		103		103						
RT Vol	0		22		89		32		0		66						
Lane Flow Rate	157		137		301		107		154		203						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.282		0.234		0.478		0.181		0.27		0.335						
Departure Headway (Hd)	6.458		6.168		5.712		6.088		6.327		5.948						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	555		580		630		585		565		603						
Service Time	4.223		3.933		3.77		4.165		4.089		3.71						
HCM Lane V/C Ratio	0.283		0.236		0.478		0.183		0.273		0.337						
HCM Control Delay	11.8		10.8		13.9		10.5		11.4		11.7						
HCM Lane LOS	B		B		B		B		B		B						
HCM 95th-ile Q	1.2		0.9		2.6		0.7		1.1		1.5						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Opening Year + Project AM Peak Hour
02/22/2017

Intersection													
Intersection Delay, s/veh		12.9											
Intersection LOS		B											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	5	24	2	0	136	18	147	0	0	141	221	
Future Vol, veh/h	0	5	24	2	0	136	18	147	0	0	141	221	
Peak Hour Factor	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	6	30	3	0	172	23	186	0	0	178	280	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													
Opposing Approach	WB		EB		WB		WB		WB		SB		
Opposing Lanes	2		1		2		1		2		2		
Conflicting Approach Left	SB		NB		WB		WB		WB		EB		
Conflicting Lanes Left	2		2		2		2		2		1		
Conflicting Approach Right	NB		SB		WB		WB		WB		WB		
Conflicting Lanes Right	2		2		2		2		2		2		
HCM Control Delay	11		12.6		12.6		12.6		12.6		13.7		
HCM LOS	B		B		B		B		B		B		
Lane													
Vol Left, %	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		
Vol Left, %	0%		0%		16%		0%		88%		0%		
Vol Thru, %	100%		18%		77%		12%		0%		47%		
Vol Right, %	0%		82%		6%		0%		100%		0%		
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		
Traffic Vol by Lane	94		268		31		154		142		69		
LT Vol	0		0		5		136		0		75		
Through Vol	94		47		24		18		0		67		
RT Vol	0		221		2		0		147		0		
Lane Flow Rate	119		339		39		195		186		87		
Geometry Grp	7		7		6		7		7		7		
Degree of Util (X)	0.207		0.535		0.079		0.379		0.302		0.337		
Departure Headway (Hd)	6.26		5.674		7.235		7.001		5.843		6.746		
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		
Cap	572		634		492		513		612		554		
Service Time	4.016		3.429		5.323		4.76		3.602		4.509		
HCM Lane V/C Ratio	0.208		0.535		0.079		0.38		0.304		0.338		
HCM Control Delay	10.7		14.8		11		14		11.1		12.9		
HCM Lane LOS	B		B		B		B		B		B		
HCM 95th-ile Q	0.8		3.2		0.3		1.8		1.3		1.5		

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	75	134	2	
Future Vol, veh/h	0	75	134	2	
Peak Hour Factor	0.92	0.79	0.79	0.79	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	95	170	3	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	12.1				
HCM LOS	B				

Intersection											
Intersection Delay, s/veh 7.7											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	100	10	0	6	87	0	7	12		
Future Vol, veh/h	0	100	10	0	6	87	0	7	12		
Peak Hour Factor	0.92	0.85	0.85	0.92	0.85	0.85	0.92	0.85	0.85		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	118	12	0	7	102	0	8	14		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		NB						
Opposing Approach	WB		EB		NB						
Opposing Lanes	1		1		0						
Conflicting Approach Left			NB		EB						
Conflicting Lanes Left	0		1		1						
Conflicting Approach Right	NB				WB						
Conflicting Lanes Right	1		0		1						
HCM Control Delay	7.7		7.7		7.2						
HCM LOS	A		A		A						
Lane	NBLn1		EBLn1		WBLn1						
Vol Left, %	37%		0%		6%						
Vol Thru, %	0%		91%		94%						
Vol Right, %	63%		9%		0%						
Sign Control	Stop		Stop		Stop						
Traffic Vol by Lane	19		110		93						
LT Vol	7		0		6						
Through Vol	0		100		87						
RT Vol	12		10		0						
Lane Flow Rate	22		129		109						
Geometry Grp	1		1		1						
Degree of Util (X)	0.026		0.144		0.124						
Departure Headway (Hd)	4.139		4		4.083						
Convergence, Y/N	Yes		Yes		Yes						
Cap	870		894		875						
Service Time	2.139		2.035		2.12						
HCM Lane V/C Ratio	0.025		0.144		0.125						
HCM Control Delay	7.2		7.7		7.7						
HCM Lane LOS	A		A		A						
HCM 95th-ile Q	0.1		0.5		0.4						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh 8.9																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol. veh/h	0	35	122	14	0	74	82	52	0	13	16	31	0	60	16	15
Future Vol. veh/h	0	35	122	14	0	74	82	52	0	13	16	31	0	60	16	15
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	131	15	0	80	88	56	0	14	17	33	0	65	17	16
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				2				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				2				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				2			
HCM Control Delay	8.7				9.4				8.2				8.8			
HCM LOS	A				A				A				A			
Lane	NBLn1				EBLn1				WBLn1				SBLn1			
Vol Left, %	22%				36%				0%				36%			
Vol Thru, %	27%				64%				81%				39%			
Vol Right, %	52%				0%				19%				25%			
Sign Control	Stop				Stop				Stop				Stop			
Traffic Vol by Lane	60				96				75				208			
LT Vol	13				35				0				74			
Through Vol	16				61				61				82			
RT Vol	31				0				14				52			
Lane Flow Rate	65				103				81				224			
Geometry Grp	2				7				5				2			
Degree of Util (X)	0.085				0.152				0.112				0.284			
Departure Headway (Hd)	4.757				5.307				4.992				4.577			
Convergence, Y/N	Yes				Yes				Yes				Yes			
Cap	750				675				717				783			
Service Time	2.803				3.045				2.73				2.613			
HCM Lane V/C Ratio	0.087				0.153				0.113				0.286			
HCM Control Delay	8.2				9				8.4				9.4			
HCM Lane LOS	A				A				A				A			
HCM 95th-tile Q	0.3				0.5				0.4				1.2			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	71	37	0	16	32	0	28	15			
Future Vol, veh/h	0	71	37	0	16	32	0	28	15			
Peak Hour Factor	0.92	0.87	0.87	0.92	0.87	0.87	0.92	0.87	0.87			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	82	43	0	18	37	0	32	17			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	8.1				7.1				7.7			
HCM LOS	A				A				A			
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%			100%			0%			65%		
Vol Thru, %	33%			0%			0%			35%		
Vol Right, %	67%			0%			100%			0%		
Sign Control	Stop			Stop			Stop			Stop		
Traffic Vol by Lane	48			71			37			43		
LT Vol	0			71			0			28		
Through Vol	16			0			0			15		
RT Vol	32			0			37			0		
Lane Flow Rate	55			82			43			49		
Geometry Grp	2			7			7			2		
Degree of Util (X)	0.06			0.118			0.047			0.061		
Departure Headway (Hd)	3.887			5.216			4.014			4.428		
Convergence, Y/N	Yes			Yes			Yes			Yes		
Cap	924			685			885			814		
Service Time	1.899			2.97			1.768			2.43		
HCM Lane V/C Ratio	0.06			0.12			0.049			0.06		
HCM Control Delay	7.1			8.7			7			7.7		
HCM Lane LOS	A			A			A			A		
HCM 95th-Pile Q	0.2			0.4			0.1			0.2		

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection 2									
Int Delay, s/veh									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	111	0	32	96	0	34			
Future Vol, veh/h	111	0	32	96	0	34			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	89	89	89	89	89	89			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	125	0	36	108	0	38			
Major/Minor	Major1	Major2	Minor1						
Conflicting Flow All	0	0	125	0	305	125			
Stage 1	-	-	-	-	125	-			
Stage 2	-	-	-	-	180	-			
Critical Hwy	-	-	4.12	-	6.42	6.22			
Critical Hwy Stg 1	-	-	-	-	5.42	-			
Critical Hwy Stg 2	-	-	-	-	5.42	-			
Follow-up Hwy	-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver	-	-	1462	-	687	926			
Stage 1	-	-	-	-	901	-			
Stage 2	-	-	-	-	851	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1462	-	669	926			
Mov Cap-2 Maneuver	-	-	-	-	669	-			
Stage 1	-	-	-	-	901	-			
Stage 2	-	-	-	-	829	-			
Approach	EB	WB	NB						
HCM Control Delay, s	0	1.9	9.1						
HCM LOS	A								
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	926	-	-	1462	-				
HCM Lane V/C Ratio	0.041	-	-	0.025	-				
HCM Control Delay (s)	9.1	-	-	7.5	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-				

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

↖ → ↗ ↖ ↗ ↖ ↗ ↖ ↗ ↖									
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBR
Lane Configurations		4T			4			4T	
Traffic Volume (veh/h)	168	30	20	324	35	537	11	1471	128
Future Volume (veh/h)	168	30	20	324	35	537	11	1471	365
Number	7	4	14	3	8	18	5	2	12
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	173	31	21	360	0	0	11	1516	376
Adj No. of Lanes	0	2	0	2	0	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2
Cap. veh/h	127	74	50	419	0	187	23	1596	497
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.31	0.31
Sat Flow, veh/h	1774	1037	702	3548	0	1583	1774	5085	1583
Grp Volume(v), veh/h	173	0	52	360	0	0	11	1516	376
Grp Sat Flow(s), veh/h	1774	0	1739	1774	0	1583	1774	1695	1583
Q Serve(g, s), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	32.1	23.5
Cycle Q Clear(g, c), s	7.9	0.0	3.1	11.0	0.0	0.0	0.7	32.1	23.5
Prop In Lane	1.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	127	0	125	419	0	187	23	1596	497
V/C Ratio(X)	1.36	0.00	0.42	0.86	0.00	0.00	0.48	0.95	0.76
Avail Cap(c, a), veh/h	127	0	125	426	0	190	81	1600	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.87
Uniform Delay (d), s/veh	51.1	0.0	48.8	47.6	0.0	0.0	53.9	36.9	34.0
Incr Delay (d2), s/veh	203.5	0.0	2.2	15.9	0.0	0.0	14.6	13.4	10.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	11.1	0.0	1.6	6.3	0.0	0.0	0.4	17.0	11.7
LnGrp Delay(d), s/veh	254.5	0.0	51.0	63.5	0.0	0.0	68.5	50.3	44.2
LnGrp LOS	F	D	D	E	E	D	D	D	A
Approach Vol, veh/h	225		360		1903		1805		
Approach Delay, s/veh	207.5		63.5		49.2		11.2		
Approach LOS	F		E		D		B		
Timer	1	2	3	4	5	6	7	8	
Assigned Phs	1	2		4	5	6			
Phs Duration (G+Y+Rc), s	42.8	40.3		12.6	5.4	77.7		18.8	
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8	
Max Green Setting (Gmax), s	34.0	* 35		* 7.9	5.0	63.6		13.2	
Max Q Clear Time (g_c+I1), s	32.0	34.1		9.9	2.7	2.0		13.0	
Green Ext Time (p_c), s	0.5	0.5		0.0	0.0	13.9		0.0	
Intersection Summary									
HCM 2010 Ctrl Delay	42.7								
HCM 2010 LOS	D								
Notes									

12/1/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	80	73	88	197	15	694	41	1578	561	329	1477	377
Future Volume (veh/h)	80	73	88	197	15	694	41	1578	561	329	1477	377
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Obs.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	82	75	91	203	0	725	42	1627	0	339	1523	389
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	81	85	72	942	0	840	472	1873	583	242	1785	556
Arrive On Green	0.05	0.05	0.05	0.27	0.00	0.27	0.27	0.74	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Sat Flow(s), veh/h	82	75	91	203	0	725	42	1627	0	339	1523	389
Q Serv(g.s), s	5.0	4.4	5.0	4.9	0.0	24.0	1.0	25.8	0.0	15.0	30.5	23.3
Cycle Q Clear(g.s), s	5.0	4.4	5.0	4.9	0.0	24.0	1.0	25.8	0.0	15.0	30.5	23.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	85	72	942	0	840	472	1873	583	242	1785	556
V/C Ratio(X)	1.02	0.89	1.26	0.22	0.00	0.86	0.09	0.87	0.00	1.40	0.85	0.70
Avail Cap(c), veh/h	81	85	72	1258	0	1123	472	1873	583	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.52	0.52	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.2	52.5	31.5	0.0	38.5	34.8	12.6	0.0	47.5	33.1	30.7
Incr Delay (d2), s/veh	104.9	61.6	192.8	0.1	0.0	5.5	0.0	3.1	0.0	203.6	5.4	7.2
Initial Q Delay(d3), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/lt	8	3.7	6.0	2.4	0.0	11.1	0.5	12.0	0.0	21.0	15.1	11.3
LnGrp Delay(d), s/veh	157.6	113.8	245.3	31.6	0.0	44.0	34.8	15.7	0.0	251.1	38.5	37.9
LnGrp LOS	F	F	F	C	D	C	D	C	B	F	D	D
Approach Vol, veh/h	248			928			1669			2251		
Approach Delay, s/veh	176.5			41.3			16.2			70.4		
Approach LOS	F			D			B			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	46.3			9.7	20.9	44.4						
Change Period (Y+Rc), s	4.0			*4.7	5.8	*5.8						
Max Green Setting (Gmax), s	30.7			*5	5.0	*41						
Max Q Clear Time (g_c+1/10), s	27.8			7.0	3.0	32.5						
Green Ext Time (p_c), s	0.0	2.4		0.0	1.6	6.1						
Intersection Summary												
HCM 2010 Ctrl Delay				52.5								
HCM 2010 LOS				D								
Notes												

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Health Club within the Shops at Rossmoor				
Opening Year (2018) Plus Project				
PM Peak Hour				
Level of Service Computation Report				
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)				
Intersection #3 Seal Beach Blvd/Lampson Ave				
Cycle (sec):	100	Critical Vol./Cap.(X):	0.814	
Loss Time (sec):	70	Average Delay (sec/veh):	xxxxxx	
Optimal Cycle:	70	Level of Service:	D	
Street Name:	Seal Beach Blvd	Lampson Ave		
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Permitted
Rights:	Ovl	Include	Include	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	2 0 0 0 1
Volume Module:				
Base Vol:	0 1771 549	647 1649	0 0 0	0 545 0 490
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 1771 549	647 1649	0 0 0	0 545 0 490
User Adj:	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.98 0.98 0.98	0.98 0.98 0.98	0.98 0.98 0.98	0.98 0.98 0.98
PHF Volume:	0 1813 562	662 1688	0 0 0	0 558 0 502
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 1813 562	662 1688	0 0 0	0 558 0 502
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
Final Volume:	0 1813 562	662 1688	0 0 0	0 558 0 502
OvAdjVol:				
Saturation Flow Module:				
Sat/Lane:	1700 1700	1700 1700	1700 1700	1700 1700
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 3.00 1.00	2.00 3.00 0.00	0.00 0.00 0.00	2.00 0.00 1.00
Final Sat.:	0 5100 1700	3400 5100	0 0 0	0 3400 0 1700
Capacity Analysis Module:				
Vol/Sat:	0.00 0.36 0.33	0.19 0.33	0.00 0.00 0.00	0.16 0.00 0.30
OvAdjV/S:				
Crit Moves:	****	****	****	****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
PM Peak Hour

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.740
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0

Volume Module:
Base Vol: 414 1724 133 5 1715 70 95 0 392 195 31 5
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 414 1724 133 5 1715 70 95 0 392 195 31 5
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
PHF Volume: 445 1854 143 5 1844 75 102 0 422 210 33 5
Reduc Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 445 1854 143 5 1844 75 102 0 422 210 33 5
PCE Adj: 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
FinalVolume: 445 1854 143 5 1844 75 102 0 422 210 33 5
OvlAdjVol: 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 2.79 0.21 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04
Final Sat.: 3400 4735 365 1700 4900 200 1700 0 3400 2870 456 74

Capacity Analysis Module:
Vol/Sat: 0.13 0.39 0.39 0.00 0.38 0.38 0.06 0.00 0.12 0.07 0.07 0.07
OvlAdjV/S: 0.00
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
PM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: C

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 207 1503 85 79 1431 95 101 28 187 140 47 60
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 207 1503 85 79 1431 95 101 28 187 140 47 60
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 219 1589 90 84 1513 100 107 30 198 148 50 63
Reduc Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 219 1589 90 84 1513 100 107 30 198 148 50 63
PCE Adj: 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
FinalVolume: 219 1589 90 84 1513 100 107 30 198 148 50 63
OvlAdjVol: 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56
Final Sat.: 1700 4827 273 1700 4783 317 1700 221 1479 1700 747 953

Capacity Analysis Module:
Vol/Sat: 0.13 0.33 0.33 0.05 0.32 0.32 0.06 0.13 0.13 0.09 0.07 0.07
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
PM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.741
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1 0
Volume Module:
Base Vol: 194 1591 24 36 1603 224 210 1 156 15 1 16
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: 194 1591 24 36 1603 224 210 1 156 15 1 16
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 205 1684 25 38 1696 237 222 1 165 16 1 17
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 205 1684 25 38 1696 237 222 1 165 16 1 17
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: 205 1684 25 38 1696 237 222 1 165 16 1 17
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 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 2.96 0.04 1.00 2.63 0.37 1.00 0.01 0.99 1.00 0.06 0.94
Final Sat.: 1700 5024 76 1700 4475 625 1700 11 1689 1700 100 1600
Capacity Analysis Module:
Vol/Sat: 0.12 0.34 0.02 0.38 0.38 0.13 0.10 0.10 0.01 0.01 0.01
Crit Moves: ****

Opening Year WP PM Mon Feb 20, 2017 15:26:09 Page 6-1
Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
PM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.705
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: C

Street Name: Seal Beach Blvd-Los Alamitos Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 0 1 0 1 0 1
Volume Module:
Base Vol: 131 1584 58 24 1758 177 173 9 89 48 3 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: 131 1584 58 24 1758 177 173 9 89 48 3 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: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97
PHF Volume: 135 1628 60 25 1807 182 178 9 91 49 3 21
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 135 1628 60 25 1807 182 178 9 91 49 3 21
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: 135 1628 60 25 1807 182 178 9 91 49 3 21
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 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 2.69 0.11 1.00 2.73 0.27 1.00 0.09 0.91 0.94 0.06 1.00
Final Sat.: 1700 4920 180 1700 4633 467 1700 156 1544 1600 100 1700
Capacity Analysis Module:
Vol/Sat: 0.08 0.33 0.33 0.01 0.39 0.39 0.10 0.06 0.06 0.03 0.03 0.01
Crit Moves: ****

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/1/2016

Intersection									
Int Delay, s/veh		1.2							
Movement									
Traffic Vol, veh/h	450	7	54	462	3	49	NBL	NBR	
Future Vol, veh/h	450	7	54	462	3	49			
Conflicting Peds, #/hr	0	0	0	0	0	0	Stop	Stop	
Sign Control	Free	Free	Free	Free	None	None	Stop	Stop	
RT Channelized	-	None	-	-	-	-	0	0	
Storage Length	-	-	-	-	-	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	0	0	-	
Grade, %	0	-	-	0	0	0	0	-	
Peak Hour Factor	90	90	90	90	90	90	90	90	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	
Mvmt Flow	500	8	60	513	3	54	3	54	
Major/Minor									
Conflicting Flow All	0	0	508	0	881	254	Minor1		
Stage 1	-	-	-	-	504	-			
Stage 2	-	-	-	-	377	-			
Critical Hdwy	-	-	4.14	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	-	-	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	1053	-	286	745			
Stage 1	-	-	-	-	572	-			
Stage 2	-	-	-	-	663	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1053	-	263	745			
Mov Cap-2 Maneuver	-	-	-	-	263	-			
Stage 1	-	-	-	-	572	-			
Stage 2	-	-	-	-	610	-			
Approach									
EB	0	WB	1.2	NB			NB		
HCM Control Delay, s		10.8							
HCM LOS		B							
Minor Lane/Major Mvmt									
NBLn1	674	EBT	EBR	WBL	WBT				
Capacity (veh/h)	674	-	-	1053	-				
HCM Lane V/C Ratio	0.086	-	-	0.057	-				
HCM Control Delay (s)	10.8	-	-	8.6	0.3				
HCM Lane LOS	B	-	-	A	A				
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection									
Intersection Delay, s/veh		9.6							
Intersection LOS		A							
Movement									
EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL
Traffic Vol, veh/h	0	30	5	47	0	3	6	10	0
Future Vol, veh/h	0	30	5	47	0	3	6	10	0
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.92	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	6	56	0	4	7	12	0
Number of Lanes	0	0	1	0	0	0	1	0	0
Approach									
EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL
Opposing Approach	WB			EB				SB	
Opposing Lanes	1			1				2	
Conflicting Approach Left	SB			NB				EB	
Conflicting Lanes Left	2			2				1	
Conflicting Approach Right	NB			SB				WB	
Conflicting Lanes Right	2			2				1	
HCM Control Delay	9.1			8.6				10	
HCM LOS	A			A				A	
Lane									
NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2				
Vol Left, %	38%	0%	37%	16%	6%	0%			
Vol Thru, %	62%	96%	6%	32%	94%	73%			
Vol Right, %	0%	4%	57%	53%	0%	27%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	178	114	82	19	126	163			
LT Vol	68	0	30	3	7	0			
Through Vol	110	110	5	6	119	119			
RT Vol	0	4	47	10	0	44			
Lane Flow Rate	211	135	98	23	150	194			
Geometry Grp	7	7	2	2	7	7			
Degree of Util (X)	0.314	0.193	0.141	0.033	0.217	0.269			
Departure Headway (Hd)	5.357	5.139	5.2	5.323	5.208	4.99			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	668	696	685	667	687	718			
Service Time	3.11	2.892	3.261	3.4	2.959	2.741			
HCM Lane V/C Ratio	0.316	0.194	0.143	0.034	0.218	0.27			
HCM Control Delay	10.6	9.1	9.1	8.6	9.4	9.6			
HCM Lane LOS	B	A	A	A	A	A			
HCM 95th-tile Q	1.3	0.7	0.5	0.1	0.8	1.1			

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	7	238	44	
Future Vol, veh/h	0	7	238	44	
Peak Hour Factor	0.92	0.84	0.84	0.84	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	8	283	52	
Number of Lanes	0	0	2	0	
Approach	SB				
Opposing Approach	NB				
Opposing Lanes	2				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	9.5				
HCM LOS	A				
ane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/1/2016

Intersection																
Intersection Delay, s/veh10.4																
Intersection LOS																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	42	37	56	0	38	41	74	0	30	133	29	0	46	183	40
Future Vol, veh/h	0	42	37	56	0	38	41	74	0	30	133	29	0	46	183	40
Peak Hour Factor	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84	0.92	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	50	44	67	0	45	49	88	0	36	158	35	0	55	218	48
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	2
Approach	EB		WB		WB		EB		NB		NB		SB		SB	
Opposing Approach	WB		1		EB		1		SB		2		SB		NB	
Opposing Lanes	1								2				2			
Conflicting Approach Left	SB		NB		NB		EB		EB		WB		WB		WB	
Conflicting Lanes Left	2		2		2		1		1		1		1		1	
Conflicting Approach Right	NB		SB		SB		WB		WB		EB		EB		EB	
Conflicting Lanes Right	2		2		2		1		1		1		1		1	
HCM Control Delay	10.3		10.5		10.5		10		10		10.6		10.6		B	
HCM LOS	B		B		B		A		A		B		B		B	
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	31%		0%		31%		25%		33%		0%					
Vol Thru, %	69%		70%		27%		27%		67%		70%					
Vol Right, %	0%		30%		41%		48%		0%		30%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	97		96		135		153		138		132					
LT Vol	30		0		42		38		46		0					
Through Vol	67		67		37		41		92		92					
RT Vol	0		29		56		74		0		40					
Lane Flow Rate	115		114		161		182		164		157					
Geometry Grp	7		7		2		2		7		7					
Degree of Util (X)	0.195		0.181		0.245		0.273		0.272		0.244					
Departure Headway (Hd)	6.101		5.728		5.487		5.397		5.992		5.606					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	588		626		654		665		599		640					
Service Time	3.839		3.466		3.529		3.437		3.727		3.342					
HCM Lane V/C Ratio	0.196		0.182		0.246		0.274		0.274		0.245					
HCM Control Delay	10.3		9.7		10.3		10.5		11		10.2					
HCM Lane LOS	B		A		B		B		B		B					
HCM 95th-ile Q	0.7		0.7		1		1.1		1.1		1					

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year + Project PM Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	17	2	0	149	25	65	0	5	106	107
Traffic Vol, veh/h	0	1	17	2	0	149	25	65	0	5	106	107
Future Vol, veh/h	0	1	17	2	0	149	25	65	0	5	106	107
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	20	2	0	171	29	75	0	6	122	123
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	9.4				11				9.6			
HCM LOS	A				B				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	5%	0%	86%	39%	0%	0%	0%	0%
Vol Thru, %	91%	33%	85%	14%	0%	61%	95%	0%	95%	0%
Vol Right, %	0%	67%	10%	0%	100%	0%	5%	0%	5%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	160	20	174	65	105	67	0	0	0
LT Vol	5	0	1	149	0	41	0	0	0	0
Through Vol	53	53	17	25	0	64	64	0	0	0
RT Vol	0	107	2	0	65	0	3	0	0	0
Lane Flow Rate	67	184	23	200	75	120	76	0	0	0
Geometry Grp	7	7	6	7	7	7	7	7	7	7
Degree of Utl (X)	0.105	0.262	0.039	0.338	0.103	0.195	0.19	0.195	0.19	0.19
Departure Headway (Hd)	5.648	5.132	6.13	6.091	4.956	5.841	5.611	5.841	5.611	5.611
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	629	683	588	586	714	609	633	609	633	633
Service Time	3.431	2.914	4.13	3.883	2.747	3.63	3.4	3.63	3.4	3.4
HCM Lane V/C Ratio	0.107	0.266	0.039	0.341	0.105	0.197	0.12	0.197	0.12	0.12
HCM Control Delay	9.1	9.8	9.4	12	8.3	10.1	9.2	10.1	9.2	9.2
HCM Lane LOS	A	A	A	A	B	A	B	A	B	A
HCM 95th-tile Q	0.4	1	0.1	1.5	0.3	0.7	0.4	0.7	0.4	0.4

HCM 2010 AWSC
11: Montecito Road & Bradbury Road

Opening Year + Project PM Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations	0	1	17	2	0	149	25	65	0	5	106	107
Traffic Vol, veh/h	0	1	17	2	0	149	25	65	0	5	106	107
Future Vol, veh/h	0	1	17	2	0	149	25	65	0	5	106	107
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	20	2	0	171	29	75	0	6	122	123
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	9.4				11				9.6			
HCM LOS	A				B				A			

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/1/2016

Intersection										
Intersection Delay, s/veh 8.1										
Intersection LOS A										
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR	
Traffic Vol. veh/h	0	91	24	0	22	137	0	32	11	
Future Vol. veh/h	0	91	24	0	22	137	0	32	11	
Peak Hour Factor	0.92	0.90	0.90	0.92	0.90	0.90	0.92	0.90	0.90	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	101	27	0	24	152	0	36	12	
Number of Lanes	0	1	0	0	0	1	0	1	0	
Approach	EB	WB	EB	WB	WB	NB	NB	NB		
Opposing Approach	WB	EB								
Opposing Lanes	1	1						0		
Conflicting Approach Left		NB				EB				
Conflicting Lanes Left	0	1				1				
Conflicting Approach Right	NB					WB				
Conflicting Lanes Right	1	0				1				
HCM Control Delay	7.8	8.3				7.9				
HCM LOS	A	A				A				
Lane	NBLn1	EBLn1	WBLn1							
Vol Left, %	74%	0%	14%							
Vol Thru, %	0%	79%	86%							
Vol Right, %	26%	21%	0%							
Sign Control	Stop	Stop	Stop							
Traffic Vol by Lane	43	115	159							
LT Vol	32	0	22							
Through Vol	0	91	137							
RT Vol	11	24	0							
Lane Flow Rate	48	128	177							
Geometry Grp	1	1	1							
Degree of Util (X)	0.061	0.143	0.203							
Departure Headway (Hd)	4.585	4.025	4.142							
Convergence, Y/N	Yes	Yes	Yes							
Cap	786	879	859							
Service Time	2.585	2.103	2.205							
HCM Lane V/C Ratio	0.061	0.146	0.206							
HCM Control Delay	7.9	7.8	8.3							
HCM Lane LOS	A	A	A							
HCM 95th-tile Q	0.2	0.5	0.8							

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection															
Intersection Delay, s/veh16.1															
Intersection LOS C															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	22	122	27	0	185	171	85	0	43	44	180	0	76	34
Future Vol, veh/h	0	22	122	27	0	185	171	85	0	43	44	180	0	76	34
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	127	28	0	193	178	89	0	45	46	188	0	79	35
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1
Approach	EB		WB		WB		NB		NB		SB		SB		
Opposing Approach	WB		EB		EB		SB		SB		NB		NB		
Opposing Lanes	1		2		2		1		1		1		1		
Conflicting Approach Left	SB		NB		NB		EB		EB		WB		WB		
Conflicting Lanes Left	1		1		1		2		2		1		1		
Conflicting Approach Right	NB		SB		SB		WB		WB		EB		EB		
Conflicting Lanes Right	1		1		1		1		1		2		2		
HCM Control Delay	10.5		21.5		21.5		13.2		13.2		11.6		11.6		
HCM LOS	B		C		C		B		B		B		B		
Lane	NBLn1		EBLn1		EBLn2		WBLn1		SBLn1						
Vol Left, %	16%		27%		0%		42%		54%						
Vol Thru, %	16%		73%		69%		39%		24%						
Vol Right, %	67%		0%		31%		19%		21%						
Sign Control	Stop		Stop		Stop		Stop		Stop						
Traffic Vol by Lane	267		83		88		441		140						
LT Vol	43		22		0		185		76						
Through Vol	44		61		61		171		34						
RT Vol	180		0		27		85		30						
Lane Flow Rate	278		86		92		459		146						
Geometry Grp	2		7		7		5		2						
Degree of Util (X)	0.438		0.159		0.16		0.713		0.258						
Departure Headway (Hd)	5.663		6.628		6.273		5.589		6.379						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes						
Cap	629		537		567		643		566						
Service Time	3.753		4.426		4.072		3.663		4.379						
HCM Lane V/C Ratio	0.442		0.16		0.162		0.714		0.258						
HCM Control Delay	13.2		10.7		10.3		21.5		11.6						
HCM Lane LOS	B		B		B		C		B						
HCM 95th-tile Q	2.2		0.6		0.6		5.9		1						

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection													
Intersection Delay, s/veh 11.8													
Intersection LOS B													
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBT					
Traffic Vol. veh/h	0	86	295	0	43	66	0	233	55				
Future Vol. veh/h	0	86	295	0	43	66	0	233	55				
Peak Hour Factor	0.92	0.89	0.89	0.92	0.89	0.89	0.92	0.89	0.89				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	97	331	0	48	74	0	262	62				
Number of Lanes	0	1	1	0	1	0	0	0	1				
Approach													
Approach	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBT					
Opposing Approach							SB	NB					
Opposing Lanes	0						1	1					
Conflicting Approach Left	NB												
Conflicting Lanes Left	1						0	2					
Conflicting Approach Right	SB						WB	2					
Conflicting Lanes Right	1						2	0					
HCM Control Delay	11.5						9.2	13.1					
HCM LOS	B						A	B					
Lane													
Lane	NBLn1WBLn1WBLn2SBLn1												
Vol Left, %	0% 100%						0% 81%						
Vol Thru, %	39% 0%						0% 19%						
Vol Right, %	61% 0%						100% 0%						
Sign Control	Stop Stop						Stop Stop						
Traffic Vol by Lane	109 86						295 288						
LT Vol	0 86						0 233						
Through Vol	43 0						0 55						
RT Vol	66 0						295 0						
Lane Flow Rate	122 97						331 324						
Geometry Grp	2 7						7 2						
Degree of Util (X)	0.175 0.165						0.456 0.473						
Departure Headway (Hd)	5.14 6.16						4.949 5.26						
Convergence, Y/N	Yes Yes						Yes Yes						
Cap	702 577						719 676						
Service Time	3.14 3.955						2.742 3.35						
HCM Lane V/C Ratio	0.174 0.168						0.46 0.479						
HCM Control Delay	9.2 10.2						11.9 13.1						
HCM Lane LOS	A B						B B						
HCM 95th-ile Q	0.6 0.6						2.4 2.5						

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/1/2016

Intersection												
Int Delay, s/veh 3.2												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	89	1	84	167	4	69						
Future Vol, veh/h	89	1	84	167	4	69						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	93	93	93	93	93	93						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	96	1	90	180	4	74						
Major/Minor												
	Major1			Major2			Minor1					
Conflicting Flow All	0			97			456			96		
Stage 1	-			-			96			-		
Stage 2	-			-			360			-		
Critical Hdwy	-			4.12			6.42			6.22		
Critical Hdwy Stg 1	-			-			5.42			-		
Critical Hdwy Stg 2	-			-			5.42			-		
Follow-up Hdwy	-			2.218			3.518			3.318		
Pot Cap-1 Maneuver	-			1496			562			960		
Stage 1	-			-			928			-		
Stage 2	-			-			706			-		
Platoon blocked, %	-			-			-			-		
Mov Cap-1 Maneuver	-			1496			524			960		
Mov Cap-2 Maneuver	-			-			524			-		
Stage 1	-			-			928			-		
Stage 2	-			-			659			-		
Approach												
	EB			WB			NB					
HCM Control Delay, s	0			2.5			9.3			A		
HCM LOS												
Minor Lane/Major Mvmt												
	NBLn1			EBT			WBL			WBT		
Capacity (veh/h)	918			-			1496			-		
HCM Lane V/C Ratio	0.086			-			0.06			-		
HCM Control Delay (s)	9.3			-			7.6			0		
HCM Lane LOS	A			-			A			A		
HCM 95th %ile Q(veh)	0.3			-			0.2			-		

HCM 2010 Signalized Intersection Summary 1: Seal Beach Boulevard & I-405 SB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4TB	4TB	4TB	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	148	26	16	549	37	509	9	1118	275	437	1131	132
Future Volume (veh/h)	148	26	16	549	37	509	9	1118	275	437	1131	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	157	28	17	612	0	0	10	1189	293	465	1203	140
Adj No. of Lanes	0	2	0	2	0	2	1	3	1	1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	72	44	684	0	305	21	1321	411	497	2769	862
Arrive On Green	0.07	0.07	0.07	0.19	0.00	0.00	0.01	0.26	0.26	0.56	1.00	1.00
Sat Flow, veh/h	1774	1087	660	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	157	0	45	612	0	0	10	1189	293	465	1203	140
Grp Sat Flow(s), veh/hln	1774	0	1746	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.8	18.5	26.6	0.0	0.0
Cycle Q Clear(g, c), s	7.3	0.0	2.7	18.5	0.0	0.0	0.6	24.8	18.5	26.6	0.0	0.0
Prop In Lane	1.00	0.00	0.38	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	684	0	305	21	1321	411	497	2769	862
V/C Ratio(X)	1.33	0.00	0.39	0.90	0.00	0.00	0.47	0.90	0.71	0.94	0.43	0.16
Avail Cap(c, a), veh/h	118	0	116	748	0	334	81	1350	420	497	2769	862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.3	0.0	0.0	54.0	39.3	37.0	23.2	0.0	0.0
Incr Delay (d2), s/veh	196.7	0.0	2.1	12.7	0.0	0.0	15.3	10.0	10.1	23.0	0.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	10.0	0.0	1.4	10.3	0.0	0.0	0.4	12.9	9.2	15.8	0.1	0.1
LnGrp Delay(d), s/veh	248.1	0.0	51.3	56.0	0.0	0.0	69.3	49.4	47.0	46.3	0.4	0.4
LnGrp LOS	F	D	E	E	E	E	D	D	D	D	A	A
Approach Vol, veh/h	202			612			1492				1808	
Approach Delay, s/veh	204.2			56.0			49.0				12.2	
Approach LOS	F			E			D				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.6	34.4		12.0	5.3	65.7		27.0				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	28.6	26.8		9.3	2.6	20.0		20.5				
Green Ext Time (p_c), s	0.3	1.7		0.0	0.0	14.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				41.5								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary 2: Seal Beach Boulevard & I-405 NB Ramps

12/1/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	8	7	359	5	592	15	1386	381	272	1338	245
Traffic Volume (veh/h)	9	8	7	359	5	592	15	1386	381	272	1338	245
Future Volume (veh/h)	9	8	7	359	5	592	15	1386	381	272	1338	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	9	8	7	378	0	626	16	1459	0	286	1408	258
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	42	44	37	848	0	757	691	2117	659	242	1706	531
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.40	0.83	0.00	0.14	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	9	8	7	378	0	626	16	1459	0	286	1408	258
Grp Sat Flow(s), veh/hln	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g, s), s	0.5	0.5	0.5	10.0	0.0	20.6	0.3	12.4	0.0	15.0	28.0	14.2
Cycle Q Clear(g, c), s	0.5	0.5	0.5	10.0	0.0	20.6	0.3	12.4	0.0	15.0	28.0	14.2
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	42	44	37	848	0	757	691	2117	659	242	1706	531
V/C Ratio(X)	0.21	0.18	0.19	0.45	0.00	0.83	0.02	0.69	0.00	1.18	0.83	0.49
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	691	2117	659	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.65	0.65	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.7	52.7	52.7	35.6	0.0	39.7	26.4	6.4	0.0	47.5	33.6	29.0
Incr Delay (d2), s/veh	2.5	2.0	2.4	0.4	0.0	3.3	0.0	1.2	0.0	116.1	4.7	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	0.3	0.2	0.2	4.9	0.0	9.4	0.1	5.6	0.0	15.1	13.8	6.7
LnGrp Delay(d), s/veh	55.2	54.6	55.0	36.0	0.0	43.0	26.4	7.6	0.0	163.6	38.3	32.2
LnGrp LOS	E	D	E	D	D	D	C	A	F	D	C	C
Approach Vol, veh/h	24			1004			1475			1952		
Approach Delay, s/veh	55.0			40.4			7.8			55.8		
Approach LOS	D			D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	51.6	49.0		7.3	27.9	42.7		32.1				
Change Period (Y+Rc), s	4.0	* 4.0		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	30.7	* 30.7		* 5.0	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	14.4	2.5	2.3	30.0	22.6							
Green Ext Time (p_c), s	0.0	8.8	0.0	2.0	6.9	3.7						
Intersection Summary												
HCM 2010 Ctrl Delay				36.5								
HCM 2010 LOS				D								
Notes												

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.802

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 67 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted

Rights: Ovl Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1595 364 521 1503 0 0 0 0 364 0 578

Growth Adj: 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 1595 364 521 1503 0 0 0 0 364 0 578

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 0 1715 391 560 1616 0 0 0 0 391 0 622

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 0 1715 391 560 1616 0 0 0 0 391 0 622

PCE Adj: 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

FinalVolume: 0 1715 391 560 1616 0 0 0 0 391 0 622

OvAdjVol: 0 1715 391 560 1616 0 0 0 0 391 0 341

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00

Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.34 0.23 0.16 0.32 0.00 0.00 0.00 0.00 0.12 0.00 0.37

OvAdjV/S: 0.00 0.34 0.23 0.16 0.32 0.00 0.00 0.00 0.00 0.12 0.00 0.37

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.673

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 47 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Split Phase Split Phase

Rights: Include Ovl

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 368 1664 174 17 1423 73 111 2 405 176 35 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 368 1664 174 17 1423 73 111 2 405 176 35 5

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93

PHF Volume: 397 1795 188 18 1535 79 120 2 437 190 38 5

Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 397 1795 188 18 1535 79 120 2 437 190 38 5

PCE Adj: 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

FinalVolume: 397 1795 188 18 1535 79 120 2 437 190 38 5

OvAdjVol: 397 1795 188 18 1535 79 120 2 437 190 38 5

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.72 0.28 1.00 2.85 0.15 0.98 0.02 2.00 1.63 0.32 0.05

Final Sat.: 3400 4617 483 1700 4851 249 1670 30 3400 2770 551 79

Capacity Analysis Module:

Vol/Sat: 0.12 0.39 0.39 0.01 0.32 0.32 0.07 0.07 0.13 0.07 0.07 0.07

OvAdjV/S: 0.12 0.39 0.39 0.01 0.32 0.32 0.07 0.07 0.13 0.07 0.07 0.07

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.856

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 82 Level Of Service: D

Street Name: Seal Beach Blvd Towne Center Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 294 1299 109 93 1110 152 120 84 245 175 90 89

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 1299 109 93 1110 152 120 84 245 175 90 89

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95

PHF Volume: 310 1370 115 98 1171 160 127 89 258 185 95 94

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 310 1370 115 98 1171 160 127 89 258 185 95 94

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

Final Volume: 310 1370 115 98 1171 160 127 89 258 185 95 94

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 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 2.77 0.23 1.00 2.64 0.36 1.00 0.26 0.74 1.00 0.50 0.50

Final Sat.: 1700 4705 395 1700 4486 614 1700 434 1266 1700 855 845

Capacity Analysis Module:

Vol/Sat: 0.18 0.29 0.29 0.06 0.26 0.26 0.07 0.20 0.20 0.11 0.11 0.11

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Opening Year (2018) Plus Project
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.713

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 52 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:

Base Vol: 226 1467 15 25 1424 251 215 4 178 19 2 14

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: 226 1467 15 25 1424 251 215 4 178 19 2 14

User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

PHF Adj: 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97 0.97

PHF Volume: 232 1506 15 26 1462 258 221 4 183 20 2 14

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 232 1506 15 26 1462 258 221 4 183 20 2 14

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

Final Volume: 232 1506 15 26 1462 258 221 4 183 20 2 14

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 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 2.97 0.03 1.00 2.55 0.45 1.00 0.02 0.98 1.00 0.13 0.87

Final Sat.: 1700 5048 52 1700 4336 764 1700 37 1663 1700 213 1487

Capacity Analysis Module:

Vol/Sat: 0.14 0.30 0.30 0.02 0.34 0.34 0.13 0.11 0.11 0.01 0.01 0.01

Crit Moves: ****

Intersection										
1										
Init Delay, s/veh										
Movement										
Traffic Vol, veh/h	464	1	43	426	4	44				
Future Vol, veh/h	464	1	43	426	4	44				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	94	94	94	94	94	94				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	494	1	46	453	4	47				
Major/Minor										
Conflicting Flow All	0	0	495	0	812	247				
Stage 1	-	-	-	-	494	-				
Stage 2	-	-	-	-	318	-				
Critical Hdwy	-	-	4.14	-	6.84	6.94				
Critical Hdwy Stg 1	-	-	-	-	5.84	-				
Critical Hdwy Stg 2	-	-	-	-	5.84	-				
Follow-up Hdwy	-	-	2.22	-	3.52	3.32				
Pot Cap-1 Maneuver	-	-	1065	-	317	763				
Stage 1	-	-	-	-	579	-				
Stage 2	-	-	-	-	710	-				
Platoon blocked, %	-	-	-	-	-	-				
Mov Cap-1 Maneuver	-	-	1065	-	299	763				
Mov Cap-2 Maneuver	-	-	-	-	299	-				
Stage 1	-	-	-	-	579	-				
Stage 2	-	-	-	-	669	-				
Approach										
EB	EB	WB	WB	NB	NB					
HCM Control Delay, s	0	1	1	10.8	10.8					
HCM LOS				B	B					
Minor Lane/Major Mvmt										
NBLn1	EBT	EBR	WBL	WBT						
Capacity (veh/h)	668	-	-	1065	-					
HCM Lane V/C Ratio	0.076	-	-	0.043	-					
HCM Control Delay (s)	10.8	-	-	8.5	0.2					
HCM Lane LOS	B	-	-	A	A					
HCM 95th %ile Q(veh)	0.2	-	-	0.1	-					

Opening Year WP Saturday Mon Feb 20, 2017 15:26:28 Page 6-1												
Health Club within the Shops at Rossmore												
Opening Year (2018) Plus Project												
Saturday Peak Hour												
Level of Service Computation Report												
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)												

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd												

Cycle (sec):	100	Critical Vol./Cap.(X): 0.651										
Loss Time (sec):	10	Average Delay (sec/veh): xxxxxx										
Optimal Cycle:	45	Level of Service: B										

Street Name:Seal Beach Blvd-Los Alamitos Blvd												
Approach: North Bound South Bound East Bound West Bound												
Movement:	L T R	L T R	L T R	L T R	L T R	L T R	L T R	L T R	L T R	L T R	L T R	L T R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include	Include	Include	Include	Include	Include	Include	Include	Include
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0
Volume Module:												
Base Vol:	112	1455	44	22	1543	126	178	8	97	64	7	21
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:	112	1455	44	22	1543	126	178	8	97	64	7	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	114	1485	45	22	1574	129	182	8	99	65	7	21
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	114	1485	45	22	1574	129	182	8	99	65	7	21
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
M/F Adj:	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:	114	1485	45	22	1574	129	182	8	99	65	7	21
Saturation Flow Module:												
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	2.91	0.09	1.00	2.77	0.23	1.00	0.08	0.92	0.90	0.10	1.00
Final Sat.:	1700	4950	150	1700	4715	385	1700	130	1570	1532	168	1700
Capacity Analysis Module:												
Vol/Sat:	0.07	0.30	0.30	0.01	0.33	0.33	0.11	0.06	0.06	0.04	0.04	0.01
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection													
Intersection Delay, s/veh													8.8
Intersection LOS													A
Movement													
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	35	5	38	0	4	6	5	0	38	181	7	
Future Vol, veh/h	0	35	5	38	0	4	6	5	0	38	181	7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	38	5	41	0	4	7	5	0	41	197	8	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	
Approach													
	EB			WB			WB			NB			
Opposing Approach	WB			EB			EB			SB			
Opposing Lanes	1			1			1			2			
Conflicting Approach Left	SB			NB			NB			EB			
Conflicting Lanes Left	2			2			2			1			
Conflicting Approach Right	NB			SB			SB			WB			
Conflicting Lanes Right	2			2			2			1			
HCM Control Delay	8.6			8.3			8.3			8.9			
HCM LOS	A			A			A			A			
Lane													
	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2							
Vol Left, %	30%	0%	45%	27%	6%	0%							
Vol Thru, %	70%	93%	6%	40%	94%	85%							
Vol Right, %	0%	7%	49%	33%	0%	15%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	129	98	78	15	127	141							
LT Vol	38	0	35	4	7	0							
Through Vol	91	91	5	6	120	120							
RT Vol	0	7	38	5	0	21							
Lane Flow Rate	140	106	85	16	138	153							
Geometry Grp	7	7	2	2	7	7							
Degree of Util (X)	0.202	0.147	0.117	0.023	0.192	0.208							
Departure Headway (Hd)	5.194	4.995	4.949	5.113	5.038	4.905							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	691	717	723	698	712	732							
Service Time	2.928	2.729	2.987	3.161	2.77	2.637							
HCM Lane V/C Ratio	0.203	0.148	0.118	0.023	0.194	0.209							
HCM Control Delay	9.2	8.6	8.6	8.3	9	8.9							
HCM Lane LOS	A	A	A	A	A	A							
HCM 95th-tile Q	0.8	0.5	0.4	0.1	0.7	0.8							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/1/2016

Intersection				
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	239	21
Future Vol, veh/h	0	7	239	21
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	260	23
Number of Lanes	0	0	2	0
Approach				
Approach	SB			
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	1			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	8.9			
HCM LOS	A			
Lane				

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/1/2016

Intersection		Intersection Delay, s/veh 9.8															
Intersection LOS		A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	42	43	64	0	20	54	45	0	47	131	31	0	46	163	33	
Future Vol, veh/h	0	42	43	64	0	20	54	45	0	47	131	31	0	46	163	33	
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	47	48	71	0	22	60	50	0	52	146	34	0	51	181	37	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		SB		NB								SB		
Opposing Lanes	1		1		2		2								NB		
Conflicting Approach Left	SB		NB		EB		WB								WB		
Conflicting Lanes Left	2		2		1		1								1		
Conflicting Approach Right	NB		SB		WB		EB								EB		
Conflicting Lanes Right	2		2		1		1								1		
HCM Control Delay	9.9		9.6		9.8		9.9								9.9		
HCM LOS	A		A		A		A								A		
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2		
Vol Left, %	42%		0%		28%		17%		36%		0%						
Vol Thru, %	58%		68%		29%		45%		64%		71%						
Vol Right, %	0%		32%		43%		38%		0%		29%						
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop						
Traffic Vol by Lane	113		97		149		119		128		115						
LT Vol	47		0		42		20		46		0						
Through Vol	66		66		43		54		82		82						
RT Vol	0		31		64		45		0		33						
Lane Flow Rate	125		107		166		132		142		127						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.205		0.163		0.236		0.195		0.23		0.193						
Departure Headway (Hd)	5.914		5.475		5.267		5.306		5.841		5.454						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	609		657		685		678		618		660						
Service Time	3.63		3.19		3.267		3.327		3.554		3.167						
HCM Lane V/C Ratio	0.205		0.163		0.242		0.195		0.23		0.192						
HCM Control Delay	10.2		9.3		9.9		9.6		10.3		9.5						
HCM Lane LOS	B		A		A		A		B		A						
HCM 95th-tile Q	0.8		0.6		0.9		0.7		0.9		0.7						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

Opening Year + P Saturday Peak Hour
02/22/2017

Intersection													
Intersection Delay, s/veh		9											
Intersection LOS		A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	1	15	4	0	116	20	70	0	3	74	95	
Future Vol, veh/h	0	1	15	4	0	116	20	70	0	3	74	95	
Peak Hour Factor	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	0.92	0.97	0.97	0.97	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	1	15	4	0	120	21	72	0	3	76	98	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													
Opposing Approach	WB		EB		WB		NB		SB				
Opposing Lanes	2		1		1		2		2				
Conflicting Approach Left	SB		NB		NB		EB		EB				
Conflicting Lanes Left	2		2		2		1		1				
Conflicting Approach Right	NB		SB		SB		WB		WB				
Conflicting Lanes Right	2		2		2		2		2				
HCM Control Delay	8.7		9.4		9.4		8.6		8.6				
HCM LOS	A		A		A		A		A				
Lane													
Vol Left, %	7%		0%		5%		85%		0%		44%		0%
Vol Thru, %	93%		28%		75%		15%		0%		56%		96%
Vol Right, %	0%		72%		20%		0%		100%		0%		4%
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop
Traffic Vol by Lane	40		132		20		136		70		82		48
LT Vol	3		0		1		116		0		36		0
Through Vol	37		37		15		20		0		46		46
RT Vol	0		95		4		0		70		0		2
Lane Flow Rate	41		136		21		140		72		85		49
Geometry Grp	7		7		6		7		7		7		7
Degree of Util (X)	0.061		0.181		0.031		0.224		0.092		0.13		0.073
Departure Headway (Hd)	5.336		4.791		5.47		5.744		4.612		5.547		5.297
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes
Cap	670		747		651		624		774		645		675
Service Time	3.077		2.532		3.529		3.488		2.356		3.29		3.04
HCM Lane V/C Ratio	0.061		0.182		0.032		0.224		0.093		0.132		0.073
HCM Control Delay	8.4		8.6		8.7		10.2		7.8		9.1		8.5
HCM Lane LOS	A		A		A		B		A		A		A
HCM 95th-tile Q	0.2		0.7		0.1		0.9		0.3		0.4		0.2

HCM 2010 AWSC
 11: Montecito Road & Bradbury Road

Opening Year + P Saturday Peak Hour
 02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement					
Lane Configurations	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	36	92	2	
Future Vol, veh/h	0	36	92	2	
Peak Hour Factor	0.92	0.97	0.97	0.97	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	37	95	2	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	8.9				
HCM LOS	A				

HCM 2010 AWSC
 12: West Road & Rossmoor Center Way

12/1/2016

Intersection											
Intersection Delay, s/veh 7.8											
Intersection LOS A											
Movement											
	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	83	21	0	10	119	0	32	17		
Future Vol, veh/h	0	83	21	0	10	119	0	32	17		
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	91	23	0	11	131	0	35	19		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach											
	EB			WB			NB				
Opposing Approach	WB			EB			NB			0	
Opposing Lanes	1			1			0			EB	
Conflicting Approach Left				NB			EB			1	
Conflicting Lanes Left	0			1			1			WB	
Conflicting Approach Right	NB			0			1			1	
Conflicting Lanes Right	1			0			7.7			8	
HCM Control Delay	7.7			8			7.7			A	
HCM LOS	A			A			A			A	
Lane											
	NBLn1			EBLn1WBLn1							
Vol Left, %	65%			0%			8%				
Vol Thru, %	0%			80%			92%				
Vol Right, %	35%			20%			0%				
Sign Control	Stop			Stop			Stop				
Traffic Vol by Lane	49			104			129				
LT Vol	32			0			10				
Through Vol	0			83			119				
RT Vol	17			21			0				
Lane Flow Rate	54			114			142				
Geometry Grp	1			1			1				
Degree of Util (X)	0.066			0.127			0.163				
Departure Headway (Hd)	4.409			4.015			4.131				
Convergence, Y/N	Yes			Yes			Yes				
Cap	817			883			862				
Service Time	2.409			2.083			2.189				
HCM Lane V/C Ratio	0.066			0.129			0.165				
HCM Control Delay	7.7			7.7			8				
HCM Lane LOS	A			A			A				
HCM 95th-tile Q	0.2			0.4			0.6				

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/1/2016

Intersection																	
Intersection Delay, s/veh23.7																	
Intersection LOS		C															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol. veh/h	0	21	151	36	0	216	135	107	0	43	65	217	0	97	61	24	
Future Vol. veh/h	0	21	151	36	0	216	135	107	0	43	65	217	0	97	61	24	
Peak Hour Factor	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	0.92	0.94	0.94	0.94	
Heavy Vehicles %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	22	161	38	0	230	144	114	0	46	69	231	0	103	65	26	
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1	
Approach		EB		WB		NB		SB									
Opposing Approach		WB		EB		SB		NB									
Opposing Lanes		1		2		1		1									
Conflicting Approach Left		SB		NB		EB		WB									
Conflicting Lanes Left		1		1		2		1									
Conflicting Approach Right		NB		SB		WB		EB									
Conflicting Lanes Right		1		1		1		2									
HCM Control Delay		12.2		35.9		18.9		14.6									
HCM LOS		B		E		C		B									
Lane		NBLn1		EBLn1		WBLn1		SBLn1									
Vol Left, %		13%		22%		0%		47%		53%							
Vol Thru, %		20%		78%		68%		29%		34%							
Vol Right, %		67%		0%		32%		23%		13%							
Sign Control		Stop		Stop		Stop		Stop		Stop							
Traffic Vol by Lane		325		97		112		458		162							
LT Vol		43		21		0		216		97							
Through Vol		65		76		76		135		61							
RT Vol		217		0		36		107		24							
Lane Flow Rate		346		103		119		487		194							
Geometry Grp		2		7		7		5		2							
Degree of Utlr (X)		0.609		0.213		0.235		0.854		0.383							
Departure Headway (Hd)		6.338		7.468		7.124		6.309		7.124							
Convergence, Y/N		Yes		Yes		Yes		Yes		Yes							
Cap		567		478		501		570		501							
Service Time		4.415		5.257		4.913		4.378		5.216							
HCM Lane V/C Ratio		0.61		0.215		0.238		0.854		0.387							
HCM Control Delay		18.9		12.3		12.1		35.9		14.6							
HCM Lane LOS		C		B		B		E		B							
HCM 95th-tile Q		4.1		0.8		0.9		9.2		1.8							

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/1/2016

Intersection												
Intersection Delay, s/veh16.3												
Intersection LOS C												
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	133	398	0	70	102	0	342	53			
Future Vol, veh/h	0	133	398	0	70	102	0	342	53			
Peak Hour Factor	0.92	0.97	0.97	0.92	0.97	0.97	0.92	0.97	0.97			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	137	410	0	72	105	0	353	55			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB		NB		SB							
Opposing Approach					SB		NB					
Opposing Lanes	0		1		1		1					
Conflicting Approach Left	NB						WB					
Conflicting Lanes Left	1				0		2					
Conflicting Approach Right	SB				WB		0					
Conflicting Lanes Right	1				2		0					
HCM Control Delay	15.7				11		19.3					
HCM LOS	C				B		C					
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%			100%			0%			87%		
Vol Thru, %	41%			0%			0%			13%		
Vol Right, %	59%			0%			100%			0%		
Sign Control	Stop			Stop			Stop			Stop		
Traffic Vol by Lane	172			133			398			395		
LT Vol	0			133			0			342		
Through Vol	70			0			0			53		
RT Vol	102			0			398			0		
Lane Flow Rate	177			137			410			407		
Geometry Grp	2			7			7			2		
Degree of Util (X)	0.28			0.256			0.626			0.656		
Departure Headway (Hd)	5.683			6.709			5.492			5.798		
Convergence, Y/N	Yes			Yes			Yes			Yes		
Cap	629			535			656			623		
Service Time	3.738			4.453			3.236			3.841		
HCM Lane V/C Ratio	0.281			0.256			0.625			0.653		
HCM Control Delay	11			11.8			17			19.3		
HCM Lane LOS	B			B			C			C		
HCM 95th-Pile Q	1.1			1			4.4			4.8		

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/1/2016

Intersection									
Int Delay, s/veh									
3.8									
Movement									
Traffic Vol, veh/h	100	0	85	124			NBL	NBR	
Future Vol, veh/h	100	0	85	124			5	89	
Conflicting Peds, #/hr	0	0	0	0			0	0	
Sign Control									
RT Channelized	Free	Free	Free	Free			Stop	Stop	
Storage Length	-	None	-	None			-	None	
Veh in Median Storage, #	0	-	-	0			0	-	
Grade, %	0	-	-	0			0	-	
Peak Hour Factor									
Heavy Vehicles, %	2	2	2	2			2	2	
Mvmt Flow									
	109	0	92	135			5	97	
Major/Minor									
	Major1		Major2		Minor1				
Conflicting Flow All	0	0	109	0	429		109		
Stage 1	-	-	-	-	109		-		
Stage 2	-	-	-	-	320		-		
Critical Hwy	-	-	4.12	-	6.42		6.22		
Critical Hwy Stg 1	-	-	-	-	5.42		-		
Critical Hwy Stg 2	-	-	-	-	5.42		-		
Follow-up Hwy	-	-	2.218	-	3.518		3.318		
Pot Cap-1 Maneuver	-	-	1481	-	583		945		
Stage 1	-	-	-	-	916		-		
Stage 2	-	-	-	-	736		-		
Platoon blocked, %	-	-	-	-	-		-		
Mov Cap-1 Maneuver	-	-	1481	-	544		945		
Mov Cap-2 Maneuver	-	-	-	-	544		-		
Stage 1	-	-	-	-	916		-		
Stage 2	-	-	-	-	687		-		
Approach									
	EB		WB		NB				
HCM Control Delay, s	0		3.1		9.5				
HCM LOS			A						
Minor Lane/Major Mvmt									
	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	909	-	-	1481	-				
HCM Lane V/C Ratio	0.112	-	-	0.062	-				
HCM Control Delay (s)	9.5	-	-	7.6	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-				

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations		4T			4			4T			4T
Traffic Volume (veh/h)	95	31	18	762	48	584	15	1156	182	477	1591
Future Volume (veh/h)	95	31	18	762	48	584	15	1156	182	477	1591
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Qt), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	31	18	796	0	0	15	1156	182	477	1591
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	859	0	383	30	1232	384	674	984
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.25	0.42	0.42
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085
Grp Volume(v), veh/h	95	0	49	796	0	0	15	1156	182	477	1591
Grp Sat Flow(s),veh/h	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695
Q Serve(g, s), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.5	10.8	26.9	25.4
Cycle Q Clear(g, c), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.5	10.8	26.9	25.4
Prop In Lane	1.00	0.0	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	859	0	383	30	1232	384	674	984
V/C Ratio(X)	1.07	0.00	0.56	0.93	0.00	0.51	0.94	0.47	0.71	0.50	0.68
Avail Cap(c, a), veh/h	89	0	87	887	0	396	81	1234	384	674	984
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	35.5	19.6
Incr Delay (d2), s/veh	116.2	0.0	7.8	15.2	0.0	0.0	12.7	14.5	4.2	2.6	0.4
Initial Q Delay(d3),s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	5.5	0.0	1.6	13.6	0.0	0.0	0.6	13.1	5.2	13.7	12.0
LnGrp Delay(d),s/veh	169.1	0.0	58.9	55.9	0.0	0.0	66.3	55.4	39.8	38.0	20.0
LnGrp LOS	F	E	E	E	E	E	E	D	D	B	B
Approach Vol, veh/h	144		796		1353		2147				
Approach Delay, s/veh	131.6		55.9		53.4		23.7				
Approach LOS	F		E		D		C				
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	47.6	32.5		10.2	5.8	74.2		32.4			
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8			
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5			
Max Q Clear Time (g_c+I), s	28.9	26.5		7.5	2.9	27.4		26.1			
Green Ext Time (p_c), s	0.2	0.1		0.0	0.0	14.4		0.5			
Intersection Summary											
HCM 2010 Ctrl Delay	42.1		D								
HCM 2010 LOS											
Notes											

12/5/2016

HCM 2010 Signalized Intersection Summary

2: Seal Beach Boulevard & I-405 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	2	3	4	5	6	7	8	9	10	11	12
Traffic Volume (veh/h)	10	12	5	402	58	612	120	1324	381	366	1726	508
Future Volume (veh/h)	10	12	5	402	58	612	120	1324	381	366	1726	508
Number	7	4	14	3	8	18	5	12	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	12	5	402	58	612	120	1324	381	366	1726	508
Adj No. of Lanes	1	1	1	2	2	2	2	2	2	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	45	48	40	879	0	784	547	1879	585	306	1866	581
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.32	0.74	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	10	12	5	402	0	651	120	1324	0	366	1726	508
Grp Sat Flow(s), veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Q Serve(g.s), s	0.6	0.7	0.3	10.6	0.0	21.4	2.8	15.6	0.0	19.0	35.8	32.9
Cycle Q Clear(g.s), s	0.6	0.7	0.3	10.6	0.0	21.4	2.8	15.6	0.0	19.0	35.8	32.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	45	48	40	879	0	784	547	1879	585	306	1866	581
V/C Ratio(X)	0.22	0.25	0.12	0.46	0.00	0.83	0.22	0.70	0.00	1.19	0.93	0.87
Avail Cap(c.a), veh/h	81	85	72	1258	0	1123	547	1879	585	306	1866	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.6	52.4	35.1	0.0	39.2	32.5	11.1	0.0	45.5	33.4	32.5
Incr Delay (d2), s/veh	2.4	2.7	1.4	0.4	0.0	3.7	0.1	1.3	0.0	11.0	9.3	16.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/In	0.3	0.4	0.2	5.2	0.0	9.8	1.3	7.1	0.0	19.1	18.2	17.1
LnGrp Delay(d), s/veh	54.9	55.3	53.7	35.5	0.0	42.9	32.6	12.4	0.0	160.5	42.7	49.1
LnGrp LOS	D	E	D	D	D	D	C	B	F	D	D	D
Approach Vol, veh/h	27	1444	2600									
Approach Delay, s/veh	54.9	14.1	60.5									
Approach LOS	D	B	E									
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6							
Phs Duration (G+Y+Rc), s	46.5	7.5	23.3	46.2	33.0							
Change Period (Y+Rc), s	4.0	5.8	* 4.7	5.8	* 5.8							
Max Green Setting (Gmax), s	26.7	* 5.0	* 5.0	* 41	39.0							
Max Q Clear Time (g_c+d), s	17.6	2.7	4.8	37.8	23.4							
Green Ext Time (p_c), s	0.0	5.6	0.0	0.0	2.6							
Intersection Summary												
HCM 2010 Ctrl Delay	43.2											
HCM 2010 LOS	D											
Notes												

Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
AM Peak Hour

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

Intersection #3 Seal Beach Blvd/Lampson Ave											

Cycle (sec):	100	Critical Vol./Cap.(X):									
Loss Time (sec):	10	Average Delay (sec/veh):									
Optimal Cycle:	69	Level Of Service:									

Street Name:	Seal Beach Blvd	Lampson Ave									
Approach:	North Bound	South Bound	East Bound								
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Permitted
Rights:	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl	Ovl
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0

Volume Module:	0 1614	334	361 1849	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 668
Base Vol:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Growth Adj:	0 1614	334	361 1849	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 668
Initial Bse:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 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 1614	334	361 1849	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 668
Reduced Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
Final Volume:	0 1614	334	361 1849	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 668
OvAdjVol:	0 1614	334	361 1849	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 487

Saturation Flow Module:	1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700	1700 1700 1700
Sat/Lane:	1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00
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 1.00 1.00	1.00 1.00 1.00	1.00 1.00 1.00	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 3.00	1.00 2.00 3.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Final Sat.:	0 5100	1700 3400 5100	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 3400	0 1700

Capacity Analysis Module:	0.00 0.32	0.20 0.11 0.36	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Vol/Sat:	0.00 0.32	0.20 0.11 0.36	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
OvAdjV/S:	0.00 0.32	0.20 0.11 0.36	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
Crit Moves:	0.00 0.32	0.20 0.11 0.36	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00

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Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
AM Peak Hour

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.623
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 2 1 0 1 0 0

Volume Module:
Base Vol: 413 1826 51 4 1501 57 116 3 621 71 14 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 413 1826 51 4 1501 57 116 3 621 71 14 2
User Adj: 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
PHF Volume: 413 1826 51 4 1501 57 116 3 621 71 14 2
Reduct Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 413 1826 51 4 1501 57 116 3 621 71 14 2
PCE Adj: 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
FinalVolume: 413 1826 51 4 1501 57 116 3 621 71 14 2
OvlAdjVol: 0 0 0 0 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03
Final Sat.: 3400 4961 139 1700 4913 187 1657 43

Capacity Analysis Module:
Vol/Sat: 0.12 0.37 0.37 0.00 0.31 0.31 0.07 0.07
OvlAdjV/S: 0.06
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
AM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.498
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 59 1794 34 23 1539 33 21 4 15 26 2 23
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 59 1794 34 23 1539 33 21 4 15 26 2 23
User Adj: 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
PHF Volume: 59 1794 34 23 1539 33 21 4 15 26 2 23
Reduct Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 59 1794 34 23 1539 33 21 4 15 26 2 23
PCE Adj: 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
FinalVolume: 59 1794 34 23 1539 33 21 4 15 26 2 23
OvlAdjVol: 0 0 0 0 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.94 0.06 1.00 2.94 0.06 1.00 0.21
Final Sat.: 1700 5005 95 1700 4993 107 1700 358

Capacity Analysis Module:
Vol/Sat: 0.03 0.36 0.36 0.01 0.31 0.31 0.01 0.01
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
AM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.544
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 71 1761 16 21 1562 77 84 8 85 19 11 43
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 71 1761 16 21 1562 77 84 8 85 19 11 43
User Adj: 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
PHF Volume: 71 1761 16 21 1562 77 84 8 85 19 11 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 71 1761 16 21 1562 77 84 8 85 19 11 43
PCE Adj: 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
Final Volume: 71 1761 16 21 1562 77 84 8 85 19 11 43

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.97 0.03 1.00 2.86 0.14 1.00 0.09 0.91 1.00 0.20 0.80
Final Sat.: 1700 5054 46 1700 4860 240 1700 146 1554 1700 346 1354

Capacity Analysis Module:
Vol/Sat: 0.04 0.35 0.35 0.01 0.32 0.32 0.05 0.05 0.05 0.01 0.03 0.03
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
AM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.766
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: C

Street Name: Seal Beach Blvd-Los Alamitos Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 160 1676 28 30 1516 185 305 20 106 77 24 31
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 160 1676 28 30 1516 185 305 20 106 77 24 31
User Adj: 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
PHF Volume: 160 1676 28 30 1516 185 305 20 106 77 24 31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 160 1676 28 30 1516 185 305 20 106 77 24 31
PCE Adj: 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
Final Volume: 160 1676 28 30 1516 185 305 20 106 77 24 31

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.95 0.05 1.00 2.67 0.33 1.00 0.16 0.84 0.76 0.24 1.00
Final Sat.: 1700 5016 84 1700 4545 555 1700 270 1430 1296 404 1700

Capacity Analysis Module:
Vol/Sat: 0.09 0.33 0.33 0.02 0.33 0.33 0.18 0.07 0.07 0.05 0.06 0.02
Crit Moves: ****

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/5/2016

Intersection									
Int Delay, s/veh		1.2							
Movement									
Traffic Vol, veh/h	662	4	31	441	9	77			
Future Vol, veh/h	662	4	31	441	9	77			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	100	100	100	100	100	100			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	662	4	31	441	9	77			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	666	0	947	333			
Stage 1	-	-	-	-	664	-			
Stage 2	-	-	-	-	283	-			
Critical Hdwy	-	-	4.14	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	-	-	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	919	-	259	663			
Stage 1	-	-	-	-	474	-			
Stage 2	-	-	-	-	740	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	919	-	247	663			
Mov Cap-2 Maneuver	-	-	-	-	247	-			
Stage 1	-	-	-	-	474	-			
Stage 2	-	-	-	-	707	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		0.8		12.5				
HCM LOS					B				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	564	-	-	919	-				
HCM Lane V/C Ratio	0.152	-	-	0.034	-				
HCM Control Delay (s)		-	-	9.1	0.2				
HCM Lane LOS	B	-	-	A	A				
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection												
Intersection Delay, s/veh		10.4										
Intersection LOS		B										
Movement												
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	59	7	138	0	2	3	1	0	118	183	2
Future Vol, veh/h	0	59	7	138	0	2	3	1	0	118	183	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	59	7	138	0	2	3	1	0	118	183	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	2
Approach												
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Opposing Approach	WB	WB			WB	WB						
Opposing Lanes	1				1					2		
Conflicting Approach Left	SB	SB			NB	NB				EB		
Conflicting Lanes Left	2				2					1		
Conflicting Approach Right	NB				SB	SB				WB		
Conflicting Lanes Right	2				2					1		
HCM Control Delay	10.2				8.9					10.7		
HCM LOS	B				A					B		
Lane												
	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	WBLn1	WBLn2	NBLn1	NBLn2		
Vol Left, %	56%	0%	29%	33%	0%	0%	0%	0%				
Vol Thru, %	44%	98%	3%	50%	100%	78%						
Vol Right, %	0%	2%	68%	17%	0%	22%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	210	94	204	6	209	134						
LT Vol	118	0	59	2	0	0						
Through Vol	92	92	7	3	209	104						
RT Vol	0	2	138	1	0	30						
Lane Flow Rate	210	94	204	6	209	134						
Geometry Grp	7	7	2	2	7	7						
Degree of Util (X)	0.332	0.14	0.288	0.01	0.313	0.195						
Departure Headway (Hd)	5.706	5.407	5.074	5.86	5.395	5.237						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	624	656	702	614	659	678						
Service Time	3.499	3.199	3.148	3.86	3.185	3.027						
HCM Lane V/C Ratio	0.337	0.143	0.291	0.01	0.317	0.198						
HCM Control Delay	11.4	9.1	10.2	8.9	10.7	9.3						
HCM Lane LOS	B	A	B	A	B	A						
HCM 95th-Hile Q	1.5	0.5	1.2	0	1.3	0.7						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection						
Intersection Delay, s/veh						
Intersection LOS						
Movement	SBU	SBL	SBT	SBR		
Traffic Vol, veh/h	0	0	313	30		
Future Vol, veh/h	0	0	313	30		
Peak Hour Factor	1.00	1.00	1.00	1.00		
Heavy Vehicles, %	2	2	2	2		
Mvmt Flow	0	0	313	30		
Number of Lanes	0	0	2	0		
Approach						
Opposing Approach				SB		
Opposing Lanes				NB		
Conflicting Approach Left				WB		
Conflicting Lanes Left				1		
Conflicting Approach Right				EB		
Conflicting Lanes Right				1		
HCM Control Delay				10.2		
HCM LOS				B		
Lane						

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 11																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	106	67	96	0	14	46	34	0	43	198	23	0	26	222	71
Future Vol, veh/h	0	106	67	96	0	14	46	34	0	43	198	23	0	26	222	71
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	106	67	96	0	14	46	34	0	43	198	23	0	26	222	71
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		NB		SB									
Opposing Approach	WB		EB		SB		NB									
Opposing Lanes	1		1		2		2									
Conflicting Approach Left	SB		NB		EB		WB									
Conflicting Lanes Left	2		2		1		1									
Conflicting Approach Right	NB		SB		WB		EB									
Conflicting Lanes Right	2		2		1		1									
HCM Control Delay	12.3		9.9		10.5		10.7									
HCM LOS	B		A		B		B									
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2										
Vol Left, %	30%	0%	39%	15%	19%	0%										
Vol Thru, %	70%	81%	25%	49%	81%	61%										
Vol Right, %	0%	19%	36%	36%	0%	39%										
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop										
Traffic Vol by Lane	142	122	269	94	137	182										
LT Vol	43	0	106	14	26	0										
Through Vol	99	99	67	46	111	111										
RT Vol	0	23	96	34	0	71										
Lane Flow Rate	142	122	269	94	137	182										
Geometry Grp	7	7	2	2	7	7										
Degrees of Util (X)	0.244	0.2	0.409	0.151	0.231	0.288										
Departure Headway (Hd)	6.192	5.904	5.478	5.774	6.07	5.697										
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes										
Cap	579	608	666	619	592	630										
Service Time	3.936	3.648	3.519	3.826	3.811	3.438										
HCM Lane V/C Ratio	0.245	0.201	0.41	0.152	0.231	0.289										
HCM Control Delay	10.9	10.1	12.3	9.9	10.6	10.7										
HCM Lane LOS	B	B	B	A	B	B										
HCM 95th-ile Q	1	0.7	2	0.5	0.9	1.2										

HCM 2010 AWSC
11: Montecito Road & Bradbury Road
Future Year AM Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	11.3											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	5	26	2	0	148	20	160	0	0	152	240
Future Vol, veh/h	0	5	26	2	0	148	20	160	0	0	152	240
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	26	2	0	148	20	160	0	0	152	240
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	10.3				11.2				11.6			
HCM LOS	B				B				B			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	15%	88%	0%	53%	0%	0%	0%	0%
Vol Thru, %	100%	17%	79%	12%	0%	47%	97%	0%	97%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	291	33	168	160	153	74			
LT Vol	0	0	5	148	0	81	0			
Through Vol	101	51	26	20	0	72	72			
RT Vol	0	240	2	0	160	0	2			
Lane Flow Rate	101	291	33	168	160	153	74			
Geometry Grp	7	7	6	7	7	7	7			
Degree of Utl (X)	0.168	0.433	0.062	0.311	0.245	0.272	0.126			
Departure Headway (Hd)	5.951	5.365	6.757	6.669	5.516	6.394	6.106			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	603	671	529	539	651	562	587			
Service Time	3.687	3.101	4.812	4.407	3.254	4.133	3.845			
HCM Lane V/C Ratio	0.167	0.434	0.062	0.312	0.246	0.272	0.126			
HCM Control Delay	9.9	12.2	10.3	12.4	10	11.5	9.7			
HCM Lane LOS	A	B	B	B	A	B	A			
HCM 95th-tile Q	0.6	2.2	0.2	1.3	1.1	1.1	0.4			

HCM 2010 AWSC
11: Montecito Road & Bradbury Road
Future Year AM Peak Hour
02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	11.3											
Intersection LOS	B											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	5	26	2	0	148	20	160	0	0	152	240
Future Vol, veh/h	0	5	26	2	0	148	20	160	0	0	152	240
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	26	2	0	148	20	160	0	0	152	240
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	10.3				11.2				11.6			
HCM LOS	B				B				B			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	0%	0%	15%	88%	0%	53%	0%	0%	0%	0%
Vol Thru, %	100%	17%	79%	12%	0%	47%	97%	0%	97%	0%
Vol Right, %	0%	83%	6%	0%	100%	0%	3%	0%	3%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	291	33	168	160	153	74			
LT Vol	0	0	5	148	0	81	0			
Through Vol	101	51	26	20	0	72	72			
RT Vol	0	240	2	0	160	0	2			
Lane Flow Rate	101	291	33	168	160	153	74			
Geometry Grp	7	7	6	7	7	7	7			
Degree of Utl (X)	0.168	0.433	0.062	0.311	0.245	0.272	0.126			
Departure Headway (Hd)	5.951	5.365	6.757	6.669	5.516	6.394	6.106			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	603	671	529	539	651	562	587			
Service Time	3.687	3.101	4.812	4.407	3.254	4.133	3.845			
HCM Lane V/C Ratio	0.167	0.434	0.062	0.312	0.246	0.272	0.126			
HCM Control Delay	9.9	12.2	10.3	12.4	10	11.5	9.7			
HCM Lane LOS	A	B	B	B	A	B	A			
HCM 95th-tile Q	0.6	2.2	0.2	1.3	1.1	1.1	0.4			

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/5/2016

Intersection									
Intersection Delay, s/veh 7.6									
Intersection LOS A									
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	108	8	0	7	94	0	4	13
Future Vol, veh/h	0	108	8	0	7	94	0	4	13
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	108	8	0	7	94	0	4	13
Number of Lanes	0	1	0	0	0	1	0	1	0
Approach	EB		WB		NB				
Opposing Approach	WB		EB		NB				
Opposing Lanes	1		1		0				
Conflicting Approach Left			NB		EB				
Conflicting Lanes Left	0		1		1				
Conflicting Approach Right	NB				WB				
Conflicting Lanes Right	1		0		1				
HCM Control Delay	7.6		7.6		7.1				
HCM LOS	A		A		A				
Lane	NBLn1		EBLn1		WBLn1				
Vol Left, %	24%		0%		7%				
Vol Thru, %	0%		93%		93%				
Vol Right, %	76%		7%		0%				
Sign Control	Stop		Stop		Stop				
Traffic Vol by Lane	17		116		101				
LT Vol	4		0		7				
Through Vol	0		108		94				
RT Vol	13		8		0				
Lane Flow Rate	17		116		101				
Geometry Grp	1		1		1				
Degree of Util (X)	0.018		0.129		0.114				
Departure Headway (Hd)	3.892		3.998		4.064				
Convergence, Y/N	Yes		Yes		Yes				
Cap	904		897		882				
Service Time	1.985		2.024		2.092				
HCM Lane V/C Ratio	0.019		0.129		0.115				
HCM Control Delay	7.1		7.6		7.6				
HCM Lane LOS	A		A		A				
HCM 95th-tile Q	0.1		0.4		0.4				

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection															
Intersection Delay, s/veh 8.7															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Traffic Vol, veh/h	0	38	107	15	0	80	64	56	0	14	18	34	0	65	18
Future Vol, veh/h	0	38	107	15	0	80	64	56	0	14	18	34	0	65	18
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	107	15	0	80	64	56	0	14	18	34	0	65	18
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1
Approach	EB			WB			NB			SB					
Opposing Approach	WB			EB			SB			NB					
Opposing Lanes	1			2			1			1					
Conflicting Approach Left	SB			NB			EB			WB					
Conflicting Lanes Left	1			1			2			1					
Conflicting Approach Right	NB			SB			WB			EB					
Conflicting Lanes Right	1			1			1			2					
HCM Control Delay	8.6			9.1			8.1			8.7					
HCM LOS	A			A			A			A					
Lane	NBLn1			EBLn1			WBLn1			SBLn1					
Vol Left, %	21%			42%			0%			66%					
Vol Thru, %	27%			58%			78%			32%					
Vol Right, %	52%			0%			22%			16%					
Sign Control	Stop			Stop			Stop			Stop					
Traffic Vol by Lane	66			92			69			200					
LT Vol	14			38			0			80					
Through Vol	18			54			64			18					
RT Vol	34			0			15			56					
Lane Flow Rate	66			92			68			200					
Geometry Grp	2			7			5			2					
Degree of Util (X)	0.085			0.135			0.094			0.252					
Departure Headway (Hd)	4.646			5.311			4.948			4.541					
Convergence, Y/N	Yes			Yes			Yes			Yes					
Cap	770			674			723			790					
Service Time	2.685			3.046			2.682			2.573					
HCM Lane V/C Ratio	0.086			0.136			0.094			0.253					
HCM Control Delay	8.1			8.9			8.2			9.1					
HCM Lane LOS	A			A			A			A					
HCM 95th-tile Q	0.3			0.5			0.3			1					

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection												
Intersection Delay, s/veh 7.7												
Intersection LOS A												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	74	41	0	18	33	0	31	16			
Future Vol, veh/h	0	74	41	0	18	33	0	31	16			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	74	41	0	18	33	0	31	16			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach												
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	8				7.1				7.7			
HCM LOS	A				A				A			
Lane												
Lane	NBLn1WBLn1WBLn2				SBLn1							
Vol Left, %	0% 100%				0% 66%							
Vol Thru, %	35% 0%				0% 34%							
Vol Right, %	65% 0%				100% 0%							
Sign Control	Stop Stop				Stop Stop							
Traffic Vol by Lane	51 74 41 47											
LT Vol	0 74 0 31											
Through Vol	18 0 0 16											
RT Vol	33 0 41 0											
Lane Flow Rate	51 74 41 47											
Geometry Grp	2 7 7 2											
Degree of Util (X)	0.055 0.107 0.046 0.057											
Departure Headway (Hd)	3.884 5.204 4.003 4.402											
Convergence, Y/N	Yes Yes				Yes Yes							
Cap	928 687 890 818											
Service Time	1.884 2.953 1.75 2.404											
HCM Lane V/C Ratio	0.055 0.108 0.046 0.057											
HCM Control Delay	7.1 8.6 6.9 7.7											
HCM Lane LOS	A A A A											
HCM 95th-ile Q	0.2 0.4 0.1 0.2											

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/5/2016

Intersection												
Int Delay, s/veh 0.8												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	120	0	10	104	0	12						
Future Vol, veh/h	120	0	10	104	0	12						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	100	100	100	100	100	100						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	120	0	10	104	0	12						
Major/Minor	Major1				Major2				Minor1			
Conflicting Flow All	0				120				244			
Stage 1	-				-				120			
Stage 2	-				-				124			
Critical Hdwy	-				4.12				6.42			
Critical Hdwy Stg 1	-				-				5.42			
Critical Hdwy Stg 2	-				-				5.42			
Follow-up Hdwy	-				2.218				3.518			
Pot Cap-1 Maneuver	-				1468				744			
Stage 1	-				-				905			
Stage 2	-				-				902			
Platoon blocked, %	-				-				-			
Mov Cap-1 Maneuver	-				1468				739			
Mov Cap-2 Maneuver	-				-				739			
Stage 1	-				-				905			
Stage 2	-				-				896			
Approach	EB				WB				NB			
HCM Control Delay, s	0				0.7				8.9			
HCM LOS					A							
Minor Lane/Major Mvmt	NBLn1				EBT				WBL			
Capacity (veh/h)	931				-				1468			
HCM Lane V/C Ratio	0.013				-				0.007			
HCM Control Delay (s)	8.9				-				7.5			
HCM Lane LOS	A				-				A			
HCM 95th %ile Q(veh)	0				-				0			

HCM 2010 Signalized Intersection Summary 1: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1B2	33	22	351	38	574	12	1387	395	573	1170	139
Traffic Volume (veh/h)	182	33	22	351	38	574	12	1387	395	573	1170	139
Future Volume (veh/h)	182	33	22	351	38	574	12	1387	395	573	1170	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	182	33	22	378	0	0	12	1587	395	573	1170	139
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	130	77	51	426	0	190	24	1632	508	615	3401	1059
Arrive On Green	0.07	0.07	0.07	0.12	0.00	0.00	0.01	0.32	0.32	0.69	1.00	1.00
Sat Flow, veh/h	1774	1044	696	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	182	0	55	378	0	0	12	1587	395	573	1170	139
Grp Sat Flow(s), veh/hln	1774	0	1740	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g.s), s	8.8	0.0	3.6	12.6	0.0	0.0	0.8	37.0	27.1	33.6	0.0	0.0
Cycle Q Clear(g.c), s	8.8	0.0	3.6	12.6	0.0	0.0	0.8	37.0	27.1	33.6	0.0	0.0
Prop In Lane	1.00	0.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	130	0	128	426	0	190	24	1632	508	615	3401	1059
V/C Ratio(X)	1.40	0.00	0.43	0.89	0.00	0.00	0.49	0.97	0.78	0.93	0.34	0.10
Avail Cap(c.a), veh/h	130	0	128	426	0	190	74	1632	508	615	3401	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.84	0.84	0.84
Uniform Delay (d), s/veh	55.6	0.0	53.2	52.0	0.0	0.0	58.8	40.2	36.9	17.2	0.0	0.0
Incr Delay (d2), s/veh	219.3	0.0	2.3	19.8	0.0	0.0	14.6	16.7	11.1	18.7	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	12.2	0.0	1.8	7.4	0.0	0.0	0.5	19.9	13.4	19.1	0.1	0.1
LnGrp Delay(d), s/veh	274.9	0.0	55.5	71.8	0.0	0.0	73.3	56.9	48.0	36.9	0.2	0.2
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	A	A
Approach Vol, veh/h	237			378			1994				1882	
Approach Delay, s/veh	224.0			71.8			55.2				11.1	
Approach LOS	F			E			E				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	47.4	44.3		13.5	5.6	86.1		20.2				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	33.0	* 39		* 8.8	5.0	71.5		14.4				
Max Q Clear Time (g_c+I1), s	39.0			10.8	2.8	2.0		14.6				
Green Ext Time (p_c), s	0.6	0.0		0.0	0.0	15.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				47.0								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary 2: Seal Beach Boulevard & I-405 NB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1B2	33	22	351	38	574	12	1387	395	573	1170	139
Traffic Volume (veh/h)	182	33	22	351	38	574	12	1387	395	573	1170	139
Future Volume (veh/h)	182	33	22	351	38	574	12	1387	395	573	1170	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	182	33	22	378	0	0	12	1587	395	573	1170	139
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	93	98	83	955	0	853	111	1741	542	296	2424	755
Arrive On Green	0.05	0.05	0.05	0.27	0.00	0.27	0.06	0.68	0.00	0.17	0.48	0.48
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	182	0	55	378	0	0	12	1587	395	573	1170	139
Grp Sat Flow(s), veh/hln	1774	0	1740	1774	0	1583	1721	1695	1583	1774	1695	1583
Q Serve(g.s), s	5.7	5.0	6.3	5.6	0.0	27.2	1.5	37.8	0.0	20.0	28.5	21.7
Cycle Q Clear(g.c), s	5.7	5.0	6.3	5.6	0.0	27.2	1.5	37.8	0.0	20.0	28.5	21.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	98	83	955	0	853	111	1741	542	296	2424	755
V/C Ratio(X)	0.90	0.81	1.14	0.22	0.00	0.88	0.40	0.97	0.00	1.18	0.65	0.94
Avail Cap(c.a), veh/h	93	98	83	1189	0	1061	172	1741	542	296	2424	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.48	0.48	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.3	56.3	56.3	34.1	0.0	42.0	55.0	18.4	0.0	50.0	23.9	22.1
Incr Delay (d2), s/veh	62.3	37.7	142.5	0.1	0.0	7.3	1.1	9.9	0.0	111.7	1.4	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/ln	3.6	6.1	2.8	0.0	0.0	12.7	0.7	18.5	0.0	18.9	13.5	10.0
LnGrp Delay(d), s/veh	118.9	93.9	199.3	34.2	0.0	49.3	56.1	28.3	0.0	161.7	25.3	24.8
LnGrp LOS	F	F	F	C	C	D	E	C	F	C	C	C
Approach Vol, veh/h	258			964			1740			2343		
Approach Delay, s/veh	140.8			46.0			29.1			45.6		
Approach LOS	F			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	44.0	46.9		11.0	7.9	63.0		38.1				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	33.2	* 32		* 6.3	6.0	47.2		40.2				
Max Q Clear Time (g_c+I1), s	39.8			8.3	3.5	30.5		29.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	15.7		3.1				
Intersection Summary												
HCM 2010 Ctrl Delay				44.9								
HCM 2010 LOS				D								
Notes												

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Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.848

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 79 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Permitted

Rights: Ovl Include Ovl

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:

Base Vol: 0 1888 596 694 1763 0 0 0 0 591 0 519

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 0 1888 596 694 1763 0 0 0 0 591 0 519

User Adj: 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

PHF Volume: 0 1888 596 694 1763 0 0 0 591 0 519

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 0 1888 596 694 1763 0 0 0 591 0 519

PCE Adj: 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

FinalVolume: 0 1888 596 694 1763 0 0 0 591 0 519

OvAdjVol: 0 1888 596 694 1763 0 0 0 591 0 172

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 0.00 0.00

Final Sat.: 0 5100 1700 3400 5100 0 0 0 3400 0 1700

Capacity Analysis Module:

Vol/Sat: 0.00 0.37 0.35 0.20 0.35 0.00 0.00 0.00

OvAdjV/S: 0.00 0.37 0.35 0.20 0.35 0.00 0.17 0.00

Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.738

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 55 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Ovl

Rights: Include Ovl

Min. Green: 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:

Base Vol: 445 1829 145 5 1831 75 102 0 422 211 34 5

Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Initial Bse: 445 1829 145 5 1831 75 102 0 422 211 34 5

User Adj: 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

PHF Volume: 445 1829 145 5 1831 75 102 0 422 211 34 5

Reduct Vol: 0 0 0 0 0 0 0 0

Reduced Vol: 445 1829 145 5 1831 75 102 0 422 211 34 5

PCE Adj: 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

FinalVolume: 445 1829 145 5 1831 75 102 0 422 211 34 5

OvAdjVol: 445 1829 145 5 1831 75 102 0 422 211 34 5

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700

Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

Lanes: 2.00 2.78 0.22 1.00 2.88 0.12 1.00 0.00

Final Sat.: 3400 4725 375 1700 4899 201 1700 0 3400 2870 462 68

Capacity Analysis Module:

Vol/Sat: 0.13 0.39 0.39 0.00 0.37 0.06 0.00 0.12

OvAdjV/S: 0.13 0.39 0.39 0.00 0.37 0.06 0.00 0.12

Crit Moves: ****

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way												

Cycle (sec):	100	Critical Vol./Cap. (X):		0.713								
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx								
Optimal Cycle:	52	Level of Service:		C								

Street Name: Seal Beach Blvd Rossmoor Center Way												
Approach: North Bound South Bound East Bound West Bound												
Movement: L - T - R L - T - R L - T - R L - T - R												

Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include	Include	Include	Include	Include	Include	Include	Include	Include
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Y+R:	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4	4 0 4
Lanes:	1 0 2	1 0 1	0 2 1	0 1 0	1 0 0	1 0 1	0 1 0	1 0 0	1 0 1	0 1 0	1 0 0	1 0 0

Volume Module:												

Base Vol:	174	1720	26	39	1735	208	201	1	142	16	1	18
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:	174	1720	26	39	1735	208	201	1	142	16	1	18
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:	174	1720	26	39	1735	208	201	1	142	16	1	18
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	1720	26	39	1735	208	201	1	142	16	1	18
PLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MCE Adj:	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:	174	1720	26	39	1735	208	201	1	142	16	1	18

Saturation Flow Module:												

Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
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	2.96	0.04	1.00	2.68	0.32	1.00	0.01	0.99	1.00	0.05	0.95
Final Sat:	1700	5024	76	1700	4554	546	1700	12	1688	1700	89	1611

Capacity Analysis Module:												

Vol/Sat:	0.10	0.34	0.34	0.02	0.38	0.38	0.12	0.08	0.08	0.01	0.01	0.01
Crit Moves:	*****											

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

Intersection #5 Seal Beach Blvd/Towne Center Dr														
Cycle (sec):	100	Critical Vol./Cap.(X):										0.776		
Loss Time (sec):	10	Average Delay (sec/veh):										xxxxxx		
Optimal Cycle:	62	Level of Service:										C		

Street Name:	Seal Beach Blvd	South Bound				Towne Center Dr				West Bound				
Approach:	North Bound	South Bound				East Bound				West Bound				
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected				Protected				Permitted				Permitted	
Rights:	Include				Include				Include				Include	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0

Volume Module:														
Base Vol:	222	1590	92	85	1522	102	108	31	203	152	51	65		
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	1.00	1.00
Initial Sze:	222	1590	92	85	1522	102	108	31	203	152	51	65		
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	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	1.00	1.00
PHF Volume:	222	1590	92	85	1522	102	108	31	203	152	51	65		
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0		
Reduced Vol:	222	1590	92	85	1522	102	108	31	203	152	51	65		
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	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	1.00	1.00
FinalVolume:	222	1590	92	85	1522	102	108	31	203	152	51	65		

Saturation Flow Module:														
Sat/Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
AdjAdjustment:	1.00	1.00	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	2.84	0.16	1.00	2.81	0.19	1.00	0.13	0.87	1.00	0.44	0.56		
Final Sat.:	1700	4821	279	1700	4780	320	1700	225	1475	1700	747	953		

Capacity Analysis Module:														
Vol/Sat:	0.13	0.33	0.33	0.05	0.32	0.32	0.06	0.14	0.14	0.09	0.07	0.07		
Crit Moves:	9	12	12	1	12	12	1	1	1	1	1	1		

Future Buildout NP PM Mon Feb 20, 2017 15:28:51 Page 6-1

Health Club within the Shops at Rossmoor
Future (2035) Buildout No Project
PM Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 54 Level Of Service: C

Street Name:Seal Beach Blvd-Los Alamitos Blvd

Approach: North Bound South Bound East Bound Bradbury Rd West Bound

Movement: L - I - R L - I - R L - I - R L - I - R

Control: Protected Protected Protected Permitted Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 142 1686 62 26 1868 191 186 10 96 53 3 21

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: 142 1686 62 26 1868 191 186 10 96 53 3 21

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: 142 1686 62 26 1868 191 186 10 96 53 3 21

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 142 1686 62 26 1868 191 186 10 96 53 3 21

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: 142 1686 62 26 1868 191 186 10 96 53 3 21

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjusment: 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 2.69 0.11 1.00 2.72 0.28 1.00 0.09 0.91 0.95 0.05 1.00

Final Sat.: 1700 4919 181 1700 4627 473 1700 160 1540 1609 91 1700

Capacity Analysis Module:

Vol/Sat: 0.08 0.34 0.34 0.02 0.40 0.40 0.11 0.06 0.06 0.03 0.03 0.01

Crit Moves: ****

Intersection												
Int Delay, s/veh						1.2						
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	485	8	58	496	3	54						
Future Vol, veh/h	485	8	58	496	3	54						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	100	100	100	100	100	100						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	485	8	58	496	3	54						
Major/Minor	Major1			Major2			Minor1					
Conflicting Flow All	0	0	493	0	853	247						
Stage 1	-	-	-	-	489	-						
Stage 2	-	-	-	-	364	-						
Critical Hdwy	-	-	4.14	-	6.84	6.94						
Critical Hdwy Stg 1	-	-	-	-	5.84	-						
Critical Hdwy Stg 2	-	-	-	-	5.84	-						
Follow-up Hdwy	-	-	2.22	-	3.52	3.32						
Pot Cap-1 Maneuver	-	-	1067	-	298	753						
Stage 1	-	-	-	-	582	-						
Stage 2	-	-	-	-	673	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1067	-	276	753						
Mov Cap-2 Maneuver	-	-	-	-	276	-						
Stage 1	-	-	-	-	582	-						
Stage 2	-	-	-	-	623	-						
Approach	EB			WB			NB					
HCM Control Delay, s	0			1.2			10.7			B		
HCM LOS												
Minor Lane/Major Mvmt	NBLn1			EBL			WBL			WBT		
Capacity (veh/h)	690			-			-			1067		
HCM Lane V/C Ratio	0.083			-			-			0.054		
HCM Control Delay (s)	10.7			-			-			8.6		
HCM Lane LOS	B			-			-			A		
HCM 95th %ile Q(veh)	0.3			-			-			0.2		

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection		9.3											
Intersection Delay, s/veh		A											
Intersection LOS		A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBR	WBT	NBU	NBL	NBT	NBR	
Traffic Vol, veh/h	0	33	4	51	0	2	5	11	0	73	234	3	
Future Vol, veh/h	0	33	4	51	0	2	5	11	0	73	234	3	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	33	4	51	0	2	5	11	0	73	234	3	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	
Approach	EB	EBL	EBT	EBR	WB	WBL	WBR	WBT	NB	NBL	NBT	NBR	
Opposing Approach	WB				EB				SB				
Opposing Lanes	1				1				2				
Conflicting Approach Left	SB				NB				EB				
Conflicting Lanes Left	2				2				1				
Conflicting Approach Right	NB				SB				WB				
Conflicting Lanes Right	2				2				1				
HCM Control Delay	8.8				8.3				9.6				
HCM LOS	A				A				A				
Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2					
Vol Left, %	38%	0%	38%	11%	6%	0%							
Vol Thru, %	62%	97%	5%	28%	94%	73%							
Vol Right, %	0%	3%	58%	61%	0%	27%							
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop							
Traffic Vol by Lane	190	120	88	18	136	176							
LT Vol	73	0	33	2	8	0							
Through Vol	117	117	4	5	128	128							
RT Vol	0	3	51	11	0	48							
Lane Flow Rate	190	120	88	18	136	176							
Geometry Grp	7	7	2	2	7	7							
Degree of Util (X)	0.278	0.169	0.124	0.026	0.193	0.24							
Departure Headway (Hd)	5.275	5.064	5.054	5.101	5.121	4.899							
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes							
Cap	680	707	707	698	699	730							
Service Time	3.018	2.807	3.103	3.162	2.863	2.642							
HCM Lane V/C Ratio	0.279	0.17	0.124	0.026	0.195	0.241							
HCM Control Delay	10.1	8.8	8.8	8.3	9.1	9.2							
HCM Lane LOS	B	A	A	A	A	A							
HCM 95th-ile Q	1.1	0.6	0.4	0.1	0.7	0.9							

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection				
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	8	256	48
Future Vol, veh/h	0	8	256	48
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	256	48
Number of Lanes	0	0	2	0
Approach				
Opposing Approach	SB			
Opposing Lanes	NB			
Conflicting Approach Left	WB			
Conflicting Lanes Left	1			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	9.2			
HCM LOS	A			
Lane				

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 9.8																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	
Traffic Vol, veh/h	0	46	38	60	0	39	43	78	0	33	144	28	0	48	198	
Future Vol, veh/h	0	46	38	60	0	39	43	78	0	33	144	28	0	48	198	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
MMwt Flow	0	46	38	60	0	39	43	78	0	33	144	28	0	48	198	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	
Approach	EB		WB		NB		SB		NB		SB		SB		SB	
Opposing Approach	WB		EB		WB		EB		WB		EB		WB		NB	
Opposing Lanes	1		1		2		2		2		2		1		2	
Conflicting Approach Left	SB		NB		EB		WB		EB		WB		WB		WB	
Conflicting Lanes Left	2		2		1		1		1		1		1		1	
Conflicting Approach Right	NB		SB		WB		EB		WB		EB		EB		EB	
Conflicting Lanes Right	2		2		1		1		1		1		1		1	
HCM Control Delay	9.7		9.7		9.6		9.6		9.6		10		10		10	
HCM LOS	A		A		A		A		A		A		A		A	
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2	
Vol Left, %	31%		0%		32%		24%		33%		0%		0%		0%	
Vol Thru, %	69%		72%		26%		27%		67%		69%		0%		31%	
Vol Right, %	0%		28%		42%		49%		0%		31%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	105		100		144		160		147		143		0		0	
LT Vol	33		0		46		39		48		0		0		0	
Through Vol	72		72		38		43		99		99		0		0	
RT Vol	0		28		60		78		0		44		0		0	
Lane Flow Rate	105		100		144		160		147		143		0		0	
Geometry Grp	7		7		2		2		7		7		7		7	
Degree of Util (X)	0.172		0.154		0.211		0.227		0.237		0.215		0.172		0.172	
Departure Headway (Hd)	5.901		5.543		5.279		5.222		5.802		5.419		5.901		5.543	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Cap	610		649		681		691		622		665		610		649	
Service Time	3.616		3.259		3.3		3.222		3.515		3.132		3.616		3.259	
HCM Lane V/C Ratio	0.172		0.154		0.211		0.232		0.236		0.215		0.172		0.172	
HCM Control Delay	9.8		9.3		9.7		9.7		10.3		9.6		9.8		9.3	
HCM Lane LOS	A		A		A		A		B		A		A		A	
HCM 95th-tile Q	0.6		0.5		0.8		0.9		0.9		0.8		0.6		0.5	

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection															
Intersection Delay, s/veh 9.9															
Intersection LOS A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR			
Lane Configurations															
Traffic Vol, veh/h	0	1	19	2	0	162	27	70	0	5	113	116	4 4		
Future Vol, veh/h	0	1	19	2	0	162	27	70	0	5	113	116			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	1	19	2	0	162	27	70	0	5	113	116			
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0			
Approach															
Opposing Approach	WB		EB		WB		EB		WB		EB				
Opposing Lanes	2		2		1		1		2		2				
Conflicting Approach Left	SB		NB		WB		EB		WB		EB				
Conflicting Lanes Left	2		2		2		2		1		1				
Conflicting Approach Right	NB		SB		WB		EB		WB		EB				
Conflicting Lanes Right	2		2		2		2		2		2				
HCM Control Delay	9.2		10.7		B		9.3		A		A				
HCM LOS	A		B		A		9.3		A		A				
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2								
Vol Left, %	8%	0%	5%	86%	0%	40%	0%								
Vol Thru, %	92%	33%	86%	14%	0%	60%	96%								
Vol Right, %	0%	67%	9%	0%	100%	0%	4%								
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	62	173	22	189	70	113	71								
LT Vol	5	0	1	162	0	45	0								
Through Vol	57	57	19	27	0	68	68								
RT Vol	0	116	2	0	70	0	3								
Lane Flow Rate	62	172	22	189	70	113	71								
Geometry Grp	7	7	6	7	7	7	7								
Degree of Util (X)	0.095	0.242	0.037	0.316	0.095	0.181	0.109								
Departure Headway (Hd)	5.573	5.057	6.011	6.016	4.88	5.788	5.537								
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes								
Cap	638	704	599	593	727	617	642								
Service Time	3.348	2.831	4.011	3.796	2.66	3.547	3.316								
HCM Lane V/C Ratio	0.097	0.244	0.037	0.319	0.096	0.183	0.111								
HCM Control Delay	8.9	9.5	9.2	11.6	8.2	9.8	9								
HCM Lane LOS	A	A	A	B	A	A	A								
HCM 95th-tile Q	0.3	0.9	0.1	1.3	0.3	0.7	0.4								

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	45	136	3	
Future Vol, veh/h	0	45	136	3	
Peak Hour Factor	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	45	136	3	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
HCM Control Delay	1				
HCM LOS	9.5				
	A				

HCM 2010 AWSC

12: West Road & Rossmore Center Way

12/5/2016

Intersection											
Intersection Delay, s/veh 8											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	99	19	0	24	149	0	28	12		
Future Vol, veh/h	0	99	19	0	24	149	0	28	12		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	99	19	0	24	149	0	28	12		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		NB						
Opposing Approach	WB		EB		EB		0				
Opposing Lanes	1		1		EB		0				
Conflicting Approach Left			NB		EB		EB				
Conflicting Lanes Left	0		1		1		1				
Conflicting Approach Right	NB				WB		WB				
Conflicting Lanes Right	1		0		1		1				
HCM Control Delay	7.7		8.2		7.8		7.8				
HCM LOS	A		A		A		A				
Lane	NBLn1		EBLn1		WBLn1						
Vol Left, %	70%		0%		14%						
Vol Thru, %	0%		84%		86%						
Vol Right, %	30%		16%		0%						
Sign Control	Stop		Stop		Stop						
Traffic Vol by Lane	40		118		173						
LT Vol	28		0		24						
Through Vol	0		99		149						
RT Vol	12		19		0						
Lane Flow Rate	40		118		173						
Geometry Grp	1		1		1						
Degree of Util (X)	0.05		0.132		0.198						
Departure Headway (Hd)	4.521		4.039		4.122						
Convergence, Y/N	Yes		Yes		Yes						
Cap	797		879		865						
Service Time	2.521		2.105		2.173						
HCM Lane V/C Ratio	0.05		0.134		0.2						
HCM Control Delay	7.8		7.7		8.2						
HCM Lane LOS	A		A		A						
HCM 95th-ile Q	0.2		0.5		0.7						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh13.9																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol. veh/h	0	24	79	30	0	200	116	92	0	47	48	195	0	82	37	33
Future Vol. veh/h	0	24	79	30	0	200	116	92	0	47	48	195	0	82	37	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	79	30	0	200	116	92	0	47	48	195	0	82	37	33
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				2				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				2				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				2			
HCM Control Delay	9.9				17.2				12.5				11.1			
HCM LOS	A				C				B				B			
Lane	NBLn1				EBLn1				WBLn2				SBLn1			
Vol Left, %	16%				38%				0%				49%			
Vol Thru, %	17%				62%				57%				28%			
Vol Right, %	67%				0%				43%				23%			
Sign Control	Stop				Stop				Stop				Stop			
Traffic Vol by Lane	290				64				70				408			
LT Vol	47				24				0				200			
Through Vol	48				40				40				116			
RT Vol	195				0				30				92			
Lane Flow Rate	290				64				70				408			
Geometry Grp	2				7				5				2			
Degree of Util (X)	0.433				0.116				0.118				0.622			
Departure Headway (Hd)	5.375				6.59				6.09				5.491			
Convergence, Y/N	Yes				Yes				Yes				Yes			
Cap	667				541				585				657			
Service Time	3.439				4.362				3.861				3.545			
HCM Lane V/C Ratio	0.435				0.118				0.12				0.621			
HCM Control Delay	12.5				10.2				9.7				17.2			
HCM Lane LOS	B				B				A				C			
HCM 95th-tile Q	2.2				0.4				0.4				4.3			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection										
Intersection Delay, s/veh11.4										
Intersection LOS B										
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Traffic Vol. veh/h	0	91	320	0	47	70	0	253	59	
Future Vol. veh/h	0	91	320	0	47	70	0	253	59	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	91	320	0	47	70	0	253	59	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach	WB	WB	NB	NB	SB	SB	SB	SB	SB	
Opposing Approach					SB	NB				
Opposing Lanes		0		1	1				1	
Conflicting Approach Left	NB					WB				
Conflicting Lanes Left	1		0			2				
Conflicting Approach Right	SB		WB						0	
Conflicting Lanes Right	1		2							
HCM Control Delay	11.2		9.1			12.6				
HCM LOS	B		A			B				
Lane	NBLn1	WBLn1	WBLn2	SBLn1						
Vol Left, %	0%	100%	0%	81%						
Vol Thru, %	40%	0%	0%	19%						
Vol Right, %	60%	0%	100%	0%						
Sign Control	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	117	91	320	312						
LT Vol	0	91	0	253						
Through Vol	47	0	0	59						
RT Vol	70	0	320	0						
Lane Flow Rate	117	91	320	312						
Geometry Grp	2	7	7	2						
Degree of Util (X)	0.162	0.155	0.436	0.452						
Departure Headway (Hd)	4.974	6.113	4.902	5.211						
Convergence, Y/N	Yes	Yes	Yes	Yes						
Cap	711	582	726	686						
Service Time	3.073	3.894	2.683	3.291						
HCM Lane V/C Ratio	0.165	0.156	0.441	0.455						
HCM Control Delay	9.1	10	11.5	12.6						
HCM Lane LOS	A	A	B	B						
HCM 95th-tile Q	0.6	0.5	2.2	2.4						

HCM 2010 TWSC

15: Project Driveway & Rossmoor Center Way

12/5/2016

Intersection									
1.2									
Int Delay, s/veh									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	96	1	22	181	4	22			
Future Vol, veh/h	96	1	22	181	4	22			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	0	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	100	100	100	100	100	100			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	96	1	22	181	4	22			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	97	0	322	97			
Stage 1	-	-	-	-	97	-			
Stage 2	-	-	-	-	225	-			
Critical Hwy	-	-	4.12	-	6.42	6.22			
Critical Hwy Stg 1	-	-	-	-	5.42	-			
Critical Hwy Stg 2	-	-	-	-	5.42	-			
Follow-up Hwy	-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver	-	-	1496	-	672	959			
Stage 1	-	-	-	-	927	-			
Stage 2	-	-	-	-	812	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1496	-	661	959			
Mov Cap-2 Maneuver	-	-	-	-	661	-			
Stage 1	-	-	-	-	927	-			
Stage 2	-	-	-	-	799	-			
Approach	EB	WB	NB						
HCM Control Delay, s	0	0.8	9.1						
HCM LOS	A								
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	897	-	-	1496	-				
HCM Lane V/C Ratio	0.029	-	-	0.015	-				
HCM Control Delay (s)	9.1	-	-	7.4	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.1	-	-	0	-				

HCM 2010 Signalized Intersection Summary

1: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	
Lane Configurations		TH			TH			TH			TH	
Traffic Volume (veh/h)	161	28	18	596	41	545	10	1207	298	463	1220	143
Future Volume (veh/h)	161	28	18	596	41	545	10	1207	298	463	1220	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	161	28	18	625	0	0	10	1207	298	463	1220	143
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	70	45	694	0	310	21	1328	414	489	2753	857
Arrive On Green	0.07	0.07	0.07	0.20	0.00	0.00	0.01	0.26	0.26	0.37	0.72	0.72
Sat Flow, veh/h	1774	1061	682	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	161	0	46	625	0	0	10	1207	298	463	1220	143
Grp Sat Flow(s), veh/h	1774	0	1742	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.3	18.8	27.8	10.8	3.2
Cycle Q Clear(g, c), s	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.3	18.8	27.8	10.8	3.2
Prop In Lane	1.00	0.39	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	694	0	310	21	1328	414	489	2753	857
V/C Ratio(X)	1.37	0.00	0.40	0.90	0.00	0.00	0.47	0.91	0.72	0.95	0.44	0.17
Avail Cap(c, a), veh/h	118	0	116	748	0	334	81	1350	420	489	2753	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.2	0.0	0.0	54.0	39.4	37.0	34.0	8.6	7.5
Incr Delay (d2), s/veh	210.2	0.0	2.2	13.4	0.0	0.0	15.3	10.7	10.4	25.2	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	10.4	0.0	1.4	10.6	0.0	0.0	0.4	13.2	9.4	17.1	5.0	1.4
LnGrp Delay(d), s/veh	261.5	0.0	51.4	56.5	0.0	0.0	69.3	50.1	47.4	59.2	9.0	7.9
LnGrp LOS	F	D	D	E	E	E	D	D	D	E	A	A
Approach Vol, veh/h	207	625										
Approach Delay, s/veh	214.8	56.5										
Approach LOS	F	E										
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2										
Phs Duration (G+Y+Rc), s	36.1	34.5	12.0 5.3 65.4									
Change Period (Y+Rc), s	5.8	* 5.8	* 4.7 4.0 5.8									
Max Green Setting (Gmax), s	30.0	* 29	* 7.3 5.0 54.2									
Max Q Clear Time (g_c+I1), s	29.8	27.3	9.3 2.6 12.8									
Green Ext Time (p_c), s	0.0	1.4	0.0 0.0 13.8									
Intersection Summary												
HCM 2010 Ctrl Delay	46.6											
HCM 2010 LOS	D											
Notes												

Traffic Signal Performance Analysis - Phase 1 (Northbound)																
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Directional Flow			
Lane Configurations	↔	↗	↘	↔	↗	↘	↔	↗	↘	↔	↗	↘	↔	↗	↘	
Traffic Volume (veh/h)	9	9	8	389	5	633	16	1492	413	287	1434	264	↔	↗	↘	
Future Volume (veh/h)	9	9	8	389	5	633	16	1492	413	287	1434	264	↔	↗	↘	
Number	7	4	14	3	8	18	5	2	12	1	6	16	↔	↗	↘	
Initial Q (Obs. veh)	0	0	0	0	0	0	0	0	0	0	0	0	↔	↗	↘	
Ped-Bike Adj.(A _{pbt})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔	↗	↘	
Parking Bus. Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔	↗	↘	
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	↔	↗	↘	
Adj Flow Rate, veh/h	9	9	8	389	0	636	16	1492	0	287	1434	264	↔	↗	↘	
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1	↔	↗	↘	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔	↗	↘	
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2	↔	↗	↘	
Cap. veh/h	44	46	39	861	0	768	663	2093	652	242	1724	537	↔	↗	↘	
Arrive On Green	0.02	0.02	0.02	0.24	0.00	0.24	0.39	0.82	0.00	0.14	0.34	0.34	↔	↗	↘	
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583	↔	↗	↘	
Gp Volume(v), veh/h	9	9	8	389	0	636	16	1492	0	287	1434	264	↔	↗	↘	
Grp Sat Flow(s), veh/h/m	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583	↔	↗	↘	
Q Served(s), s	0.5	0.5	0.5	10.3	0.0	20.9	0.3	13.8	0.0	15.0	28.6	14.5	↔	↗	↘	
Cycle Q Clear(g), s	0.5	0.5	0.5	10.3	0.0	20.9	0.3	13.8	0.0	15.0	28.6	14.5	↔	↗	↘	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔	↗	↘	
Lane Grp Cap(c), veh/h	44	46	39	861	0	768	663	2093	652	242	1724	537	↔	↗	↘	
V/C Ratio(X)	0.20	0.19	0.20	0.45	0.00	0.83	0.02	0.71	0.00	0.19	0.83	0.49	↔	↗	↘	
Avail Cap(c a), veh/h	81	85	72	1258	0	1123	663	2093	652	242	1882	586	↔	↗	↘	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	↔	↗	↘	
Upstream Filter(f)	1.00	1.00	1.00	1.00	0.00	1.00	0.63	0.63	0.00	1.00	1.00	1.00	↔	↗	↘	
Uniform Delay (d), s/veh	52.6	52.5	52.6	35.4	0.0	39.5	27.4	6.9	0.0	47.5	33.5	28.8	↔	↗	↘	
Incr Delay (d2), s/veh	2.2	2.0	2.5	0.4	0.0	3.5	0.0	1.3	0.0	117.6	4.9	3.2	↔	↗	↘	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	↔	↗	↘	
%ile BackOfQ(50%), veh/m0.3	0.3	0.3	0.3	5.1	0.0	9.5	0.2	6.3	0.0	15.2	14.1	6.9	↔	↗	↘	
LnGrp Delay(d), s/veh	54.8	54.6	55.0	35.8	0.0	42.9	27.4	8.3	0.0	165.1	38.3	32.0	↔	↗	↘	
LnGrp LOS	D	D	E	D	D	D	C	C	A	F	D	C	↔	↗	↘	
Approach Vol, veh/h	26						1025						1508		1985	
Approach Delay, s/veh	54.8						40.2						8.5		55.8	
Approach LOS	D						D						A		E	
Timer	1	2	3	4	5	6	7	8								
Assigned Phs	1	2	4		5	6										
Phs Duration (G+Y+Rc), \$9.0	51.1	7.4	27.0	43.1	32.5											
Change Period (Y+Rc), s	4.0	5.8	*4.7	5.8	*5.8	5.8										
Max Green Setting (Gmax), \$	30.7	*5	*5	*41	39.0											
Max Q Clear Time (g_c+17), \$	15.8	2.5	2.3	30.6	22.9											
Green Ext Time (p_c), s	0.0	8.5	0.0	2.1	6.7	3.7										
Intersection Summary																
HCM 2010 Ctrl Delay	36.6															
HCM 2010 LOS	D															
Notes																

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***** ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative) *****
***** Intersection #3 Seal Beach Blvd/Lampson Ave *****
Cycle Length: 100 Critical Vol./Cap. (X): 0.799
Loss time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 66 Level of Service: C
*****
Street Name: Seal Beach Blvd Lampson Ave
Approach: North Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Permitted
Rights: Ovl Ovl Ovl Ovl Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 0 0 0 1
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 1
*****
Volume Module:
Base Vol: 0 1707 394 557 1605 0 0 0 0 0 394 0 619
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 1707 394 557 1605 0 0 0 0 394 0 619
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 1707 394 557 1605 0 0 0 0 394 0 619
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1707 394 557 1605 0 0 0 0 394 0 619
PEE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MUF Adj: 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 1707 394 557 1605 0 0 0 0 394 0 619
OvRadJVol: 0
*****
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
AdjSaturmet: 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 3.00 1.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00
Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700
*****
Capacity Analysis Module:
Vol/Sat: 0.00 0.33 0.23 0.16 0.31 0.00 0.00 0.00 0.00 0.12 0.00 0.36
OvRadJVs: 0
Crit Moves: ****
*****

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.669							
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx							
Optimal Cycle:	46	Level Of Service:		B							

Street Name:	Seal Beach Blvd	North Bound	South Bound	East Bound	West Bound						
Approach:		L	-	T	-	R	L	-	T	-	R
Movement:		L	-	T	-	R	L	-	T	-	R
Control:		Protected	Protected	Split Phase	Split Phase						
Rights:		Include	Include	Ovl	Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1	0	1	0	0	2	1	0

Volume Module:											
Base Vol:	396	1775	188	19	1513	79	120	2	436	191	38
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Base:	396	1775	188	19	1513	79	120	2	436	191	38
User Adj:	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
PHF Volume:	396	1775	188	19	1513	79	120	2	436	191	38
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	396	1775	188	19	1513	79	120	2	436	191	38
PCE Adj:	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
FinalVolume:	396	1775	188	19	1513	79	120	2	436	191	38
OvAdjVol:											

Saturation Flow Module:											
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.71	0.29	1.00	2.85	0.15	0.98	0.02	2.00	1.64	0.32
Final Sat.:	3400	4612	488	1700	4847	253	1672	28	3400	2775	552

Capacity Analysis Module:											
Vol/Sat:	0.12	0.38	0.38	0.01	0.31	0.31	0.07	0.07	0.13	0.07	0.07
OvAdjV/S:											
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****

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

Intersection #5 Seal Beach Blvd/Towne Center Dr											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.870							
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx							
Optimal Cycle:	87	Level Of Service:		D							

Street Name:	Seal Beach Blvd	North Bound	South Bound	East Bound	West Bound						
Approach:		L	-	T	-	R	L	-	T	-	R
Movement:		L	-	T	-	R	L	-	T	-	R
Control:		Protected	Protected	Protected	Protected	Include	Include	Include	Include	Include	Include
Rights:		Include	Include	Include	Include	Include	Include	Include	Include	Include	Include
Min. Green:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	1	0	1	0

Volume Module:											
Base Vol:	316	1382	118	101	1175	164	128	91	266	189	97
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	316	1382	118	101	1175	164	128	91	266	189	97
User Adj:	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
PHF Volume:	316	1382	118	101	1175	164	128	91	266	189	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	316	1382	118	101	1175	164	128	91	266	189	97
PCE Adj:	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
FinalVolume:	316	1382	118	101	1175	164	128	91	266	189	97
OvAdjVol:											

Saturation Flow Module:											
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	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	2.76	0.24	1.00	2.63	0.37	1.00	0.25	0.75	1.00	0.50
Final Sat.:	1700	4699	401	1700	4475	625	1700	433	1267	1700	854

Capacity Analysis Module:											
Vol/Sat:	0.19	0.29	0.29	0.06	0.26	0.26	0.08	0.21	0.21	0.11	0.11
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.713							
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx							
Optimal Cycle:	52	Level Of Service:		C							

Street Name:		Seal Beach Blvd		Rossmoor Center Way							
Approach:		North Bound		South Bound		East Bound		West Bound			
Movement:		L	-	T	-	R	L	-	T	-	R
Control:		Protected		Protected		Permitted		Permitted			
Rights:		Include		Include		Include		Include			
Min. Green:		0	0	0	0	0	0	0	0	0	0
Y+R:		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:		1	0	2	1	0	1	0	1	0	1
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----											
Volume Module:											
Base Vol:		222	1585	16	27	1540	251	206	4	165	21
Growth Adj:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:		222	1585	16	27	1540	251	206	4	165	21
User Adj:		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
PHF Volume:		222	1585	16	27	1540	251	206	4	165	21
Reduct Vol:		0	0	0	0	0	0	0	0	0	0
Reduced Vol:		222	1585	16	27	1540	251	206	4	165	21
PCE Adj:		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
FinalVolume:		222	1585	16	27	1540	251	206	4	165	21
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----											
Saturation Flow Module:											
Sat/Lane:		1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:		1.00	2.97	0.03	1.00	2.58	0.42	1.00	0.02	0.98	1.00
Final Sat.:		1700	5049	51	1700	4385	715	1700	40	1660	1700
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----											
Capacity Analysis Module:											
Vol/Sat:		0.13	0.31	0.31	0.02	0.35	0.35	0.12	0.10	0.10	0.01
Crit Moves:		****	****	****	****	****	****	****	****	****	****

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.680							
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx							
Optimal Cycle:	48	Level Of Service:		B							

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd											
Approach: North Bound South Bound East Bound West Bound											
Movement: L - T - R L - T - R L - T - R L - T - R											
Control: Protected Protected Protected Protected Protected Protected											
Rights: Include Include Include Include Include Include											
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0											
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0											
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0											
Volume Module:											
Base Vol:	122 1545	48	24 1647	136	192	9	105	69	8	22	
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	1.00 1.00	1.00	
Initial Base:	122 1545	48	24 1647	136	192	9	105	69	8	22	
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	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	1.00 1.00	1.00	
PHF Volume:	122 1545	48	24 1647	136	192	9	105	69	8	22	
Reduct Vol:	0 0	0	0 0	0	0 0	0	0 0	0	0 0	0	
Reduced Vol:	122 1545	48	24 1647	136	192	9	105	69	8	22	
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	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	1.00 1.00	1.00	
FinalVolume:	122 1545	48	24 1647	136	192	9	105	69	8	22	
Saturation Flow Module:											
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700	
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	1.00 1.00	1.00	
Lanes:	1.00 2.91	0.09	1.00 2.77	0.23	1.00 0.08	0.92	0.90 0.10	1.00			
Final Sat.:	1700 4946	154	1700 4711	389	1700	134	1566	1523	177	1700	
Capacity Analysis Module:											
Vol/Sat:	0.07 0.31	0.31	0.01 0.35	0.35	0.11 0.07	0.07	0.04 0.05	0.01			
Crit Moves:	****	****	****	****	****	****	****	****			

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/5/2016

Intersection									
1									
Int Delay, s/veh									
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	499	1	47	460	4	48			
Future Vol, veh/h	499	1	47	460	4	48			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	100	100	100	100	100	100			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	499	1	47	460	4	48			
Major/Minor	Major1	Major2	Minor1						
Conflicting Flow All	0	0	500	0	824	250			
Stage 1	-	-	-	-	500	-			
Stage 2	-	-	-	-	324	-			
Critical Hdwy	-	-	4.14	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	-	-	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	1060	-	311	750			
Stage 1	-	-	-	-	575	-			
Stage 2	-	-	-	-	705	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1060	-	292	750			
Mov Cap-2 Maneuver	-	-	-	-	292	-			
Stage 1	-	-	-	-	575	-			
Stage 2	-	-	-	-	663	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		1		10.8				
HCM LOS					B				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	669	-	-	1060	-				
HCM Lane V/C Ratio	0.078	-	-	0.044	-				
HCM Control Delay (s)	10.8	-	-	8.6	0.2				
HCM Lane LOS	B	-	-	A	A				
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection									
Intersection Delay, s/veh									
8.8									
Intersection LOS									
A									
Movement									
Traffic Vol, veh/h	0	38	4	41	0	3	5	5	0
Future Vol, veh/h	0	38	4	41	0	3	5	5	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	4	41	0	3	5	5	0
Number of Lanes	0	0	1	0	0	0	1	0	0
Approach									
EB WB									
Opposing Approach									
WB									
Opposing Lanes									
1									
Conflicting Approach Left									
SB									
Conflicting Lanes Left									
2									
Conflicting Approach Right									
NB									
Conflicting Lanes Right									
2									
HCM Control Delay									
8.6									
HCM LOS									
A									
Lane									
NBLn1 NBLn2 EBLn1 EBLn2 WBLn1 WBLn2									
Vol Left, %	30%	0%	46%	23%	6%	0%			
Vol Thru, %	70%	92%	5%	38%	94%	85%			
Vol Right, %	0%	8%	49%	38%	0%	15%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	138	105	83	13	137	152			
LT Vol	41	0	38	3	8	0			
Through Vol	97	97	4	5	129	129			
RT Vol	0	8	41	5	0	23			
Lane Flow Rate	138	105	83	13	136	152			
Geometry Grp	7	7	2	2	7	7			
Degree of Utl (X)	0.198	0.145	0.114	0.018	0.19	0.206			
Departure Headway (Hd)	5.178	4.975	4.931	5.06	5.021	4.885			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	693	721	726	706	715	735			
Service Time	2.908	2.705	2.964	3.104	2.751	2.614			
HCM Lane V/C Ratio	0.199	0.146	0.114	0.018	0.19	0.207			
HCM Control Delay	9.2	8.6	8.6	8.2	8.9	8.9			
HCM Lane LOS	A	A	A	A	A	A			
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8			

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	8	257	23	
Future Vol, veh/h	0	8	257	23	
Peak Hour Factor	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	8	257	23	
Number of Lanes	0	0	2	0	
Approach	SB				
Opposing Approach	NB				
Opposing Lanes	2				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	8.9				
HCM LOS	A				
ane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 9.6																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	46	46	69	0	20	56	47	0	51	142	32	0	49	176	36
Future Vol, veh/h	0	46	46	69	0	20	56	47	0	51	142	32	0	49	176	36
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	46	46	69	0	20	56	47	0	51	142	32	0	49	176	36
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		NB		SB									
Opposing Approach	WB		EB		SB		NB									
Opposing Lanes	1		1		2		2									
Conflicting Approach Left	SB		NB		EB		WB									
Conflicting Lanes Left	2		2		1		1									
Conflicting Approach Right	NB		SB		WB		EB									
Conflicting Lanes Right	2		2		1		1									
HCM Control Delay	9.7		9.4		9.6		9.7									
HCM LOS	A		A		A		A									
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	42%		0%		29%		16%		36%		0%					
Vol Thru, %	58%		69%		29%		46%		64%		71%					
Vol Right, %	0%		31%		43%		38%		0%		29%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	122		103		161		123		137		124					
LT Vol	51		0		46		20		49		0					
Through Vol	71		71		46		56		88		88					
RT Vol	0		32		69		47		0		36					
Lane Flow Rate	122		103		161		123		137		124					
Geometry Grp	7		7		2		2		7		7					
Degree of Util (X)	0.195		0.152		0.227		0.176		0.216		0.182					
Departure Headway (Hd)	5.751		5.32		5.086		5.147		5.68		5.294					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	617		665		699		689		625		670					
Service Time	3.55		3.119		3.175		3.243		3.477		3.09					
HCM Lane V/C Ratio	0.198		0.155		0.23		0.179		0.219		0.185					
HCM Control Delay	10		9.1		9.7		9.4		10.1		9.3					
HCM Lane LOS	A		A		A		A		B		A					
HCM 95th-ile Q	0.7		0.5		0.9		0.6		0.8		0.7					

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	1	16	4	0	126	22	76	0	3	78	103
Future Vol, veh/h	0	1	16	4	0	126	22	76	0	3	78	103
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	16	4	0	126	22	76	0	3	78	103
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB
Opposing Approach	WB				EB				SB
Opposing Lanes	2				1				2
Conflicting Approach Left	SB				NB				EB
Conflicting Lanes Left	2				2				1
Conflicting Approach Right	NB				SB				WB
Conflicting Lanes Right	2				2				2
HCM Control Delay	8.8				9.5				8.7
HCM LOS	A				A				A

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	7%	0%	5%	85%	0%	44%	0%	0%	0%	0%
Vol Thru, %	93%	27%	76%	15%	0%	56%	96%	0%	4%	0%
Vol Right, %	0%	73%	19%	0%	100%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	42	142	21	148	76	88	51			
LT Vol	3	0	1	126	0	39	0			
Through Vol	39	39	16	22	0	49	49			
RT Vol	0	103	4	0	76	0	2			
Lane Flow Rate	42	142	21	148	76	88	51			
Geometry Grp	7	7	6	7	7	7	7			
Degree of Utl (X)	0.063	0.19	0.032	0.237	0.098	0.137	0.076			
Departure Headway (Hd)	5.375	4.828	5.522	5.773	4.642	5.591	5.34			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	665	741	644	620	768	640	669			
Service Time	3.121	2.573	3.59	3.524	2.393	3.339	3.088			
HCM Lane V/C Ratio	0.063	0.192	0.033	0.239	0.099	0.138	0.076			
HCM Control Delay	8.5	8.7	8.8	10.3	7.9	9.2	8.5			
HCM Lane LOS	A	A	A	B	A	A	A			
HCM 95th-tile Q	0.2	0.7	0.1	0.9	0.3	0.5	0.2			

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↔	↔
Traffic Vol, veh/h	0	39	98	2
Future Vol, veh/h	0	39	98	2
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	39	98	2
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.9
HCM LOS	A

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/5/2016

Intersection													
Intersection Delay, s/veh 7.8													
Intersection LOS A													
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR				
Traffic Vol. veh/h	0	90	18	0	11	129	0	28	19				
Future Vol. veh/h	0	90	18	0	11	129	0	28	19				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2				
Mvmt Flow	0	90	18	0	11	129	0	28	19				
Number of Lanes	0	1	0	0	0	1	0	1	0				
Approach	EB	WB	EB	WB	WB	WB	NB	NB	NB				
Opposing Approach	WB	EB											
Opposing Lanes	1	1							0				
Conflicting Approach Left		NB					EB	EB					
Conflicting Lanes Left	0	1					1	1					
Conflicting Approach Right	NB						WB	WB					
Conflicting Lanes Right	1	0					1	1					
HCM Control Delay	7.6	8					7.6	7.6					
HCM LOS	A	A					A	A					
Lane	NBLn1	EBLn1	WBLn1	NBLn1									
Vol Left, %	60%	0%	8%										
Vol Thru, %	0%	83%	92%										
Vol Right, %	40%	17%	0%										
Sign Control	Stop	Stop	Stop										
Traffic Vol by Lane	47	108	140										
LT Vol	28	0	11										
Through Vol	0	90	129										
RT Vol	19	18	0										
Lane Flow Rate	47	108	140										
Geometry Grp	1	1	1										
Degree of Util (X)	0.057	0.121	0.16										
Departure Headway (Hd)	4.346	4.022	4.114										
Convergence, Y/N	Yes	Yes	Yes										
Cap	829	883	867										
Service Time	2.346	2.083	2.166										
HCM Lane V/C Ratio	0.057	0.122	0.161										
HCM Control Delay	7.6	7.6	8										
HCM Lane LOS	A	A	A										
HCM 95th-tile Q	0.2	0.4	0.6										

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh 19.5												
Intersection LOS C												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR	SB	SB	SB
Traffic Vol. veh/h	0	23	110	39	0	234	102	116	0	47	70	235
Future Vol. veh/h	0	23	110	39	0	234	102	116	0	47	70	235
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	110	39	0	234	102	116	0	47	70	235
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0
Approach												
Approach	EB	WB	EB	WB	EB	WB	NB	NB	SB	SB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	WB	WB	NB	NB
Opposing Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	SB	SB	SB	SB	SB	SB	EB	EB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1	2	2	1	1	1	1
Conflicting Approach Right	NB	NB	NB	NB	NB	NB	WB	WB	EB	EB	EB	EB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	2	2	2	2
HCM Control Delay	11.3	11.3	26.8	26.8	17.3	17.3	13.7	13.7	13.7	13.7	13.7	13.7
HCM LOS	B	B	D	D	C	C	B	B	B	B	B	B
Lane												
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn1	SBLn1	SBLn1	SBLn1			
Vol Left, %	13%	29%	0%	52%	53%	53%	53%	53%	53%			
Vol Thru, %	20%	71%	59%	23%	34%	34%	34%	34%	34%			
Vol Right, %	67%	0%	41%	26%	13%	13%	13%	13%	13%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	352	78	94	452	197	197	197	197	197			
LT Vol	47	23	0	234	105	105	105	105	105			
Through Vol	70	55	55	102	66	66	66	66	66			
RT Vol	235	0	39	116	26	26	26	26	26			
Lane Flow Rate	352	78	94	452	197	197	197	197	197			
Geometry Grp	2	7	7	5	2	2	2	2	2			
Degree of Utlr (X)	0.587	0.159	0.18	0.769	0.369	0.369	0.369	0.369	0.369			
Departure Headway (Hd)	6.006	7.336	6.887	6.124	6.743	6.743	6.743	6.743	6.743			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	598	488	519	592	532	532	532	532	532			
Service Time	4.06	5.103	4.654	4.173	4.808	4.808	4.808	4.808	4.808			
HCM Lane V/C Ratio	0.589	0.16	0.181	0.764	0.37	0.37	0.37	0.37	0.37			
HCM Control Delay	17.3	11.5	11.2	26.8	13.7	13.7	13.7	13.7	13.7			
HCM Lane LOS	C	B	B	D	B	B	B	B	B			
HCM 95th-tile Q	3.8	0.6	0.7	7	1.7	1.7	1.7	1.7	1.7			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection												
Intersection Delay, s/veh 17.9												
Intersection LOS C												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	140	431	0	76	108	0	371	57			
Future Vol, veh/h	0	140	431	0	76	108	0	371	57			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	140	431	0	76	108	0	371	57			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Opposing Approach												
Opposing Lanes			0			1						
Conflicting Approach Left			NB									
Conflicting Lanes Left			1			0						
Conflicting Approach Right			SB			WB						
Conflicting Lanes Right			1			2						
HCM Control Delay			17.3			11.3						
HCM LOS			C			B						
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%	100%	0%	87%								
Vol Thru, %	41%	0%	0%	13%								
Vol Right, %	59%	0%	100%	0%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	184	140	431	428								
LT Vol	0	140	0	371								
Through Vol	76	0	0	57								
RT Vol	108	0	431	0								
Lane Flow Rate	184	140	431	428								
Geometry Grp	2	7	7	2								
Degree of Util (X)	0.297	0.265	0.669	0.699								
Departure Headway (Hd)	5.808	6.805	5.587	5.883								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	616	528	647	612								
Service Time	3.87	4.555	3.336	3.934								
HCM Lane V/C Ratio	0.299	0.265	0.666	0.699								
HCM Control Delay	11.3	12	19	21.5								
HCM Lane LOS	B	B	C	C								
HCM 95th-ile Q	1.2	1.1	5.1	5.6								

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/5/2016

Intersection												
Int Delay, s/veh 2.4												
Movement	EBT	EBR	WBL	WBT	NBL	NBR						
Traffic Vol, veh/h	108	0	48	135	5	43						
Future Vol, veh/h	108	0	48	135	5	43						
Conflicting Peds, #/hr	0	0	0	0	0	0						
Sign Control	Free	Free	Free	Free	Stop	Stop						
RT Channelized	-	None	-	None	-	None						
Storage Length	-	-	-	-	0	-						
Veh in Median Storage, #	0	-	-	0	0	-						
Grade, %	0	-	-	0	0	-						
Peak Hour Factor	100	100	100	100	100	100						
Heavy Vehicles, %	2	2	2	2	2	2						
Mvmt Flow	108	0	48	135	5	43						
Major/Minor	Major1	Major2	Minor1									
Conflicting Flow All	0	0	108	0	339	108						
Stage 1	-	-	-	-	108	-						
Stage 2	-	-	-	-	231	-						
Critical Hdwy	-	-	4.12	-	7.12	6.22						
Critical Hdwy Stg 1	-	-	-	-	6.12	-						
Critical Hdwy Stg 2	-	-	-	-	6.12	-						
Follow-up Hdwy	-	-	2.218	-	3.518	3.318						
Pot Cap-1 Maneuver	-	-	1483	-	615	946						
Stage 1	-	-	-	-	897	-						
Stage 2	-	-	-	-	772	-						
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	1483	-	599	946						
Mov Cap-2 Maneuver	-	-	-	-	599	-						
Stage 1	-	-	-	-	897	-						
Stage 2	-	-	-	-	745	-						
Approach	EB	WB	NB									
HCM Control Delay, s	0	2	9.3									
HCM LOS			A									
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT							
Capacity (veh/h)	892	-	-	1483	-							
HCM Lane V/C Ratio	0.054	-	-	0.032	-							
HCM Control Delay (s)	9.3	-	-	7.5	0							
HCM Lane LOS	A	-	-	A	A							
HCM 95th %ile Q(veh)	0.2	-	-	0.1	-							

HCM 2010 Signalized Intersection Summary
1: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	95	31	18	762	48	587	15	1158	182	481	1593	79
Traffic Volume (veh/h)	95	31	18	762	48	587	15	1158	182	481	1593	79
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	95	31	18	796	0	0	15	1158	182	481	1593	79
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	89	55	32	859	0	383	30	1233	384	695	3223	1003
Arrive On Green	0.05	0.05	0.05	0.24	0.00	0.00	0.02	0.24	0.24	0.26	0.42	0.42
Sat Flow, veh/h	1774	1107	643	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	95	0	49	796	0	0	15	1158	182	481	1593	79
Grp Sat Flow(s), veh/hln	1774	0	1749	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.6	10.8	26.9	25.1	3.3
Cycle Q Clear(g, c), s	5.5	0.0	3.0	24.1	0.0	0.0	0.9	24.6	10.8	26.9	25.1	3.3
Prop In Lane	1.00	0.00	0.37	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	89	0	87	859	0	383	30	1233	384	695	3223	1003
V/C Ratio(X)	1.07	0.00	0.56	0.93	0.00	0.00	0.51	0.94	0.47	0.69	0.49	0.08
Avail Cap(c, a), veh/h	89	0	87	887	0	396	81	1234	384	695	3223	1003
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	0.0	51.1	40.7	0.0	0.0	53.6	40.9	35.7	34.6	18.8	12.5
Incr Delay (d2), s/veh	116.2	0.0	7.8	15.2	0.0	0.0	12.7	14.7	4.2	2.2	0.4	0.1
Initial Q Delay(d3), s/veh	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/hln	5.5	0.0	1.6	13.6	0.0	0.0	0.6	13.1	5.2	13.6	11.9	1.5
LnGrp Delay(d), s/veh	169.1	0.0	58.9	55.9	0.0	0.0	66.3	55.6	39.8	36.8	19.2	12.6
LnGrp LOS	F	E	E	E	E	E	E	E	D	D	B	B
Approach Vol, veh/h	144			796			1355				2153	
Approach Delay, s/veh	131.6			55.9			53.6				22.9	
Approach LOS	F			E			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	48.9	32.5		10.2	5.8	75.5		32.4				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 27		* 5.5	5.0	51.7		27.5				
Max Q Clear Time (g_c+I), s	28.9	26.6		7.5	2.9	27.1		26.1				
Green Ext Time (p_c), s	0.2	0.1		0.0	0.0	14.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				41.7								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
2: Seal Beach Boulevard & I-405 NB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	11	12	5	402	58	616	120	1329	381	1863	1863	509
Traffic Volume (veh/h)	11	12	5	402	58	616	120	1329	381	1863	1863	509
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	12	5	402	0	655	120	1329	0	369	1732	509
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	46	49	41	883	0	788	540	1870	582	306	1867	581
Arrive On Green	0.03	0.03	0.03	0.25	0.00	0.25	0.31	0.74	0.00	0.17	0.37	0.37
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/h	11	12	5	402	0	655	120	1329	0	369	1732	509
Grp Sat Flow(s), veh/hln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g, s), s	0.7	0.7	0.3	10.6	0.0	21.5	2.8	15.9	0.0	19.0	36.0	33.0
Cycle Q Clear(g, c), s	0.7	0.7	0.3	10.6	0.0	21.5	2.8	15.9	0.0	19.0	36.0	33.0
Prop In Lane	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	49	41	883	0	788	540	1870	582	306	1867	581
V/C Ratio(X)	0.24	0.25	0.12	0.46	0.00	0.83	0.22	0.71	0.00	1.20	0.93	0.88
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	540	1870	582	306	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.58	0.58	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	35.0	0.0	39.1	32.8	11.3	0.0	45.5	33.4	32.5
Incr Delay (d2), s/veh	2.6	2.6	1.3	0.4	0.0	3.7	0.1	1.4	0.0	118.7	9.5	16.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/hln	0.4	0.2	0.2	5.2	0.0	9.8	1.3	7.4	0.0	19.4	18.5	17.1
LnGrp Delay(d), s/veh	55.1	55.1	53.6	35.4	0.0	42.8	32.9	12.7	0.0	164.2	42.9	49.2
LnGrp LOS	E	E	D	D	D	D	C	B	F	D	D	D
Approach Vol, veh/h	28			1057			1449			2610		
Approach Delay, s/veh	54.8			40.0			14.3			61.3		
Approach LOS	D			D			B			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	43.0	46.3		7.6	23.1	46.2		33.2				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	26.7	26.7		* 5	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	17.9	17.9		2.7	4.8	38.0		23.5				
Green Ext Time (p_c), s	0.0	5.5		0.0	0.0	2.4		3.8				
Intersection Summary												
HCM 2010 Ctrl Delay				43.7								
HCM 2010 LOS				D								
Notes												

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Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
AM Peak Hour

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

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.813
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: D

Street Name: Seal Beach Blvd Lampson Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected Permitted
Rights: Ovl Include Include Include Ovl
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 0 2 0 0 0 1
Volume Module:
Base Vol: 0 1624 334 364 1859 0 0 0 0 0 769 0 671
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 1624 334 364 1859 0 0 0 0 769 0 671
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 1624 334 364 1859 0 0 0 0 769 0 671
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1624 334 364 1859 0 0 0 0 769 0 671
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 1624 334 364 1859 0 0 0 0 769 0 671
OvlAdjVol: 0
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 3.00 2.00 3.00 0.00 0.00 0.00 0.00 2.00 0.00 1.00 1.00
Final Sat.: 0 5100 1700 3400 5100 0 0 0 0 3400 0 1700
Capacity Analysis Module:
Vol/Sat: 0.00 0.32 0.20 0.11 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39
OvlAdjV/S: 0.00 0.32 0.20 0.11 0.36 0.00 0.00 0.00 0.00 0.23 0.00 0.39
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
AM Peak Hour

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.625
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: B

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0
Volume Module:
Base Vol: 414 1837 51 4 1512 57 116 3 622 71 14 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 414 1837 51 4 1512 57 116 3 622 71 14 2
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: 414 1837 51 4 1512 57 116 3 622 71 14 2
Reduc Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 414 1837 51 4 1512 57 116 3 622 71 14 2
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: 414 1837 51 4 1512 57 116 3 622 71 14 2
OvlAdjVol: 208
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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: 2.00 2.92 0.08 1.00 2.89 0.11 0.97 0.03 2.00 1.63 0.32 0.05
Final Sat.: 3400 4962 138 1700 4915 185 1657 43 3400 2775 547 78
Capacity Analysis Module:
Vol/Sat: 0.12 0.37 0.37 0.00 0.31 0.31 0.07 0.07 0.18 0.03 0.03 0.03
OvlAdjV/S: 0.12 0.37 0.37 0.00 0.31 0.31 0.07 0.07 0.18 0.03 0.03 0.03
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
AM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.501
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 59 1805 34 23 1550 33 21 4 15 26 2 23
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: 59 1805 34 23 1550 33 21 4 15 26 2 23
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: 59 1805 34 23 1550 33 21 4 15 26 2 23
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 59 1805 34 23 1550 33 21 4 15 26 2 23
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: 59 1805 34 23 1550 33 21 4 15 26 2 23

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.94 0.06 1.00 2.94 0.06 1.00 0.21 0.79 1.00 0.08 0.92
Final Sat.: 1700 5006 94 1700 4994 106 1700 358 1342 1700 136 1564

Capacity Analysis Module:
Vol/Sat: 0.03 0.36 0.01 0.31 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01
Crit Moves: ****

Future Buildout WP AM Mon Feb 20, 2017 15:29:22 Page 5-1
Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
AM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.559
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 82 1761 16 21 1562 88 95 8 96 19 11 43
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: 82 1761 16 21 1562 88 95 8 96 19 11 43
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: 82 1761 16 21 1562 88 95 8 96 19 11 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 82 1761 16 21 1562 88 95 8 96 19 11 43
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: 82 1761 16 21 1562 88 95 8 96 19 11 43

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 2.97 0.03 1.00 2.84 0.16 1.00 0.08 0.92 1.00 0.20 0.80
Final Sat.: 1700 5054 46 1700 4628 272 1700 131 1569 1700 346 1354

Capacity Analysis Module:
Vol/Sat: 0.05 0.35 0.01 0.32 0.01 0.06 0.06 0.06 0.01 0.03 0.03 0.03
Crit Moves: ****

Future Buildout WP AM Mon Feb 20, 2017 15:29:22 Page 6-1
Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
AM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.769
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: C

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd
Approach: North Bound South Bound East Bound West Bound
Movement: L - I - R L - I - R L - I - R L - I - R
Control: Protected Protected Protected Permitted Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:
Base Vol: 160 1687 28 30 1527 185 305 20 106 77 24 31
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: 160 1687 28 30 1527 185 305 20 106 77 24 31
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 1687 28 30 1527 185 305 20 106 77 24 31
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 160 1687 28 30 1527 185 305 20 106 77 24 31
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
M/F Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 160 1687 28 30 1527 185 305 20 106 77 24 31

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 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 2.95 0.05 1.00 2.68 0.32 1.00 0.16 0.84 0.76 0.24 1.00
Final Sat.: 1700 5017 83 1700 4549 551 1700 270 1430 1296 404 1700

Capacity Analysis Module:
Vol/Sat: 0.09 0.34 0.34 0.02 0.34 0.34 0.18 0.07 0.07 0.05 0.06 0.02
Crit Moves: ****

Intersection		1.2					
Int Delay, s/veh							
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Traffic Vol, veh/h	663	4	31	442	9	77	
Future Vol, veh/h	663	4	31	442	9	77	
Conflicting Peds, #/hr	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	- None	- None	- None	- None	-	None	
Storage Length	-	-	-	-	0	-	
Veh in Median Storage, #	0	-	-	0	0	-	
Grade, %	0	-	-	0	0	-	
Peak Hour Factor	100	100	100	100	100	100	
Heavy Vehicles, %	2	2	2	2	2	2	
Mvmt Flow	663	4	31	442	9	77	
Major/Minor	Major1	Major2	Minor1				
Conflicting Flow All	0	0	667	0	948	334	
Stage 1	-	-	-	-	665	-	
Stage 2	-	-	-	-	283	-	
Critical Hdwy	-	-	4.14	-	7.54	6.94	
Critical Hdwy Stg 1	-	-	-	-	6.54	-	
Critical Hdwy Stg 2	-	-	-	-	6.54	-	
Follow-up Hdwy	-	-	2.22	-	3.52	3.32	
Pot Cap-1 Maneuver	-	-	919	-	215	662	
Stage 1	-	-	-	-	416	-	
Stage 2	-	-	-	-	700	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	919	-	208	662	
Mov Cap-2 Maneuver	-	-	-	-	208	-	
Stage 1	-	-	-	-	416	-	
Stage 2	-	-	-	-	669	-	
Approach		EB	WB	NB			
HCM Control Delay, s	0	0.8	12.9				
HCM LOS			B				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	539	-	-	919	-		
HCM Lane V/C Ratio	0.16	-	-	0.034	-		
HCM Control Delay (s)	12.9	-	-	9.1	0.2		
HCM Lane LOS	B	-	-	A	A		
HCM 95th %ile Q(veh)	0.6	-	-	0.1	-		

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection													
Intersection Delay, s/veh										10.4			
Intersection LOS										B			
Movement													
Traffic Vol, veh/h	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	NBR
0	59	8	138	0	2	4	1	0	118	184	2	2	2
Future Vol, veh/h	0	59	8	138	0	2	4	1	0	118	184	2	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	59	8	138	0	2	4	1	0	118	184	2	2
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0
Approach													
Approach	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB	NB	NB
Opposing Approach	WB	WB	EB	EB	WB	WB	WB	WB	WB	WB	WB	WB	WB
Opposing Lanes	1	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	SB	SB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
Conflicting Lanes Left	2	2	2	2	2	2	2	2	2	2	2	2	2
Conflicting Approach Right	NB	NB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB	SB
Conflicting Lanes Right	2	2	2	2	2	2	2	2	2	2	2	2	2
HCM Control Delay	10.2	8.9	8.9	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
HCM LOS	B	B	A	A	A	A	A	B	B	B	B	B	B
Lane													
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1	WBLn1
Vol Left, %	56%	0%	29%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vol Thru, %	44%	98%	4%	57%	100%	78%	78%	78%	78%	78%	78%	78%	78%
Vol Right, %	0%	2%	67%	14%	0%	22%	22%	22%	22%	22%	22%	22%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	94	205	7	209	135	135	135	135	135	135	135	135
LT Vol	118	0	59	2	0	0	0	0	0	0	0	0	0
Through Vol	92	92	8	4	209	105	105	105	105	105	105	105	105
RT Vol	0	2	138	1	0	30	30	30	30	30	30	30	30
Lane Flow Rate	210	94	205	7	209	135	135	135	135	135	135	135	135
Geometry Grp	7	7	2	2	7	7	7	7	7	7	7	7	7
Degree of Util (X)	0.333	0.141	0.289	0.011	0.314	0.196	0.196	0.196	0.196	0.196	0.196	0.196	0.196
Departure Headway (Hd)	5.716	5.417	5.083	5.872	5.405	5.248	5.248	5.248	5.248	5.248	5.248	5.248	5.248
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	624	655	701	613	659	677	677	677	677	677	677	677	677
Service Time	3.504	3.205	3.156	3.872	3.191	3.033	3.033	3.033	3.033	3.033	3.033	3.033	3.033
HCM Lane V/C Ratio	0.337	0.144	0.292	0.011	0.317	0.199	0.199	0.199	0.199	0.199	0.199	0.199	0.199
HCM Control Delay	11.4	9.1	10.2	8.9	10.7	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
HCM Lane LOS	B	A	B	A	B	A	A	A	A	A	A	A	A
HCM 95th-tile Q	1.5	0.5	1.2	0	1.3	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection													
Intersection Delay, s/veh													
Intersection LOS													
Movement													
	SBU	SBL	SBT	SBR		SBU	SBL	SBT	SBR		SBU	SBL	SBR
Traffic Vol, veh/h	0	0	314	30		0	0	314	30		0	0	314
Future Vol, veh/h	0	0	314	30		0	0	314	30		0	0	314
Peak Hour Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00		1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2		2	2	2	2		2	2	2
Mvmt Flow	0	0	314	30		0	0	314	30		0	0	314
Number of Lanes	0	0	2	0		0	0	2	0		0	0	2
Approach													
Opposing Approach	SB				SB				NB				
Opposing Lanes	WB				WB				WB				
Conflicting Approach Left	1				1				1				
Conflicting Lanes Left	WB				WB				WB				
Conflicting Approach Right	EB				EB				EB				
Conflicting Lanes Right	1				1				1				
HCM Control Delay	10.2				10.2				10.2				
HCM LOS	B				B				B				
Lane													

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 11.1																
Intersection LOS B																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	106	68	96	0	15	47	35	0	43	198	24	0	27	222	71
Future Vol, veh/h	0	106	68	96	0	15	47	35	0	43	198	24	0	27	222	71
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	106	68	96	0	15	47	35	0	43	198	24	0	27	222	71
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach																
Approach	EB		WB		NB		SB		EB		WB		NB		SB	
Opposing Approach	WB		EB		SB		NB		WB		EB		NB		SB	
Opposing Lanes	1		1		2		2		1		1		2		2	
Conflicting Approach Left	SB		NB		EB		WB		2		2		1		1	
Conflicting Lanes Left	2		2		2		2		2		2		2		2	
Conflicting Approach Right	NB		SB		WB		EB		2		2		2		2	
Conflicting Lanes Right	2		2		2		2		2		2		2		2	
HCM Control Delay	12.4		9.9		10.6		10.8		10.6		10.6		10.8		10.8	
HCM LOS	B		A		B		B		B		B		B		B	
Lane																
Lane	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2		SBLn1		SBLn2	
Vol Left, %	30%		0%		39%		15%		20%		0%		0%		0%	
Vol Thru, %	70%		80%		25%		48%		80%		61%		0%		39%	
Vol Right, %	0%		20%		36%		36%		0%		39%		0%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	142		123		270		97		138		182		142		138	
LT Vol	43		0		106		15		27		0		0		0	
Through Vol	99		99		68		47		111		111		0		0	
RT Vol	0		24		96		35		0		71		0		0	
Lane Flow Rate	142		123		270		97		138		182		142		138	
Geometry Grp	7		7		2		2		7		7		7		7	
Degree of Util (X)	0.245		0.202		0.412		0.156		0.233		0.289		0.273		0.126	
Departure Headway (Hd)	6.211		5.918		5.49		5.785		6.09		5.714		6.394		6.107	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Cap	578		605		653		618		589		628		562		587	
Service Time	3.955		3.663		3.534		3.84		3.834		3.457		4.134		3.847	
HCM Lane V/C Ratio	0.246		0.203		0.413		0.157		0.234		0.29		0.274		0.126	
HCM Control Delay	11		10.2		12.4		9.9		10.7		10.8		11.5		9.7	
HCM Lane LOS	B		B		B		A		B		B		B		A	
HCM 95th-tile Q	1		0.8		2		0.5		0.9		1.2		1.1		0.4	

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection												
Intersection Delay, s/veh		11.3										
Intersection LOS		B										
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	5	26	2	0	148	20	160	0	0	153	240
Future Vol, veh/h	0	5	26	2	0	148	20	160	0	0	153	240
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	26	2	0	148	20	160	0	0	153	240
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0
Approach												
Opposing Approach	WB		EB		WB		EB		WB		SB	
Opposing Lanes	2		1		1		1		2		2	
Conflicting Approach Left	SB		NB		NB		NB		EB		EB	
Conflicting Lanes Left	2		2		2		2		1		1	
Conflicting Approach Right	NB		SB		SB		SB		WB		WB	
Conflicting Lanes Right	2		2		2		2		2		2	
HCM Control Delay	10.3		11.3		11.3		11.6		11.6		B	
HCM LOS	B		B		B		B		B		B	
Lane												
Vol Left, %	NBLn1		NBLn2		EBLn1		EBLn2		WBLn1		WBLn2	
Vol Left, %	0%		0%		15%		88%		0%		53%	
Vol Thru, %	100%		18%		79%		12%		0%		47%	
Vol Right, %	0%		82%		6%		0%		100%		0%	
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop	
Traffic Vol by Lane	102		291		33		168		154		75	
LT Vol	0		0		5		148		0		81	
Through Vol	102		51		26		20		0		73	
RT Vol	0		240		2		0		160		0	
Lane Flow Rate	102		291		33		168		154		74	
Geometry Grp	7		7		6		7		7		7	
Degree of Util (X)	0.169		0.434		0.062		0.311		0.245		0.273	
Departure Headway (Hd)	5.953		5.368		6.762		6.673		5.52		6.394	
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes	
Cap	603		669		529		539		650		562	
Service Time	3.698		3.103		4.816		4.411		3.258		4.134	
HCM Lane V/C Ratio	0.169		0.435		0.062		0.312		0.246		0.274	
HCM Control Delay	9.9		12.2		10.3		12.4		10.1		11.5	
HCM Lane LOS	A		B		B		B		B		A	
HCM 95th-tile Q	0.6		2.2		0.2		1.3		1		1.1	

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	81	145	2	
Future Vol, veh/h	0	81	145	2	
Peak Hour Factor	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	81	145	2	
Number of Lanes	0	0	2	0	
Approach					
Opposing Approach	SB				
Opposing Lanes	NB				
Conflicting Approach Left	2				
Conflicting Lanes Left	WB				
Conflicting Approach Right	2				
Conflicting Lanes Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	10.9				
HCM LOS	B				

HCM 2010 AWSC

12: West Road & Rossmore Center Way

12/5/2016

Intersection											
Intersection Delay, s/veh 7.6											
Intersection LOS A											
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR		
Traffic Vol, veh/h	0	108	11	0	7	94	0	7	13		
Future Vol, veh/h	0	108	11	0	7	94	0	7	13		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	108	11	0	7	94	0	7	13		
Number of Lanes	0	1	0	0	0	1	0	1	0		
Approach	EB		WB		NB						
Opposing Approach	WB		EB		NB						
Opposing Lanes	1		1		0						
Conflicting Approach Left			NB		EB						
Conflicting Lanes Left	0		1		1						
Conflicting Approach Right	NB				WB						
Conflicting Lanes Right	1		0		1						
HCM Control Delay	7.6		7.6		7.2						
HCM LOS	A		A		A						
Lane	NBLn1		EBLn1		WBLn1						
Vol Left, %	35%		0%		7%						
Vol Thru, %	0%		91%		93%						
Vol Right, %	65%		9%		0%						
Sign Control	Stop		Stop		Stop						
Traffic Vol by Lane	20		119		101						
LT Vol	7		0		7						
Through Vol	0		108		94						
RT Vol	13		11		0						
Lane Flow Rate	20		119		101						
Geometry Grp	1		1		1						
Degree of Util (X)	0.022		0.132		0.114						
Departure Headway (Hd)	3.989		3.99		4.072						
Convergence, Y/N	Yes		Yes		Yes						
Cap	882		887		879						
Service Time	2.083		2.018		2.102						
HCM Lane V/C Ratio	0.023		0.133		0.115						
HCM Control Delay	7.2		7.6		7.6						
HCM Lane LOS	A		A		A						
HCM 95th-ile Q	0.1		0.5		0.4						

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 9																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	38	130	15	0	80	87	56	0	14	18	34	0	65	18	16
Future Vol, veh/h	0	38	130	15	0	80	87	56	0	14	18	34	0	65	18	16
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	130	15	0	80	87	56	0	14	18	34	0	65	18	16
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0
Approach																
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				2				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				2				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				2			
HCM Control Delay	8.7				9.4				8.3				8.9			
HCM LOS	A				A				A				A			
Lane																
Lane	NBLn1				EBLn1				WBLn1				SBLn1			
Vol Left, %	21%				37%				0%				36%			
Vol Thru, %	27%				63%				81%				39%			
Vol Right, %	52%				0%				19%				25%			
Sign Control	Stop				Stop				Stop				Stop			
Traffic Vol by Lane	66				103				80				223			
LT Vol	14				38				0				80			
Through Vol	18				65				65				87			
RT Vol	34				0				15				56			
Lane Flow Rate	66				103				80				223			
Geometry Grp	2				7				7				5			
Degree of Util (X)	0.087				0.152				0.111				0.284			
Departure Headway (Hd)	4.754				5.315				4.997				4.583			
Convergence, Y/N	Yes				Yes				Yes				Yes			
Cap	750				674				716				783			
Service Time	2.803				3.055				2.738				2.62			
HCM Lane V/C Ratio	0.088				0.153				0.112				0.285			
HCM Control Delay	8.3				9				8.4				9.4			
HCM Lane LOS	A				A				A				A			
HCM 95th-ile Q	0.3				0.5				0.4				1.2			

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection										
Intersection Delay, s/veh 7.7										
Intersection LOS A										
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT	
Traffic Vol, veh/h	0	74	41	0	18	33	0	31	16	
Future Vol, veh/h	0	74	41	0	18	33	0	31	16	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	74	41	0	18	33	0	31	16	
Number of Lanes	0	1	1	0	1	0	0	0	1	
Approach	WB				NB		SB			
Opposing Approach	0				1		1			
Opposing Lanes	NB						WB			
Conflicting Approach Left	1				0		2			
Conflicting Lanes Left	SB				WB					
Conflicting Approach Right	1				2		0			
Conflicting Lanes Right	8				7.1		7.7			
HCM Control Delay	A				A		A			
HCM LOS										
Lane	NBLn1WBLn1WBLn2SBLn1									
Vol Left, %	0% 100% 0% 66%									
Vol Thru, %	35% 0% 0% 34%									
Vol Right, %	65% 0% 100% 0%									
Sign Control	Stop Stop Stop Stp									
Traffic Vol by Lane	51 74 41 47									
LT Vol	0 74 0 31									
Through Vol	18 0 0 16									
RT Vol	33 0 41 0									
Lane Flow Rate	51 74 41 47									
Geometry Grp	2 7 7 2									
Degree of Util (X)	0.055 0.107 0.046 0.057									
Departure Headway (Hd)	3.884 5.204 4.003 4.402									
Convergence, Y/N	Yes Yes Yes Yes									
Cap	928 687 890 818									
Service Time	1.884 2.953 1.75 2.404									
HCM Lane V/C Ratio	0.055 0.108 0.046 0.057									
HCM Control Delay	7.1 8.6 6.9 7.7									
HCM Lane LOS	A A A A									
HCM 95th-Pile Q	0.2 0.4 0.1 0.2									

Intersection									
Int Delay, s/veh					1.9				
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Traffic Vol, veh/h	120	0	33	104	0	35			
Future Vol, veh/h	120	0	33	104	0	35			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
Channelized RT	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	100	100	100	100	100	100			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	120	0	33	104	0	35			
Major/Minor	Major1	Major2	Minor1						
Conflicting Flow All	0	0	120	0	290	120			
Stage 1	-	-	-	-	120	-			
Stage 2	-	-	-	-	170	-			
Critical Hwy	-	-	4.12	-	6.42	6.22			
Critical Hwy Stg 1	-	-	-	-	5.42	-			
Critical Hwy Stg 2	-	-	-	-	5.42	-			
Follow-up Hwy	-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver	-	-	1468	-	701	931			
Stage 1	-	-	-	-	905	-			
Stage 2	-	-	-	-	860	-			
Platoon blocked, %	-	-	-	-	684	931			
Mov Cap-1 Maneuver	-	-	1468	-	684	-			
Mov Cap-2 Maneuver	-	-	-	-	905	-			
Stage 1	-	-	-	-	839	-			
Stage 2	-	-	-	-	-	-			
Approach	EB	WB	NB						
HCM Control Delay, s	0	1.8	9						
HCM LOS			A						
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	931	-	-	1468	-				
HCM Lane V/C Ratio	0.038	-	-	0.022	-				
HCM Control Delay (s)	9	-	-	7.5	0				
HCM Lane LOS	A	-	-	A	A				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-				

[illegible]

HCM 2010 Signalized Intersection Summary

Traffic Signal Performance Analysis - Phase 1																
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	Signal Timing & Control			
Lane Configurations	↔	↑	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	🚦	🚦	🚦	
Traffic Volume (veh/h)	86	79	95	214	16	750	45	1709	608	356	1600	408	🚦	🚦	🚦	
Future Volume (veh/h)	86	79	95	214	16	750	45	1709	608	356	1600	408	🚦	🚦	🚦	
Number	7	4	14	3	8	18	5	2	12	1	6	16	🚦	🚦	🚦	
Initial Q (Obs, veh)	0	0	0	0	0	0	0	0	0	0	0	0	🚦	🚦	🚦	
Ped-Bike Adj(A, pBt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	🚦	🚦	🚦	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	🚦	🚦	🚦	
Adj Sat Flow, veh/h/in	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	🚦	🚦	🚦	
Adj Flow Rate, veh/h	86	79	95	214	0	761	45	1709	0	356	1600	408	🚦	🚦	🚦	
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1	🚦	🚦	🚦	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	🚦	🚦	🚦	
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2	🚦	🚦	🚦	
Cap. veh/h	93	98	83	967	0	863	111	1725	537	296	2408	750	🚦	🚦	🚦	
Arrive On Green	0.05	0.05	0.05	0.27	0.00	0.27	0.06	0.68	0.00	0.17	0.47	0.47	🚦	🚦	🚦	
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583	🚦	🚦	🚦	
Gp Volume(V), veh/h	86	79	95	214	0	761	45	1709	0	356	1600	408	🚦	🚦	🚦	
Gp Sat Flow(s), veh/h/m	1774	1863	1583	1774	0	1583	1721	1695	1583	1774	1695	1583	🚦	🚦	🚦	
Q Serv(s), s	5.8	5.0	6.3	5.6	0.0	27.6	1.5	39.6	0.0	20.0	29.0	21.9	🚦	🚦	🚦	
Cycle Q Clear(g, s)	5.8	5.0	6.3	5.6	0.0	27.6	1.5	39.6	0.0	20.0	29.0	21.9	🚦	🚦	🚦	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	🚦	🚦	🚦	
Lane Grp Cap(c), veh/h	93	98	83	967	0	863	111	1725	537	296	2408	750	🚦	🚦	🚦	
V/C Ratio(X)	0.92	0.81	1.14	0.22	0.00	0.88	0.40	0.99	0.00	1.20	0.66	0.54	🚦	🚦	🚦	
Avail Cap(c, a), veh/h	93	98	83	1189	0	1061	172	1725	537	296	2408	750	🚦	🚦	🚦	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	🚦	🚦	🚦	
Upstream Filter(f)	1.00	1.00	1.00	1.00	1.00	1.00	0.48	0.48	0.00	1.00	1.00	1.00	🚦	🚦	🚦	
Uniform Delay (d), s/veh	56.3	56.3	96.8	33.8	0.0	41.8	55.0	19.1	0.0	50.0	24.3	22.4	🚦	🚦	🚦	
Incr Delay (d2), s/veh	68.6	37.7	142.5	0.1	0.0	7.6	1.1	12.9	0.0	119.4	1.5	2.8	🚦	🚦	🚦	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	🚦	🚦	🚦	
%ile BackOfQ(50%), veh/ld	6.3	6.1	2.7	0.0	13.0	0.7	19.8	0.0	19.6	13.8	10.1	10.1	🚦	🚦	🚦	
LnGrp Delay(d), s/veh	125.2	93.9	199.3	33.9	0.0	49.4	56.1	32.1	0.0	169.4	25.7	25.2	🚦	🚦	🚦	
LnGrp LOS	F	F	F	C	C	D	E	C	C	F	C	C	🚦	🚦	🚦	
Approach Vol, veh/h	260			975			1754			2364						
Approach Delay, s/veh	142.8			46.0			32.7			47.3						
Approach LOS	F			D			C			D						
Timer	1	2	3	4	5	6	7	8								
Assigned Phs	1	2	4		5	6										
Phs Duration (G+Y+R), s	40.0	46.5	11.0		7.9	62.6										
Change Period (Y+R), s	4.0	5.8	*4.7		4.0	5.8										
Max Green Setting (Gmax), s	41.6	33.2	*6.3		6.0	47.2										
Max Q Clear Time (g, c+22), s	3.8	3.5	3.1		3.0	29.6										
Green Ext Time (p, c), s	0.0	0.0	0.0		0.0	15.3										
Intersection Summary																
HCM 2010 Ctrl Delay 46.9																
HCM 2010 LOS D																
Notes																

Health Club within The Shops at Rossmore TIA 5:00 pm 3/23/2016 Future Year Plus Project PM Peak Hour
LSA Associates, Inc. - DL

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Health Club within the Shops at Rossmore
Future (2035) Buildout Plus Project

PM Peak Hour

Level of Service Computation Report

ICU I(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Seal Beach Blvd/Lampson Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.855
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 82 Level of Service: D

Street Name: Seal Beach Blvd Lampson Ave
Approach: North Bound South Bound East Bound West Bound
Movement: L T R L T R L T R L T R

Control:
Rights: Protected Protected Protected Permitted
Mvmt: Ovl Include Include Ovl
Min.: Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y-R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 2 0 3 0 0 0 0 0 2 0 0 1

Volume Module:
BaselVol Adj: 0 1915 596 701 1784 0 0 0 591 0 591 0 528
GrowthAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
InitialBse: 0 1915 596 701 1784 0 0 0 591 0 591 0 528
Prf Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PBF Adj: 1.00 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 1915 596 701 1784 0 0 0 591 0 591 0 528
Reduced Vol: 0 1915 596 701 1784 0 0 0 591 0 591 0 528
Reduct Vol: 0 1915 596 701 1784 0 0 0 591 0 591 0 528
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
PLF Adj: 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 1915 596 701 1784 0 0 0 591 0 591 0 528
OvlAdjtVbl: 0 1915 596 701 1784 0 0 0 591 0 591 0 178

Saturation Flow Module:
SatVlane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
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 3.00 1.00 2.00 3.00 0.00 0.00 0.00 2.00 0.00 2.00 1.00
Final Sat.: 0 5100 1700 3400 5100 0 0 0 3400 0 3400 0 1700

Capacity Analysis Module:
Vol/Sat: 0.00 0.36 0.35 0.21 0.35 0.00 0.00 0.00 0.17 0.00 0.31 0.31
OvlAdjt/S: **** * 0.10
Crit Moves: *****

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Health Club within the Shops at Rossmore
Future (2035) Buildout Plus Project
PM Peak Hour

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.744
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: C

Street Name: Seal Beach Blvd St. Cloud Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 2 1 0 1 0 2 1 0 0 1 0 0 2 1 0 1 0 0

Volume Module:
Base Vol: 449 1862 145 5 1856 75 102 0 425 211 34 5
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 449 1862 145 5 1856 75 102 0 425 211 34 5
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: 449 1862 145 5 1856 75 102 0 425 211 34 5
Reduct Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 449 1862 145 5 1856 75 102 0 425 211 34 5
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: 449 1862 145 5 1856 75 102 0 425 211 34 5
OvlAdjVol: 0

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 2.78 0.22 1.00 2.88 0.12 1.00 0.00 2.00 1.69 0.27 0.04
Final Sat.: 3400 4732 368 1700 4902 198 1700 0 3400 2870 462 68

Capacity Analysis Module:
Vol/Sat: 0.13 0.39 0.39 0.00 0.38 0.38 0.06 0.00 0.13 0.07 0.07 0.07
OvlAdjV/S: 0.00
Crit Moves: ****

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Health Club within the Shops at Rossmore
Future (2035) Buildout Plus Project
PM Peak Hour

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

Intersection #5 Seal Beach Blvd/Towne Center Dr

Cycle (sec): 100 Critical Vol./Cap.(X): 0.781
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 63 Level Of Service: C

Street Name: Seal Beach Blvd Towne Center Dr
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Include Include
Rights: Include Include Permitted Permitted
Min. Green: 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 222 1623 92 85 1547 102 108 31 203 152 51 65
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: 222 1623 92 85 1547 102 108 31 203 152 51 65
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 1623 92 85 1547 102 108 31 203 152 51 65
Reduct Vol: 0 0 0 0 0 0 0 0
Reduced Vol: 222 1623 92 85 1547 102 108 31 203 152 51 65
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 1623 92 85 1547 102 108 31 203 152 51 65

Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.84 0.16 1.00 2.81 0.19 1.00 0.13 0.87 1.00 0.44 0.56
Final Sat.: 1700 4826 274 1700 4785 315 1700 225 1475 1700 747 953

Capacity Analysis Module:
Vol/Sat: 0.13 0.34 0.34 0.05 0.32 0.32 0.06 0.14 0.14 0.09 0.07 0.07
Crit Moves: ****

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Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
PM Peak Hour

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way

Cycle (sec): 100 Critical Vol./Cap.(X): 0.753
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: C

Street Name: Seal Beach Blvd Rossmoor Center Way
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Include Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 207 1720 26 39 1735 240 225 1 167 16 1 18
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 1720 26 39 1735 240 225 1 167 16 1 18
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 1720 26 39 1735 240 225 1 167 16 1 18
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 207 1720 26 39 1735 240 225 1 167 16 1 18
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
Final Volume: 207 1720 26 39 1735 240 225 1 167 16 1 18
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 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 2.96 0.04 1.00 2.64 0.36 1.00 0.01 0.99 1.00 0.05 0.95
Final Sat.: 1700 5024 76 1700 4480 620 1700 10 1690 1700 89 1611
Capacity Analysis Module:
Vol/Sat: 0.12 0.34 0.02 0.39 0.39 0.13 0.10 0.10 0.01 0.01 0.01
Crit Moves: ****

Future Buildout WP PM Mon Feb 20, 2017 15:29:43 Page 6-1

Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
PM Peak Hour

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

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.736
Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: C

Street Name: Seal Beach Blvd-Los Alamitos Blvd
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Include Permitted Permitted
Rights: Include Include Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1
Volume Module:
Base Vol: 142 1710 62 26 1900 191 186 10 96 53 3 21
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: 142 1710 62 26 1900 191 186 10 96 53 3 21
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: 142 1710 62 26 1900 191 186 10 96 53 3 21
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 142 1710 62 26 1900 191 186 10 96 53 3 21
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
Final Volume: 142 1710 62 26 1900 191 186 10 96 53 3 21
Saturation Flow Module:
Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700
Adjustment: 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 2.90 0.10 1.00 2.73 0.27 1.00 0.09 0.91 0.95 0.05 1.00
Final Sat.: 1700 4922 178 1700 4634 466 1700 160 1540 1609 91 1700
Capacity Analysis Module:
Vol/Sat: 0.08 0.35 0.35 0.02 0.41 0.41 0.11 0.06 0.06 0.03 0.03 0.01
Crit Moves: ****

HCM 2010 TWSC

8: Yellowtail Drive & Saint Cloud Drive

12/5/2016

Intersection									
Int Delay, s/veh		1.2							
Movement									
Traffic Vol, veh/h	488	8	58	500	3	54			
Future Vol, veh/h	488	8	58	500	3	54			
Conflicting Peds, #/hr	0	0	0	0	0	0			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	-	-	0	-			
Veh in Median Storage, #	0	-	-	0	0	-			
Grade, %	0	-	-	0	0	-			
Peak Hour Factor	100	100	100	100	100	100			
Heavy Vehicles, %	2	2	2	2	2	2			
Mvmt Flow	488	8	58	500	3	54			
Major/Minor									
Major1		Major2		Minor1					
Conflicting Flow All	0	0	496	0	858	248			
Stage 1	-	-	-	-	492	-			
Stage 2	-	-	-	-	366	-			
Critical Hdwy	-	-	4.14	-	6.84	6.94			
Critical Hdwy Stg 1	-	-	-	-	5.84	-			
Critical Hdwy Stg 2	-	-	-	-	5.84	-			
Follow-up Hdwy	-	-	2.22	-	3.52	3.32			
Pot Cap-1 Maneuver	-	-	1064	-	296	752			
Stage 1	-	-	-	-	580	-			
Stage 2	-	-	-	-	672	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1064	-	274	752			
Mov Cap-2 Maneuver	-	-	-	-	274	-			
Stage 1	-	-	-	-	580	-			
Stage 2	-	-	-	-	622	-			
Approach									
EB	WB		NB						
HCM Control Delay, s	0	1.2	10.7						
HCM LOS	B								
Minor Lane/Major Mvmt									
NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)	689	-	-	1064					
HCM Lane V/C Ratio	0.083	-	-	0.055					
HCM Control Delay (s)	10.7	-	-	8.6	0.3				
HCM Lane LOS	B	-	-	A	A				
HCM 95th %tile Q(veh)	0.3	-	-	0.2	-				

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection												
Intersection Delay, s/veh			9.3									
Intersection LOS			A									
Movement												
EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBL	
Traffic Vol, veh/h	0	33	5	51	0	3	6	11	0	73	237	
Future Vol, veh/h	0	33	5	51	0	3	6	11	0	73	237	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	33	5	51	0	3	6	11	0	73	237	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	
Approach												
	EB			WB					NB			
Opposing Approach	WB			EB					SB			
Opposing Lanes	1			1					2			
Conflicting Approach Left	SB			NB					EB			
Conflicting Lanes Left	2			2					1			
Conflicting Approach Right	NB			SB					WB			
Conflicting Lanes Right	2			2					1			
HCM Control Delay	8.9			8.4					9.6			
HCM LOS	A			A					A			
Lane												
	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2						
Vol Left, %	38%	0%	37%	15%	6%	0%						
Vol Thru, %	62%	97%	6%	30%	94%	73%						
Vol Right, %	0%	3%	57%	55%	0%	27%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	192	123	89	20	137	177						
LT Vol	73	0	33	3	8	0						
Through Vol	119	119	5	6	129	129						
RT Vol	0	4	51	11	0	48						
Lane Flow Rate	192	122	89	20	137	177						
Geometry Grp	7	7	2	2	7	7						
Degree of Util (X)	0.281	0.173	0.125	0.029	0.195	0.242						
Departure Headway (Hd)	5.287	5.072	5.075	5.162	5.136	4.916						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	678	706	704	690	697	729						
Service Time	3.028	2.813	3.124	3.223	2.877	2.657						
HCM Lane V/C Ratio	0.283	0.173	0.126	0.029	0.197	0.243						
HCM Control Delay	10.1	8.9	8.9	8.4	9.1	9.2						
HCM Lane LOS	B	A	A	A	A	A						
HCM 95th-tile Q	1.2	0.6	0.4	0.1	0.7	0.9						

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	8	258	48	
Future Vol, veh/h	0	8	258	48	
Peak Hour Factor	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	8	258	48	
Number of Lanes	0	0	2	0	
Approach	SB				
Opposing Approach	NB				
Opposing Lanes	2				
Conflicting Approach Left	WB				
Conflicting Lanes Left	1				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	9.2				
HCM LOS	A				
ane					

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmore Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 9.9																
Intersection LOS A																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	46	40	60	0	41	45	80	0	33	144	31	0	50	198	44
Future Vol, veh/h	0	46	40	60	0	41	45	80	0	33	144	31	0	50	198	44
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	46	40	60	0	41	45	80	0	33	144	31	0	50	198	44
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0
Approach	EB		WB		WB		EB		NB		SB		SB		NB	
Opposing Approach	WB		1		1		1		2		2		2		2	
Opposing Lanes	1		1		1		1		2		2		2		2	
Conflicting Approach Left	SB		NB		NB		EB		EB		WB		WB		WB	
Conflicting Lanes Left	2		2		2		1		1		1		1		1	
Conflicting Approach Right	NB		SB		SB		WB		WB		EB		EB		EB	
Conflicting Lanes Right	2		2		2		1		1		1		1		1	
HCM Control Delay	9.8		9.8		9.9		9.6		A		10.1		B		B	
HCM LOS	A		A		A		A		A		A		A		A	
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2					
Vol Left, %	31%		0%		32%		25%		34%		0%					
Vol Thru, %	69%		70%		27%		27%		66%		69%					
Vol Right, %	0%		30%		41%		48%		0%		31%					
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop					
Traffic Vol by Lane	105		103		146		166		149		143					
LT Vol	33		0		46		41		50		0					
Through Vol	72		72		40		45		99		99					
RT Vol	0		31		60		80		0		44					
Lane Flow Rate	105		103		146		166		149		143					
Geometry Grp	7		7		2		2		7							
Degree of Util (X)	0.173		0.159		0.215		0.241		0.242		0.217					
Departure Headway (Hd)	5.933		5.56		5.31		5.221		5.838		5.451					
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes					
Cap	606		646		676		689		617		659					
Service Time	3.66		3.288		3.34		3.25		3.562		3.174					
HCM Lane V/C Ratio	0.173		0.159		0.216		0.241		0.241		0.217					
HCM Control Delay	9.9		9.3		9.8		9.9		10.4		9.7					
HCM Lane LOS	A		A		A		A		B		A					
HCM 95th-ile Q	0.6		0.6		0.8		0.9		0.9		0.8					

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	9.9											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	1	19	2	0	162	27	70	0	5	115	116
Future Vol, veh/h	0	1	19	2	0	162	27	70	0	5	115	116
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	19	2	0	162	27	70	0	5	115	116
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	9.3				10.7				9.4			
HCM LOS	A				B				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	0%	86%	0%	39%	0%	0%	0%
Vol Thru, %	92%	33%	86%	14%	0%	61%	96%	0%	96%	0%
Vol Right, %	0%	67%	9%	0%	100%	0%	4%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	174	22	189	70	114	72			
LT Vol	5	0	1	162	0	45	0			
Through Vol	58	58	19	27	0	69	69			
RT Vol	0	116	2	0	70	0	3			
Lane Flow Rate	62	174	22	189	70	114	72			
Geometry Grp	7	7	6	7	7	7	7			
Degree of Utl (X)	0.097	0.244	0.037	0.316	0.095	0.183	0.111			
Departure Headway (Hd)	5.576	5.063	6.025	6.027	4.891	5.768	5.54			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	638	703	598	592	725	617	642			
Service Time	3.35	2.837	4.025	3.808	2.672	3.548	3.32			
HCM Lane V/C Ratio	0.097	0.248	0.037	0.319	0.097	0.185	0.112			
HCM Control Delay	9	9.5	9.3	11.6	8.2	9.9	9			
HCM Lane LOS	A	A	A	A	B	A	A			
HCM 95th-tile Q	0.3	1	0.1	1.3	0.3	0.7	0.4			

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Intersection Delay, s/veh	9.9											
Intersection LOS	A											

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↔	↔			↔	↔			↔	↔
Traffic Vol, veh/h	0	1	19	2	0	162	27	70	0	5	115	116
Future Vol, veh/h	0	1	19	2	0	162	27	70	0	5	115	116
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	19	2	0	162	27	70	0	5	115	116
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0

Approach	EB	EBL	EBT	EBR	WB	WBL	WBT	WBR	NB	NBL	NBT	NBR
Opposing Approach	WB				EB				SB			
Opposing Lanes	2				1				2			
Conflicting Approach Left	SB				NB				EB			
Conflicting Lanes Left	2				2				1			
Conflicting Approach Right	NB				SB				WB			
Conflicting Lanes Right	2				2				2			
HCM Control Delay	9.3				10.7				9.4			
HCM LOS	A				B				A			

Lane	NBLn1	NBLn2	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	5%	0%	86%	0%	39%	0%	0%	0%
Vol Thru, %	92%	33%	86%	14%	0%	61%	96%	0%	96%	0%
Vol Right, %	0%	67%	9%	0%	100%	0%	4%	0%	4%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	174	22	189	70	114	72			
LT Vol	5	0	1	162	0	45	0			
Through Vol	58	58	19	27	0	69	69			
RT Vol	0	116	2	0	70	0	3			
Lane Flow Rate	62	174	22	189	70	114	72			
Geometry Grp	7	7	6	7	7	7	7			
Degree of Utl (X)	0.097	0.244	0.037	0.316	0.095	0.183	0.111			
Departure Headway (Hd)	5.576	5.063	6.025	6.027	4.891	5.768	5.54			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	638	703	598	592	725	617	642			
Service Time	3.35	2.837	4.025	3.808	2.672	3.548	3.32			
HCM Lane V/C Ratio	0.097	0.248	0.037	0.319	0.097	0.185	0.112			
HCM Control Delay	9	9.5	9.3	11.6	8.2	9.9	9			
HCM Lane LOS	A	A	A	A	B	A	A			
HCM 95th-tile Q	0.3	1	0.1	1.3	0.3	0.7	0.4			

HCM 2010 AWSC

12: West Road & Rossmoor Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh 8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol. veh/h	0	99	26	0	24	149	0	34	12			
Future Vol. veh/h	0	99	26	0	24	149	0	34	12			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	99	26	0	24	149	0	34	12			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EB	WB	EB	WB	WB	EB	NB	NB				
Opposing Approach	WB	EB	WB	EB	EB	WB	EB	0				
Opposing Lanes	1	1	1	1	1	1	0	0				
Conflicting Approach Left	0	0	0	0	0	0	0	0				
Conflicting Lanes Left	0	0	0	0	0	0	0	0				
Conflicting Approach Right	NB	NB	NB	NB	NB	NB	WB	WB				
Conflicting Lanes Right	1	1	1	1	1	1	1	1				
HCM Control Delay	7.8	7.8	7.8	7.8	8.2	8.2	7.9	7.9				
HCM LOS	A	A	A	A	A	A	A	A				
Lane	NBLn1	EBLn1	WBLn1	NBLn1	EBLn1	WBLn1	NBLn1	EBLn1	WBLn1			
Vol Left, %	74%	0%	14%	74%	0%	14%	0%	0%	0%			
Vol Thru, %	0%	79%	86%	0%	79%	86%	0%	0%	0%			
Vol Right, %	26%	21%	0%	26%	21%	0%	0%	0%	0%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	46	125	173	46	125	173	0	0	0			
LT Vol	34	0	24	34	0	24	0	0	0			
Through Vol	0	99	149	0	99	149	0	0	0			
RT Vol	12	26	0	12	26	0	0	0	0			
Lane Flow Rate	46	125	173	46	125	173	0	0	0			
Geometry Grp	1	1	1	1	1	1	1	1	1			
Degree of Util (X)	0.058	0.14	0.199	0.058	0.14	0.199	0.058	0.14	0.199			
Departure Headway (Hd)	4.569	4.021	4.137	4.569	4.021	4.137	4.569	4.021	4.137			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	788	881	860	788	881	860	788	881	860			
Service Time	2.569	2.094	2.196	2.569	2.094	2.196	2.569	2.094	2.196			
HCM Lane V/C Ratio	0.058	0.142	0.201	0.058	0.142	0.201	0.058	0.142	0.201			
HCM Control Delay	7.9	7.8	8.2	7.9	7.8	8.2	7.9	7.8	8.2			
HCM Lane LOS	A	A	A	A	A	A	A	A	A			
HCM 95th-ile Q	0.2	0.5	0.7	0.2	0.5	0.7	0.2	0.5	0.7			

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh17.3												
Intersection LOS C												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBT	NBR	SBT
Traffic Vol. veh/h	0	24	128	30	0	200	180	92	0	47	48	195
Future Vol. veh/h	0	24	128	30	0	200	180	92	0	47	48	195
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	24	128	30	0	200	180	92	0	47	48	195
Number of Lanes	0	0	2	0	0	0	1	0	0	1	0	0
Approach												
Approach	EB	WB	EB	WB	EB	WB	NB	NB	SB	SB	SB	SB
Opposing Approach	WB	EB	WB	EB	WB	EB	WB	EB	WB	WB	WB	WB
Opposing Lanes	1	1	1	1	1	1	1	1	1	1	1	1
Conflicting Approach Left	SB	SB	SB	SB	SB	SB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Left	1	1	1	1	1	1	2	2	2	2	2	2
Conflicting Approach Right	NB	NB	NB	NB	NB	NB	WB	WB	WB	WB	WB	WB
Conflicting Lanes Right	1	1	1	1	1	1	1	1	1	1	1	1
HCM Control Delay	10.7	10.7	10.7	10.7	10.7	10.7	13.8	13.8	13.8	13.8	13.8	13.8
HCM LOS	B	B	B	B	B	B	B	B	B	B	B	B
Lane												
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	16%	27%	0%	42%	54%	54%	17%	73%	68%	38%	24%	24%
Vol Thru, %	67%	0%	32%	19%	22%	22%	67%	0%	32%	19%	22%	22%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	290	88	94	472	152	152	290	88	94	472	152	152
LT Vol	47	24	0	200	82	82	47	24	0	200	82	82
Through Vol	0	48	64	64	180	37	0	48	64	64	180	37
RT Vol	195	0	30	92	33	33	195	0	30	92	33	33
Lane Flow Rate	290	88	94	472	152	152	290	88	94	472	152	152
Geometry Grp	2	7	7	5	2	2	2	7	7	5	2	2
Degree of Util (X)	0.464	0.167	0.169	0.744	0.275	0.275	0.464	0.167	0.169	0.744	0.275	0.275
Departure Headway (Hd)	5.864	6.852	6.485	5.672	6.502	6.502	5.864	6.852	6.485	5.672	6.502	6.502
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	618	525	556	632	555	555	618	525	556	632	555	555
Service Time	3.864	4.564	4.196	3.765	4.509	4.509	3.864	4.564	4.196	3.765	4.509	4.509
HCM Lane V/C Ratio	0.469	0.168	0.169	0.747	0.274	0.274	0.469	0.168	0.169	0.747	0.274	0.274
HCM Control Delay	13.8	10.9	10.5	23.6	12	12	13.8	10.9	10.5	23.6	12	12
HCM Lane LOS	B	B	B	C	B	B	B	B	B	C	B	B
HCM 95th-ile Q	2.5	0.6	0.6	6.6	1.1	1.1	2.5	0.6	0.6	6.6	1.1	1.1

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection												
Intersection Delay, s/veh11.4												
Intersection LOS B												
Movement	WBU	WBL	WBR	NBU	NBL	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	91	320	0	47	70	0	253	59			
Future Vol, veh/h	0	91	320	0	47	70	0	253	59			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	91	320	0	47	70	0	253	59			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	11.2				9.1				12.6			
HCMLOS	B				A				B			
Lane	NBLn1WBLn1WBLn2				SBLn1							
Vol Left, %	0%				100%				81%			
Vol Thru, %	40%				0%				19%			
Vol Right, %	60%				100%				0%			
Sign Control	Stop				Stop				Stop			
Traffic Vol by Lane	117				91				320			
LT Vol	0				91				0			
Through Vol	47				0				59			
RT Vol	70				0				320			
Lane Flow Rate	117				91				320			
Geometry Grp	2				7				2			
Degree of Util (X)	0.162				0.155				0.436			
Departure Headway (Hd)	4.974				6.113				4.902			
Convergence, Y/N	Yes				Yes				Yes			
Cap	711				582				726			
Service Time	3.073				3.894				2.683			
HCM Lane V/C Ratio	0.165				0.156				0.441			
HCM Control Delay	9.1				10				11.5			
HCM Lane LOS	A				A				B			
HCM 95th-tile Q	0.6				0.5				2.2			

HCM 2010 TWSC

15: Project Driveway & Rossmore Center Way

12/5/2016

Intersection													
Int Delay, s/veh 3													
Movement	EBT	EBR	WBL	WBT	NBL	NBR							
Traffic Vol, veh/h	96	1	86	181	4	71							
Future Vol, veh/h	96	1	86	181	4	71							
Conflicting Peds, #/hr	0	0	0	0	0	0							
Sign Control	Free	Free	Free	Free	Stop	Stop							
RT Channelized	-	None	-	None	-	None							
Storage Length	-	-	-	-	0	-							
Veh in Median Storage, #	0	-	-	0	0	-							
Grade, %	0	-	-	0	0	-							
Peak Hour Factor	100	100	100	100	100	100							
Heavy Vehicles, %	2	2	2	2	2	2							
Mvmt Flow	96	1	86	181	4	71							
Major/Minor	Major1				Major2				Minor1				
Conflicting Flow All	0	0	97	0	450	97							
Stage 1	-	-	-	-	97	-							
Stage 2	-	-	-	-	353	-							
Critical Hdwy	-	-	4.12	-	6.42	6.22							
Critical Hdwy Stg 1	-	-	-	-	5.42	-							
Critical Hdwy Stg 2	-	-	-	-	5.42	-							
Follow-up Hdwy	-	-	2.218	-	3.518	3.318							
Pot Cap-1 Maneuver	-	-	1496	-	567	959							
Stage 1	-	-	-	-	927	-							
Stage 2	-	-	-	-	711	-							
Platoon blocked, %	-	-	-	-	-	-							
Mov Cap-1 Maneuver	-	-	1496	-	531	959							
Mov Cap-2 Maneuver	-	-	-	-	531	-							
Stage 1	-	-	-	-	927	-							
Stage 2	-	-	-	-	665	-							
Approach	EB		WB		NB								
HCM Control Delay, s	0		2.4		9.3								
HCM LOS					A								
Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT									
Capacity (veh/h)	919	-	-	1496	-								
HCM Lane V/C Ratio	0.082	-	-	0.057	-								
HCM Control Delay (s)	9.3	-	-	7.6	0								
HCM Lane LOS	A	-	-	A	A								
HCM 95th %ile Q(veh)	0.3	-	-	0.2	-								

HCM 2010 Signalized Intersection Summary
1: Seal Beach Boulevard & I-405 SB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	161	28	18	596	41	550	10	1211	298	472	1225	143
Future Volume (veh/h)	161	28	18	596	41	550	10	1211	298	472	1225	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	161	28	18	625	0	0	10	1211	298	472	1225	143
Adj No. of Lanes	0	2	0	2	0	1	1	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	118	70	45	694	0	310	21	1330	414	489	2753	857
Arrive On Green	0.07	0.07	0.07	0.20	0.00	0.00	0.01	0.26	0.26	0.37	0.72	0.72
Sat Flow, veh/h	1774	1061	682	3548	0	1583	1774	5085	1583	1774	5085	1583
Grp Volume(v), veh/hln	161	0	46	625	0	0	10	1211	298	472	1225	143
Grp Sat Flow(s), veh/hln	1774	0	1742	1774	0	1583	1774	1695	1583	1774	1695	1583
Q Serve(g, s), s	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.4	18.8	28.7	10.9	3.2
Cycle Q Clear(g, c), s	7.3	0.0	2.8	18.9	0.0	0.0	0.6	25.4	18.8	28.7	10.9	3.2
Prop In Lane	1.00	0.00	0.39	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	118	0	116	694	0	310	21	1330	414	489	2753	857
V/C Ratio(X)	1.37	0.00	0.40	0.90	0.00	0.00	0.47	0.91	0.72	0.97	0.44	0.17
Avail Cap(c, a), veh/h	118	0	116	748	0	334	81	1350	420	489	2753	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.4	0.0	49.2	43.2	0.0	0.0	54.0	39.4	37.0	34.3	8.6	7.5
Incr Delay (d2), s/veh	210.2	0.0	2.2	13.4	0.0	0.0	15.3	10.9	10.3	29.3	0.5	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	10.4	0.0	1.4	10.6	0.0	0.0	0.4	13.2	9.4	17.9	5.0	1.4
LnGrp Delay(d), s/veh	261.5	0.0	51.4	56.5	0.0	0.0	69.3	50.3	47.3	63.6	9.0	7.9
LnGrp LOS	F	D	E	E	E	E	E	D	D	E	A	A
Approach Vol, veh/h	207			625			1519			1840		
Approach Delay, s/veh	214.8			56.5			49.8			22.9		
Approach LOS	F			E			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	36.1	34.6		12.0	5.3	65.4		27.3				
Change Period (Y+Rc), s	5.8	* 5.8		* 4.7	4.0	5.8		5.8				
Max Green Setting (Gmax), s	30.0	* 29		* 7.3	5.0	54.2		23.2				
Max Q Clear Time (g_c+I), s	30.7	27.4		9.3	2.6	12.9		20.9				
Green Ext Time (p_c), s	0.0	1.4		0.0	0.0	13.9		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay	47.2											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary
2: Seal Beach Boulevard & I-405 NB Ramps

12/5/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Volume (veh/h)	10	9	8	389	5	640	16	1501	413	293	1448	266
Future Volume (veh/h)	10	9	8	389	5	640	16	1501	413	293	1448	266
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	9	8	389	0	643	16	1501	0	293	1448	266
Adj No. of Lanes	1	1	1	2	0	2	2	3	1	1	3	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	45	48	40	868	0	775	647	2079	647	242	1733	540
Arrive On Green	0.03	0.03	0.03	0.24	0.00	0.24	0.38	0.82	0.00	0.14	0.34	0.34
Sat Flow, veh/h	1774	1863	1583	3548	0	3167	3442	5085	1583	1774	5085	1583
Grp Volume(v), veh/hln	10	9	8	389	0	643	16	1501	0	293	1448	266
Grp Sat Flow(s), veh/hln	1863	1863	1774	0	1583	1721	1695	1583	1774	1695	1583	1583
Q Serve(g, s), s	0.6	0.5	0.5	10.2	0.0	21.2	0.3	14.5	0.0	15.0	28.9	14.6
Cycle Q Clear(g, c), s	0.6	0.5	0.5	10.2	0.0	21.2	0.3	14.5	0.0	15.0	28.9	14.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	45	48	40	868	0	775	647	2079	647	242	1733	540
V/C Ratio(X)	0.22	0.19	0.20	0.45	0.00	0.83	0.02	0.72	0.00	1.21	0.84	0.49
Avail Cap(c, a), veh/h	81	85	72	1258	0	1123	647	2079	647	242	1882	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.63	0.63	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	52.5	52.5	35.2	0.0	39.4	28.0	7.2	0.0	47.5	33.4	28.7
Incr Delay (d2), s/veh	2.4	1.9	2.4	0.4	0.0	3.6	0.0	1.4	0.0	127.0	4.9	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.0	0.3	0.3	5.1	0.0	9.6	0.2	6.6	0.0	15.9	14.3	6.9
LnGrp Delay(d), s/veh	54.9	54.4	54.8	35.6	0.0	42.9	28.0	8.6	0.0	174.5	38.3	31.9
LnGrp LOS	D	D	D	D	D	D	C	A	F	D	C	C
Approach Vol, veh/h	27			1032			1517			2007		
Approach Delay, s/veh	54.7			40.2			8.9			57.4		
Approach LOS	D			D			A			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	50.8	50.8		7.5	26.5	43.3		32.7				
Change Period (Y+Rc), s	4.0	5.8		* 4.7	5.8	* 5.8		5.8				
Max Green Setting (Gmax), s	30.7	30.7		* 5	5.0	* 41		39.0				
Max Q Clear Time (g_c+I), s	30.7	30.7		2.6	2.3	30.9		23.2				
Green Ext Time (p_c), s	0.0	8.3		0.0	2.1	6.6		3.8				
Intersection Summary												
HCM 2010 Ctrl Delay	37.4											
HCM 2010 LOS	D											
Notes												

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

Intersection #3 Seal Beach Blvd/Lampson Ave											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.806		*****					
Loss time (sec):	10	Average Delay (sec/veh):		xxxxxx		*****					
Optimal Cycle:	68	Level Of Service:		D		*****					

Street Name:	Seal Beach Blvd	North Bound	South Bound	East Bound	West Bound						
Approach:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R						
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R						
Control:	Protected	Protected	Protected	Protected	Permitted						
Rights:	Ovl	Include	Include	Include	Ovl						
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0						
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0						
Lanes:	0 0 3 0 1	2 0 3 0 0	0 0 0 0 0	0 0 0 0 0	2 0 0 0 1						

Volume Module:											
Base Vol:	0 1724	394	564 1626	0 0 0	0 394 0 625						
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00						
Initial Base:	0 1724	394	564 1626	0 0 0	0 394 0 625						
User Adj:	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						
PHF Volume:	0 1724	394	564 1626	0 0 0	0 394 0 625						
Reduc Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0						
Reduced Vol:	0 1724	394	564 1626	0 0 0	0 394 0 625						
PCE Adj:	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						
FinalVolume:	0 1724	394	564 1626	0 0 0	0 394 0 625						
OvAdjVol:											

Saturation Flow Module:											
Sat/Lane:	1700 1700	1700	1700 1700	1700 1700	1700 1700 1700						
Adjustment:	1.00 1.00	1.00	1.00 1.00	1.00 1.00	1.00 1.00 1.00						
Lanes:	0.00 3.00	1.00	2.00 3.00	0.00 0.00	0.00 2.00 0.00 1.00						
Final Sat.:	0 5100	1700	3400 5100	0 0 0	0 3400 0 1700						

Capacity Analysis Module:											
Vol/Sat:	0.00 0.34	0.23	0.17 0.32	0.00 0.00	0.00 0.12 0.00 0.37						
OvAdjV/S:											
Crit Moves:	****	****	****	****	****						

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

Intersection #4 Seal Beach Blvd/St. Cloud Dr											

Cycle (sec):	100	Critical Vol./Cap.(X):		0.675		*****					
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx		*****					
Optimal Cycle:	47	Level Of Service:		B		*****					

Street Name:	Seal Beach Blvd	North Bound	South Bound	East Bound	West Bound						
Approach:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R						
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R						
Control:	Protected	Protected	Protected	Split Phase	Split Phase						
Rights:	Include	Include	Include	Ovl	Include						
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0						
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0						
Lanes:	2 0 2 1 0	1 0 2 1 0	0 1 0 0 2	1 0 0 2	1 0 1 0 0						

Volume Module:											
Base Vol:	398 1796	188	19 1538	79	120 2 439 191 38 5						
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 Base:	398 1796	188	19 1538	79	120 2 439 191 38 5						
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:	398 1796	188	19 1538	79	120 2 439 191 38 5						
Reduct Vol:	0 0	0 0	0 0 0	0 0 0	0 0 0						
Reduced Vol:	398 1796	188	19 1538	79	120 2 439 191 38 5						
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:	398 1796	188	19 1538	79	120 2 439 191 38 5						
OvAdjVol:					41						

Saturation Flow Module:											
Sat/Lane:	1700 1700	1700	1700 1700	1700 1700	1700 1700 1700 1700						
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:	2.00 2.72	0.28	1.00 2.85	0.15 0.98	0.02 2.00 1.64 0.32 0.04						
Final Sat.:	3400 4617	483	1700 4851	249	1672 28 3400 2775 552 73						

Capacity Analysis Module:											
Vol/Sat:	0.12 0.39	0.39	0.01 0.32	0.32	0.07 0.07 0.13 0.07 0.07 0.07						
OvAdjV/S:					0.01						
Crit Moves:	****	****	****	****	****	*****					

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

Intersection #5 Seal Beach Blvd/Towne Center Dr																	

Cycle (sec):	100	Critical Vol./Cap.(X):		0.875													
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx													
Optimal Cycle:	89	Level Of Service:		D													

Street Name:	Seal Beach Blvd	Towne Center Dr															
Approach:	North Bound	South Bound	East Bound	West Bound													
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L							T	R	L	T	R	
Control:	Protected	Protected	Protected	Protected	Permitted	Permitted											
Rights:	Include	Include	Include	Include	Include	Include											
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0											
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0											
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0											

Volume Module:																	
Base Vol:	316 1403	118	101 1200	164	128	91	266	189	97	96							
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 1.00	1.00							
Initial Bse:	316 1403	118	101 1200	164	128	91	266	189	97	96							
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 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 1.00	1.00							
PHF Volume:	316 1403	118	101 1200	164	128	91	266	189	97	96							
Reduct Vol:	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0							
Reduced Vol:	316 1403	118	101 1200	164	128	91	266	189	97	96							
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 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 1.00	1.00							
FinalVolume:	316 1403	118	101 1200	164	128	91	266	189	97	96							

Saturation Flow Module:																	
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700							
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 1.00	1.00							
Lanes:	1.00 2.77	0.23	1.00 2.64	0.36	1.00 0.25	0.75	1.00 0.50	0.50	1.00 0.50	0.50							
Final Sat.:	1700 4704	396	1700 4487	613	1700 433	1267	1700 854	846	1700 854	846							

Capacity Analysis Module:																	
Vol/Sat:	0.19 0.30	0.30	0.06 0.27	0.27	0.08 0.21	0.21	0.11 0.11	0.11	0.11 0.11	0.11							
Crit Moves:	****	****	****	****	****	****	****	****	****	****							

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

Intersection #6 Seal Beach Blvd/Rossmoor Center Way																	

Cycle (sec):	100	Critical Vol./Cap.(X):		0.744													
Loss Time (sec):	10	Average Delay (sec/veh):		xxxxxx													
Optimal Cycle:	56	Level Of Service:		C													

Street Name:	Seal Beach Blvd	Rossmoor Center Way															
Approach:	North Bound	South Bound	East Bound	West Bound													
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R							L - T - R					
Control:	Protected	Protected	Protected	Protected	Permitted	Permitted											
Rights:	Include	Include	Include	Include	Include	Include											
Min. Green:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0											
Y+R:	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0	4.0 4.0 4.0											
Lanes:	1 0 2 1 0	1 0 2 1 0	1 0 2 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0											

Volume Module:																	
Base Vol:	243 1585	16	27 1540	271	231	4	190	21	2	15							
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 1.00	1.00							
Initial Bse:	243 1585	16	27 1540	271	231	4	190	21	2	15							
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 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 1.00	1.00							
PHF Volume:	243 1585	16	27 1540	271	231	4	190	21	2	15							
Reduct Vol:	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0							
Reduced Vol:	243 1585	16	27 1540	271	231	4	190	21	2	15							
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 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 1.00	1.00							
Final Volume:	243 1585	16	27 1540	271	231	4	190	21	2	15							

Saturation Flow Module:																	
Sat/Lane:	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700	1700 1700	1700							
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 1.00	1.00							
Lanes:	1.00 2.97	0.03	1.00 2.55	0.45	1.00 0.02	0.98	1.00 0.12	0.88	1.00 0.12	0.88							
Final Sat.:	1700 5049	51	1700 4337	763	1700 35	1665	1700 200	1500	1700 200	1500							

Capacity Analysis Module:																	
Vol/Sat:	0.14 0.31	0.31	0.02 0.36	0.36	0.14 0.11	0.11	0.01 0.01	0.01	0.01 0.01	0.01							
Crit Waves:	****	****	****	****	****	****	****	****	****	****							

Future Buildout WP SaturdayMon Feb 20, 2017 15:30:02 Page 6-1

Health Club within the Shops at Rossmoor
Future (2035) Buildout Plus Project
Saturday Peak Hour

Level Of Service Computation Report

ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #7 Seal Beach Blvd-Los Alamitos Blvd/Bradbury Rd

Cycle (sec): 100 Critical Vol./Cap.(X): 0.684

Loss Time (sec): 10 Average Delay (sec/veh): xxxxxx

Optimal Cycle: 48 Level Of Service: B

Street Name:Seal Beach Blvd-Los Alamitos Blvd Bradbury Rd

Approach: North Bound South Bound East Bound West Bound

Movement: L - I - R L - I - R L - I - R L - I - R

Control: Protected Protected Protected Permitted Permitted Permitted

Rights: Include Include Include Include Include Include

Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0

Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0

Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 0 1 0 1 0 1

Volume Module:

Base Vol: 122 1570 48 24 1667 136 192 9 105 69 8 22

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: 122 1570 48 24 1667 136 192 9 105 69 8 22

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: 122 1570 48 24 1667 136 192 9 105 69 8 22

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 122 1570 48 24 1667 136 192 9 105 69 8 22

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: 122 1570 48 24 1667 136 192 9 105 69 8 22

Saturation Flow Module:

Sat/Lane: 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700 1700

Adjusment: 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 2.91 0.09 1.00 2.77 0.23 1.00 0.08 0.92 0.90 0.10 1.00

Final Sat.: 1700 4949 151 1700 4715 385 1700 134 1566 1523 177 1700

Capacity Analysis Module:

Vol/Sat: 0.07 0.32 0.32 0.01 0.35 0.35 0.11 0.07 0.07 0.04 0.05 0.01

Crit Moves: ****

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HCM 2010 TWSC 8: Yellowtail Drive & Saint Cloud Drive

Intersection	1									
Int Delay, s/veh										
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Traffic Vol, veh/h	502	1	47	462	4	48				
Future Vol, veh/h	502	1	47	462	4	48				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	- None	- None	- None	- None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	100	100	100	100	100	100				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	502	1	47	462	4	48				
Major/Minor	Major1		Major2		Minor1					
Conflicting Flow All	0		0		828					
Stage 1	-		-		503					
Stage 2	-		-		325					
Critical Hwy	-		4.14		6.84					
Critical Hwy Stg 1	-		-		5.84					
Critical Hwy Stg 2	-		-		5.84					
Follow-up Hwy	-		2.22		3.52					
Pot Cap-1 Maneuver	-		1058		309					
Stage 1	-		-		573					
Stage 2	-		-		705					
Platoon blocked, %	-		-		-					
Mov Cap-1 Maneuver	-		1058		290					
Mov Cap-2 Maneuver	-		-		573					
Stage 1	-		-		663					
Stage 2	-		-		-					
Approach	EB		WB		NB					
HCM Control Delay, s	0		1		10.9					
HCM LOS					B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT					
Capacity (veh/h)	667	-	-	1058	-					
HCM Lane V/C Ratio	0.078	-	-	0.044	-					
HCM Control Delay (s)	10.9	-	-	8.6	0.2					
HCM Lane LOS	B	-	-	A	A					
HCM 95th %ile Q(veh)	0.3	-	-	0.1	-					

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection														
Intersection Delay, s/veh													8.8	
Intersection LOS													A	
Movement														
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR		
Traffic Vol, veh/h	0	38	5	41	0	4	6	5	0	41	196	8		
Future Vol, veh/h	0	38	5	41	0	4	6	5	0	41	196	8		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2		
Mvmt Flow	0	38	5	41	0	4	6	5	0	41	196	8		
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0		
Approach														
	EB			WB			WB			NB				
Opposing Approach	WB			EB			EB			SB				
Opposing Lanes	1			1			1			2				
Conflicting Approach Left	SB			NB			NB			EB				
Conflicting Lanes Left	2			2			2			1				
Conflicting Approach Right	NB			SB			SB			WB				
Conflicting Lanes Right	2			2			2			1				
HCM Control Delay	8.6			8.3			8.3			8.9				
HCM LOS	A			A			A			A				
Lane														
	NBLn1	NBLn2	NBLn1	EBLn1	WBLn1	SBLn1	SBLn2							
Vol Left, %	29%	0%	45%	27%	6%	0%								
Vol Thru, %	71%	92%	6%	40%	94%	85%								
Vol Right, %	0%	8%	49%	33%	0%	15%								
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	139	106	84	15	138	153								
LT Vol	41	0	38	4	8	0								
Through Vol	98	98	5	6	130	130								
RT Vol	0	8	41	5	0	23								
Lane Flow Rate	139	106	84	15	138	152								
Geometry Grp	7	7	2	2	7	7								
Degree of Util (X)	0.2	0.147	0.115	0.021	0.192	0.208								
Departure Headway (Hd)	5.19	4.988	4.947	5.111	5.035	4.899								
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes								
Cap	692	719	724	698	714	734								
Service Time	2.919	2.717	2.982	3.156	2.762	2.626								
HCM Lane V/C Ratio	0.201	0.147	0.116	0.021	0.193	0.207								
HCM Control Delay	9.2	8.6	8.6	8.3	9	8.9								
HCM Lane LOS	A	A	A	A	A	A								
HCM 95th-tile Q	0.7	0.5	0.4	0.1	0.7	0.8								

HCM 2010 AWSC

9: Montecito Road & Copa De Oro Drive/Project Driveway

12/5/2016

Intersection				
Intersection Delay, s/veh				
Intersection LOS				
Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	8	259	23
Future Vol, veh/h	0	8	259	23
Peak Hour Factor	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	259	23
Number of Lanes	0	0	2	0
Approach	SB			
Opposing Approach	NB			
Opposing Lanes	2			
Conflicting Approach Left	WB			
Conflicting Lanes Left	1			
Conflicting Approach Right	EB			
Conflicting Lanes Right	1			
HCM Control Delay	8.9			
HCM LOS	A			
Lane				

HCM 2010 AWSC

10: Montecito Road & Mainway Drive/Rossmoor Center Way

12/5/2016

Intersection																	
Intersection Delay, s/veh		9.7															
Intersection LOS		A															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Traffic Vol, veh/h	0	46	47	69	0	22	58	49	0	51	142	34	0	50	176	36	
Future Vol, veh/h	0	46	47	69	0	22	58	49	0	51	142	34	0	50	176	36	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	46	47	69	0	22	58	49	0	51	142	34	0	50	176	36	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	
Approach	EB		WB		NB		SB										
Opposing Approach	WB		EB		SB		NB										
Opposing Lanes	1		1		2		2										
Conflicting Approach Left	SB		NB		EB		WB										
Conflicting Lanes Left	2		2		1		1										
Conflicting Approach Right	NB		SB		WB		EB										
Conflicting Lanes Right	2		2		1		1										
HCM Control Delay	9.8		9.5		9.6		9.8										
HCM LOS	A		A		A		A										
Lane	NBLn1		NBLn2		EBLn1		WBLn1		SBLn1		SBLn2						
Vol Left, %	42%		0%		28%		17%		36%		0%						
Vol Thru, %	58%		68%		29%		45%		64%		71%						
Vol Right, %	0%		32%		43%		38%		0%		29%						
Sign Control	Stop		Stop		Stop		Stop		Stop		Stop						
Traffic Vol by Lane	122		105		162		129		138		124						
LT Vol	51		0		46		22		50		0						
Through Vol	71		71		47		58		88		88						
RT Vol	0		34		69		49		0		36						
Lane Flow Rate	122		105		162		129		138		124						
Geometry Grp	7		7		2		2		7		7						
Degree of Util (X)	0.199		0.159		0.23		0.185		0.223		0.187						
Departure Headway (Hd)	5.878		5.438		5.222		5.284		5.808		5.419						
Convergence, Y/N	Yes		Yes		Yes		Yes		Yes		Yes						
Cap	614		663		692		684		621		666						
Service Time	3.585		3.144		3.222		3.284		3.513		3.124						
HCM Lane V/C Ratio	0.199		0.158		0.234		0.189		0.222		0.186						
HCM Control Delay	10		9.2		9.8		9.5		10.2		9.4						
HCM Lane LOS	A		A		A		A		B		A						
HCM 95th-tile Q	0.7		0.6		0.9		0.7		0.8		0.7						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection													
Intersection Delay, s/veh		9.1											
Intersection LOS		A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	
Lane Configurations													
Traffic Vol, veh/h	0	1	16	4	0	126	22	76	0	3	80	103	
Future Vol, veh/h	0	1	16	4	0	126	22	76	0	3	80	103	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	1	16	4	0	126	22	76	0	3	80	103	
Number of Lanes	0	0	1	0	0	0	1	1	0	0	2	0	
Approach													
Opposing Approach	WB		EB		WB		NB		SB				
Opposing Lanes	2		1		1		2		2				
Conflicting Approach Left	SB		NB		NB		EB		EB				
Conflicting Lanes Left	2		2		2		1		1				
Conflicting Approach Right	NB		SB		SB		WB		WB				
Conflicting Lanes Right	2		2		2		2		2				
HCM Control Delay	8.8		9.5		9.5		8.7		8.7				
HCM LOS	A		A		A		A		A				
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2						
Vol Left, %	7%	0%	5%	85%	0%	44%	0%						
Vol Thru, %	93%	28%	76%	15%	0%	56%	96%						
Vol Right, %	0%	72%	19%	0%	100%	0%	4%						
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop						
Traffic Vol by Lane	43	143	21	148	76	89	52						
LT Vol	3	0	1	126	0	39	0						
Through Vol	40	40	16	22	0	50	50						
RT Vol	0	103	4	0	76	0	2						
Lane Flow Rate	43	143	21	148	76	88	52						
Geometry Grp	7	7	6	7	7	7	7						
Degree of Util (X)	0.064	0.192	0.032	0.238	0.098	0.137	0.076						
Departure Headway (Hd)	5.376	4.833	5.532	5.783	4.652	5.593	5.943						
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes						
Cap	665	739	644	620	768	639	668						
Service Time	3.122	2.579	3.596	3.529	2.398	3.342	3.093						
HCM Lane V/C Ratio	0.065	0.194	0.033	0.239	0.099	0.138	0.078						
HCM Control Delay	8.5	8.7	8.8	10.3	7.9	9.2	8.5						
HCM Lane LOS	A	A	A	B	A	A	A						
HCM 95th-tile Q	0.2	0.7	0.1	0.9	0.3	0.5	0.2						

HCM 2010 AWSC

11: Montecito Road & Bradbury Road

02/22/2017

Intersection					
Intersection Delay, s/veh					
Intersection LOS					
Movement	SBU	SBL	SBT	SBR	
Lane Configurations					
Traffic Vol, veh/h	0	39	99	2	
Future Vol, veh/h	0	39	99	2	
Peak Hour Factor	1.00	1.00	1.00	1.00	
Heavy Vehicles, %	2	2	2	2	
Mvmt Flow	0	39	99	2	
Number of Lanes	0	0	2	0	
Approach	SB				
Opposing Approach	NB				
Opposing Lanes	2				
Conflicting Approach Left	WB				
Conflicting Lanes Left	2				
Conflicting Approach Right	EB				
Conflicting Lanes Right	1				
HCM Control Delay	8.9				
HCM LOS	A				

HCM 2010 AWSC

12: West Road & Rossmore Center Way

12/5/2016

Intersection												
Intersection Delay, s/veh 7.8												
Intersection LOS A												
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR			
Traffic Vol, veh/h	0	90	23	0	11	129	0	34	19			
Future Vol, veh/h	0	90	23	0	11	129	0	34	19			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	90	23	0	11	129	0	34	19			
Number of Lanes	0	1	0	0	0	1	0	1	0			
Approach	EB						WB					
Opposing Approach	WB						EB					
Opposing Lanes	1						1					
Conflicting Approach Left							NB					
Conflicting Lanes Left	0						1					
Conflicting Approach Right	NB						WB					
Conflicting Lanes Right	1						0					
HCM Control Delay	7.7						8					
HCM LOS	A						A					
Lane	NBLnt EBLntWBLnt											
Vol Left, %	64%				0%				8%			
Vol Thru, %	0%				80%				92%			
Vol Right, %	36%				20%				0%			
Sign Control	Stop				Stop				Stop			
Traffic Vol by Lane	53				113				140			
LT Vol	34				0				11			
Through Vol	0				90				129			
RT Vol	19				23				0			
Lane Flow Rate	53				113				140			
Geometry Grp	1				1				1			
Degree of Util (X)	0.065				0.126				0.161			
Departure Headway (Hd)	4.394				4.01				4.128			
Convergence, Y/N	Yes				Yes				Yes			
Cap	820				885				862			
Service Time	2.394				2.078				2.186			
HCM Lane V/C Ratio	0.065				0.128				0.162			
HCM Control Delay	7.7				7.7				8			
HCM Lane LOS	A				A				A			
HCM 95th-tile Q	0.2				0.4				0.6			

HCM 2010 AWSC

13: Internal Driveway & Rossmoor Center Way

12/5/2016

Intersection																
Intersection Delay, s/veh 25																
Intersection LOS C																
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol. veh/h	0	23	160	39	0	234	143	116	0	47	70	235	0	105	66	26
Future Vol. veh/h	0	23	160	39	0	234	143	116	0	47	70	235	0	105	66	26
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	160	39	0	234	143	116	0	47	70	235	0	105	66	26
Number of Lanes	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	1
Approach	EB				WB				NB				SB			
Opposing Approach	WB				EB				SB				NB			
Opposing Lanes	1				2				1				1			
Conflicting Approach Left	SB				NB				EB				WB			
Conflicting Lanes Left	1				1				2				1			
Conflicting Approach Right	NB				SB				WB				EB			
Conflicting Lanes Right	1				1				1				2			
HCM Control Delay	12.3				38.6				19.7				15			
HCM LOS	B				E				C				B			
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1											
Vol Left, %	13%	22%	0%	47%	53%											
Vol Thru, %	20%	78%	67%	29%	34%											
Vol Right, %	67%	0%	33%	24%	13%											
Sign Control	Stop	Stop	Stop	Stop	Stop											
Traffic Vol by Lane	352	103	119	493	197											
LT Vol	47	23	0	234	105											
Through Vol	70	80	80	143	66											
RT Vol	235	0	39	116	26											
Lane Flow Rate	352	103	119	493	197											
Geometry Grp	2	7	7	5	2											
Degree of Util (X)	0.625	0.216	0.238	0.872	0.394											
Departure Headway (Hd)	6.397	7.551	7.201	6.365	7.196											
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes											
Cap	560	473	495	567	496											
Service Time	4.479	5.347	4.996	4.439	5.293											
HCM Lane V/C Ratio	0.629	0.218	0.24	0.869	0.397											
HCM Control Delay	19.7	12.4	12.3	38.6	15											
HCM Lane LOS	C	B	B	E	B											
HCM 95th-ile Q	4.3	0.8	0.9	9.8	1.9											

HCM 2010 AWSC

14: Restaurant Driveway & Towne Center Drive

12/5/2016

Intersection												
Intersection Delay, s/veh17.9												
Intersection LOS C												
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT			
Traffic Vol, veh/h	0	140	431	0	76	108	0	371	57			
Future Vol, veh/h	0	140	431	0	76	108	0	371	57			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2			
Mvmt Flow	0	140	431	0	76	108	0	371	57			
Number of Lanes	0	1	1	0	1	0	0	0	1			
Approach	WB				NB				SB			
Opposing Approach					SB				NB			
Opposing Lanes	0				1				1			
Conflicting Approach Left	NB								WB			
Conflicting Lanes Left	1				0				2			
Conflicting Approach Right	SB				WB							
Conflicting Lanes Right	1				2				0			
HCM Control Delay	17.3				11.3				21.5			
HCM LOS	C				B				C			
Lane	NBLn1WBLn1WBLn2SBLn1											
Vol Left, %	0%			100%			0%			87%		
Vol Thru, %	41%			0%			0%			13%		
Vol Right, %	59%			0%			100%			0%		
Sign Control	Stop			Stop			Stop			Stop		
Traffic Vol by Lane	184			140			431			428		
LT Vol	0			140			0			371		
Through Vol	76			0			0			57		
RT Vol	108			0			431			0		
Lane Flow Rate	184			140			431			428		
Geometry Grp	2			7			7			2		
Degree of Util (X)	0.297			0.265			0.669			0.699		
Departure Headway (Hd)	5.808			6.805			5.587			5.883		
Convergence, Y/N	Yes			Yes			Yes			Yes		
Cap	616			528			647			612		
Service Time	3.87			4.555			3.336			3.934		
HCM Lane V/C Ratio	0.289			0.265			0.666			0.699		
HCM Control Delay	11.3			12			19			21.5		
HCM Lane LOS	B			B			C			C		
HCM 95th-Pile Q	1.2			1.1			5.1			5.6		

Intersection										
Int Delay, s/veh		3.7								
Movement										
Traffic Vol, veh/h	EBT	EBR	WBL	WBT	NBL	NBR				
	108	0	89	135	5	93				
Future Vol, veh/h	108	0	89	135	5	93				
Conflicting Peds, #/hr	0	0	0	0	0	0				
Sign Control	Free	Free	Free	Free	Stop	Stop				
RT Channelized	-	None	-	None	-	None				
Storage Length	-	-	-	-	0	-				
Veh in Median Storage, #	0	-	-	0	0	-				
Grade, %	0	-	-	0	0	-				
Peak Hour Factor	100	100	100	100	100	100				
Heavy Vehicles, %	2	2	2	2	2	2				
Mvmt Flow	108	0	89	135	5	93				
Major/Minor										
Major1		Major2				Minor1				
Conflicting Flow All		0	0	108	0	421	108			
Stage 1		-	-	-	-	108	-			
Stage 2		-	-	-	-	313	-			
Critical Hdwy		-	-	4.12	-	6.42	6.22			
Critical Hdwy Stg 1		-	-	-	-	5.42	-			
Critical Hdwy Stg 2		-	-	-	-	5.42	-			
Follow-up Hdwy		-	-	2.218	-	3.518	3.318			
Pot Cap-1 Maneuver		-	-	1483	-	589	946			
Stage 1		-	-	-	-	916	-			
Stage 2		-	-	-	-	741	-			
Platoon blocked, %		-	-	-	-	-	-			
Mov Cap-1 Maneuver		-	-	1483	-	551	946			
Mov Cap-2 Maneuver		-	-	-	-	551	-			
Stage 1		-	-	-	-	916	-			
Stage 2		-	-	-	-	693	-			
Approach										
EB		WB				NB				
HCM Control Delay, s		0	3				9.4			
HCM LOS						A				
Minor Lane/Major Mvmt										
NBLn1		EBT	EBR	WBL	WBT					
Capacity (veh/h)		913	-	-	1483					
HCM Lane V/C Ratio		0.107	-	-	0.06					
HCM Control Delay (s)		9.4	-	-	7.6	0				
HCM Lane LOS		A	-	-	A	A				
HCM 95th %tile Q(veh)		0.4	-	-	0.2					

APPENDIX C

ROADWAY LOS WORKSHEETS

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1751 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 748 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.6 LOS: B			
Design Design (N): Required Number of Lanes, N: 748 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 16.6 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2356 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 809 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.0 LOS: B			
Design Design (N): Required Number of Lanes, N: 809 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 18.0 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2054 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 877 Speed, S (mi/h): 45.0 D (pc/mi/ln): 19.5 LOS: C			
Design Design (N): Required Number of Lanes, N: 877 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 19.5 Design LOS: C			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1941 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 752 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.7 LOS: B			
Design Design (N): Required Number of Lanes, N: 752 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 16.7 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: AM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1715 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 657 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: AM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1367 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 500 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1686 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 591 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.1 LOS: B			
Design Design (N): Required Number of Lanes, N: 591 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 13.1 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1456 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 521 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.6 LOS: B			
Design Design (N): Required Number of Lanes, N: 521 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 11.6 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1890 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 663 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.7 LOS: B			
Design Design (N): Required Number of Lanes, N: 663 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 14.7 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/23/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1505 AADT(veh/h): Peak-Hour Factor, PHF: 0.90 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 557 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.4 LOS: B			
Design Design (N): Required Number of Lanes, N: 557 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 12.4 Design LOS: B			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.0
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	1.000
Two-way flow rate,(note-1) vp	1563 pc/h
Highest directional split proportion (note-2)	953
Base percent time-spent-following, BPTSF	74.7 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	74.7 %

Level of Service and Other Performance Measures	
Level of service, LOS	D
Volume to capacity ratio, v/c	0.49
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/23/2016
Analysis Time Period	AM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	1110 veh/h
Directional split	61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate,(note-1) vp	1567 pc/h
Highest directional split proportion (note-2)	956 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	22.8 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/23/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi /mi
Up/down	%

Two-way hourly volume, V	834 veh/h
Directional split	61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	1158 pc/h
Highest directional split proportion (note-2)	706 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.0 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	1145 pc/h
Highest directional split proportion (note-2)	698
Base percent time-spent-following, BPTSF	63.4 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	63.4 %

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.36
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/23/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2016-Current Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.85
Lane width	12.0 ft	% Trucks and buses	2
Segment length	0.0 mi	% Recreational vehicles	4
Terrain type	Level	% No-passing zones	0
Grade:	mi	Access points/mi	8
Up/down	%		
Two-way hourly volume, V	536 veh/h		
Directional split	57 / 43 %		
Average Travel Speed			

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 633 pc/h
Highest directional split proportion (note-2) 361 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 632 pc/h
Highest directional split proportion (note-2) 360
Base percent time-spent-following, BPTSF 42.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 42.6 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/23/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year 2016-Current Occupancy
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.81
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 613 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 760 pc/h
Highest directional split proportion (note-2) 410 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 758 pc/h
Highest directional split proportion (note-2) 409
Base percent time-spent-following, BPTSF 48.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 48.6 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.24
Peak 15-min vehicle-miles of travel, VMT15 veh-mi
Peak-hour vehicle-miles of travel, VMT60 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction 2016-Current Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 250 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 309 pc/h
Highest directional split proportion (note-2) 167 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 305 pc/h
Highest directional split proportion (note-2) 165
Base percent time-spent-following, BPTSF 23.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.4
Percent time-spent-following, PTSF 23.9 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.10
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2255 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 808 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.0 LOS: B			
Design Design (N): Required Number of Lanes, N: 808 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 18.0 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2127 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 738 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.4 LOS: B			
Design Design (N): Required Number of Lanes, N: 738 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 16.4 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2150 Peak-Hour Factor, PHF: 0.87 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 823 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.3 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2224 Peak-Hour Factor, PHF: 0.97 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 764 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1694 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 656 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1707 AADT(veh/h): Peak-Hour Factor, PHF: 0.98 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 580 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (V)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, N, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N, S, D	Planning (V)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, N, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N, S, D																						
Planning (V)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2016-Current Occupancy																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (Vp)																								
Flow Inputs Volume, V (veh/h): 1631 AADT(veh/h): Peak-Hour Factor, PHF: 0.92 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 590 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.1 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, N, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (V)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, N, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N, S, D	Planning (V)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, N, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N, S, D																						
Planning (V)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2016-Current Occupancy																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (Vp)																								
Flow Inputs Volume, V (veh/h): 1615 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 554 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.3 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Analysis Year: 2016 - Current Occupancy	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1698 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 589 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Analysis Year: 2016 - Current Occupancy	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1796 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 630 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1680 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 619 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.8 LOS: B			
Design Design (N): Required Number of Lanes, N: 619 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 13.8 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1938 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 672 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.9 LOS: B			
Design Design (N): Required Number of Lanes, N: 672 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 14.9 Design LOS: B			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1087
Highest directional split proportion (note-2)	554
Base percent time-spent-following, BPTSf	61.5
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	61.5
Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	veh-mi
Peak-hour vehicle-miles of travel, VMT60	veh-mi
Peak 15-min total travel time, TT15	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Two-Way Two-lane Highway Segment Analysis	
Phone:	
E-Mail:	
Fax:	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	987 veh/h
Directional split	51 / 49 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1089
Highest directional split proportion (note-2)	555
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.5 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1089
Highest directional split proportion (note-2)	555
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.5 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	789 pc/h
Highest directional split proportion (note-2)	418
Base percent time-spent-following, BPTSF	50.0 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	50.0 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.25
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.

2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	685 veh/h
Directional split	53 / 47 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	798 pc/h
Highest directional split proportion (note-2)	423 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	28.8 mi/h

Peak-hour factor, PHF	0.87
% Trucks and buses	2 %
% Recreational vehicles	4 %
% No-passing zones	0 %
Access points/mi	8 /mi

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	620 pc/h
Highest directional split proportion (note-2)	347
Base percent time-spent-following, BPTSF	42.0 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	42.0 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	495 veh/h
Directional split	56 / 44 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	621 pc/h
Highest directional split proportion (note-2)	348 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.2 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	609
Highest directional split proportion (note-2)	329
Base percent time-spent-following, BPTSF	41.5
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	41.5

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	498 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	610
Highest directional split proportion (note-2)	329

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.3

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction 2016-Current Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.83
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 458 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 560 pc/h
Highest directional split proportion (note-2) 302 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 553 pc/h
Highest directional split proportion (note-2) 299
Base percent time-spent-following, BPTSF 38.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 38.5 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.17
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1899 Peak-Hour Factor, PHF: 0.91 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 695 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1792 Peak-Hour Factor, PHF: 0.95 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 628 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, θ</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, V_p</td> <td>LOS, S, θ</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, θ	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, V_p	LOS, S, θ	Planning (LOS)	FFS, LOS, V_p	N, S, D	Planning (N)	FFS, LOS, V_p	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, θ																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, V_p	LOS, S, θ																						
Planning (LOS)	FFS, LOS, V_p	N, S, D																						
Planning (N)	FFS, LOS, V_p	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Current Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2079 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 796 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.7 LOS: B																								
Design Design (N): Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, θ																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, V_p	LOS, S, θ																						
Planning (LOS)	FFS, LOS, V_p	N, S, D																						
Planning (N)	FFS, LOS, V_p	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Current Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1930 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 670 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.9 LOS: B																								
Design Design (N): Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																		
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Application	Input	Output																
Operational (LOS)	FFS, N , v_p	LOS, S, D																
Design (N)	FFS, LOS, v_p	N , S, D																
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																
Planning (N)	FFS, LOS, v_p	N , S, D																
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Current Occupancy Analysis Year:																
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																		
Flow Inputs Volume, V (veh/h): 1629 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: DDHV (veh/h): Length (mi): Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																		
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																		
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																		
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																		
Operations Operational (LOS): Flow Rate, v_p (pc/h/ln): 631 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.0 LOS: B																		
Design Design (N): Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS:																		

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																		
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Application	Input	Output																
Operational (LOS)	FFS, N , v_p	LOS, S, D																
Design (N)	FFS, LOS, v_p	N , S, D																
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																
Planning (N)	FFS, LOS, v_p	N , S, D																
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Current Occupancy Analysis Year:																
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																		
Flow Inputs Volume, V (veh/h): 1450 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: DDHV (veh/h): Length (mi): Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																		
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																		
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																		
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																		
Operations Operational (LOS): Flow Rate, v_p (pc/h/ln): 508 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.3 LOS: B																		
Design Design (N): Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS:																		

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1504 AADT(veh/h): Peak-Hour Factor, PHF: 0.90 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 557 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.4 LOS: B			
Design Design (N): Required Number of Lanes, N: 557 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 12.4 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1409 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 505 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.2 LOS: B			
Design Design (N): Required Number of Lanes, N: 505 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 11.2 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1563 Peak-Hour Factor, PHF: 0.93 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 560 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Current Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1604 Peak-Hour Factor, PHF: 0.93 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 574 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1064
Highest directional split proportion (note-2)	553
Base percent time-spent-following, BPTSf	60.8
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	60.8
Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.33
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	966 veh/h
Directional split	52 / 48 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1066
Highest directional split proportion (note-2)	554
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.7 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction 2016-Current Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.93
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length mi	Access points/mi	8 /mi
Up/down	%		

Two-way hourly volume, V 678 veh/h
Directional split 54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	739 pc/h
Highest directional split proportion (note-2)	399 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.3 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 730 pc/h
Highest directional split proportion (note-2) 394 %
Base percent time-spent-following, BPTSF 47.4 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 47.4 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.23
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Percent Time-Spent-Following	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	493
Highest directional split proportion (note-2)	266
Base percent time-spent-following, BPTSF	35.2
Adj.for directional distribution and no-passing zones, fd/np	0.1
Percent time-spent-following, PTSF	35.3

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%

Two-way hourly volume, V	459
Directional split	54 / 46

Average Travel Speed	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	499
Highest directional split proportion (note-2)	269

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	31.1

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	482
Highest directional split proportion (note-2)	260
Base percent time-spent-following, BPTSF	34.5
Adj.for directional distribution and no-passing zones, fd/np	0.1
Percent time-spent-following, PTSF	34.7

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.15
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2016-Current Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	414 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	488
Highest directional split proportion (note-2)	264

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	31.2 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction 2016-Current Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 503 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 616 pc/h
Highest directional split proportion (note-2) 333 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 615 pc/h
Highest directional split proportion (note-2) 332
Base percent time-spent-following, BPTSF 41.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 41.8 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.19
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1771 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 756 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2372 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 815 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.1 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2080 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 888 Speed, S (mi/h): 45.0 D (pc/mi/ln): 19.7 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1962 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 760 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1741 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: DDHV (veh/h): Length (mi): Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 667 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1383 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: DDHV (veh/h): Length (mi): Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 506 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1674 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 613 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1435 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 514 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
		<table border="1"> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>LOS, S, D</td> </tr> </table>		Application	Input	Output	Operational (LOS)	FFS, N , v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Planning (LOS)	FFS, LOS, v_p	LOS, S, D	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	LOS, S, D
Application	Input	Output																			
Operational (LOS)	FFS, N , v_p	LOS, S, D																			
Design (N)	FFS, LOS, v_p	N, S, D																			
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, N	LOS, S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Existing Full Occupancy Analysis Year:																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1704 AADT (veh/h): Peak-Hour Factor, PHF: 0.95 % Trucks and Buses, P_T : 0 % RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 597 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.3 LOS: B																					
Design (N) Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																					
		<table border="1"> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>LOS, S, D</td> </tr> </table>		Application	Input	Output	Operational (LOS)	FFS, N , v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N, S, D	Planning (LOS)	FFS, LOS, v_p	LOS, S, D	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	LOS, S, D
Application	Input	Output																			
Operational (LOS)	FFS, N , v_p	LOS, S, D																			
Design (N)	FFS, LOS, v_p	N, S, D																			
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, N	LOS, S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Existing Full Occupancy Analysis Year:																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1479 AADT (veh/h): Peak-Hour Factor, PHF: 0.93 % Trucks and Buses, P_T : 0 % RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 530 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.8 LOS: B																					
Design (N) Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 1)									
				General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore			Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy Analysis Year:		
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)									
Flow Inputs Volume, V (veh/h): 1908 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3									
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000									
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0									
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0									
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 669 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.9 LOS: B									
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:									

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.0
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	1.000
Two-way flow rate,(note-1) vp	1563 pc/h
Highest directional split proportion (note-2)	953
Base percent time-spent-following, BPTSf	74.7 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	74.7 %

Level of Service and Other Performance Measures	
Level of service, LOS	D
Volume to capacity ratio, v/c	0.49
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Two-Way Two-lane Highway Segment Analysis	
Phone:	
E-Mail:	
Fax:	

Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi /mi
Up/down	%

Two-way hourly volume, V	1110 veh/h
Directional split	61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate,(note-1) vp	1567 pc/h
Highest directional split proportion (note-2)	956 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	22.8 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1150 pc/h
Highest directional split proportion (note-2)	702
Base percent time-spent-following, BPTSf	63.6 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	63.6 %

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.36
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	

Two-Way Two-Lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi /mi
Up/down	%
Two-way hourly volume, V	838 veh/h
Directional split	61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	1164 pc/h
Highest directional split proportion (note-2)	710 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.0 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	638 pc/h
Highest directional split proportion (note-2)	364
Base percent time-spent-following, BPTSF	42.9 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	42.9 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	541 veh/h
Directional split	57 / 43 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	639 pc/h
Highest directional split proportion (note-2)	364 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.0 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	639 pc/h
Highest directional split proportion (note-2)	364 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.0 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	761
Highest directional split proportion (note-2)	411
Base percent time-spent-following, BPTSF	48.8
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	48.8

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	54 / 46 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	762
Highest directional split proportion (note-2)	411

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	29.1

Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	762
Highest directional split proportion (note-2)	411

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	29.1

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2016-Existing Full Occupancy
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 250 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 309 pc/h
Highest directional split proportion (note-2) 167 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 305 pc/h
Highest directional split proportion (note-2) 165
Base percent time-spent-following, BPTSF 23.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.4
Percent time-spent-following, PTSF 23.9 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.10
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2275 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 815 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.1 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2140 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 743 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2175 Peak-Hour Factor, PHF: 0.87 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 833 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.5 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2241 Peak-Hour Factor, PHF: 0.97 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 770 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1719 Peak-Hour Factor, PHF: 0.86 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 666 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1721 Peak-Hour Factor, PHF: 0.98 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 585 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N, S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
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Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1646 AADT(veh/h): Peak-Hour Factor, PHF: 0.92 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 596 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N, S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N, S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1637 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 562 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.5 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Existing Full Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1713 Peak-Hour Factor, PHF: 0.96 AADT(veh/h): %Trucks and Buses, P_T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P_R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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Operations Operational (LOS): Flow Rate, V_p (pc/hln): 594 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B																								
Design Design (N): Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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Application	Input	Output																						
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Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, θ																						
Planning (LOS)	FFS, LOS, AADT	N, S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Existing Full Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1818 Peak-Hour Factor, PHF: 0.95 AADT(veh/h): %Trucks and Buses, P_T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P_R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
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Operations Operational (LOS): Flow Rate, V_p (pc/hln): 637 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.2 LOS: B																								
Design Design (N): Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1705 AADT (veh/h): Peak-Hour Factor, PHF: 0.91 % Trucks and Buses, P_T : 0 % RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/h): 624 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.9 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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Application	Input	Output																						
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Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
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Planning (LOS)	FFS, LOS, AADT	N, S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1960 AADT (veh/h): Peak-Hour Factor, PHF: 0.96 % Trucks and Buses, P_T : 0 % RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/h): 680 Speed, S (mi/h): 45.0 D (pc/mi/h): 15.1 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																								

Phone:
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Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year 2016-Existing Full Occupancy
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.91
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 987 veh/h
Directional split 51 / 49 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 1089 pc/h
Highest directional split proportion (note-2) 555 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 26.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1087 pc/h
Highest directional split proportion (note-2) 554
Base percent time-spent-following, BPTSF 61.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 61.5 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.34
Peak 15-min vehicle-miles of travel, VMT15 veh-mi
Peak-hour vehicle-miles of travel, VMT60 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction
Analysis Year 2016-Existing Full Occupancy
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.87
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 689 veh/h
Directional split 53 / 47 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 803 pc/h
Highest directional split proportion (note-2) 426 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 28.8 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 794 pc/h
Highest directional split proportion (note-2) 421
Base percent time-spent-following, BPTSF 50.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 50.2 %

Level of Service and Other Performance Measures
Level of service, LOS B
Volume to capacity ratio, v/c 0.25
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2016-Existing Full Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.80
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 500 veh/h
Directional split 56 / 44 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 628 pc/h
Highest directional split proportion (note-2) 352 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 626 pc/h
Highest directional split proportion (note-2) 351
Base percent time-spent-following, BPTSF 42.3 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 42.3 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	611
Highest directional split proportion (note-2)	330
Base percent time-spent-following, BPTSF	41.6
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	41.6

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	500 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	612
Highest directional split proportion (note-2)	330
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.3
	mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2016-Existing Full Occupancy
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.83
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 458 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 560 pc/h
Highest directional split proportion (note-2) 302 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 553 pc/h
Highest directional split proportion (note-2) 299
Base percent time-spent-following, BPTSF 38.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 38.5 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.17
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1924 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 704 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1814 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 636 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2111 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 808 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1958 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 679 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1661 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 643 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1471 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 516 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1529 Peak-Hour Factor, PHF: 0.90 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 566 Speed, S (mi/h): 45.0 D (pc/mi/h): 12.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1438 Peak-Hour Factor, PHF: 0.93 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 515 Speed, S (mi/h): 45.0 D (pc/mi/h): 11.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1571 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 575 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.8 LOS: B			
Design Design (N): Required Number of Lanes, N: 575 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 12.8 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016 - Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1654 AADT(veh/h): Peak-Hour Factor, PHF: 0.94 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 586 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.0 LOS: B			
Design Design (N): Required Number of Lanes, N: 586 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 13.0 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1588 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 569 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1632 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 584 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1064
Highest directional split proportion (note-2)	553
Base percent time-spent-following, BPTSF	60.8
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	60.8

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.33
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Two-Way Two-lane Highway Segment Analysis	
Phone:	
E-Mail:	
	Fax:

Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	966 veh/h
Directional split	52 / 48 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1066
Highest directional split proportion (note-2)	554
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	26.7
	mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	736 pc/h
Highest directional split proportion (note-2)	397
Base percent time-spent-following, BPTSF	47.6 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	47.6 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.23
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	

Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi /mi
Up/down	%
Two-way hourly volume, V	683 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	745 pc/h
Highest directional split proportion (note-2)	402 pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.2 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2016-Existing Full Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.93
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 465 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 507 pc/h
Highest directional split proportion (note-2) 274 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed: -
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 31.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 501 pc/h
Highest directional split proportion (note-2) 271
Base percent time-spent-following, BPTSF 35.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 35.7 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.16
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	485
Highest directional split proportion (note-2)	262
Base percent time-spent-following, BPTSF	34.7
Adj.for directional distribution and no-passing zones, fd/np	0.1
Percent time-spent-following, PTSF	34.8

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.15
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	2016-Existing Full Occupancy
Analysis Year	Health Club within the Shops at Rossmoor
Description	

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	416 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	490
Highest directional split proportion (note-2)	265

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	31.2

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction 2016-Existing Full Occupancy
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 503 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 616 pc/h
Highest directional split proportion (note-2) 333 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 615 pc/h
Highest directional split proportion (note-2) 332
Base percent time-spent-following, BPTSF 41.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 41.8 %

Level of Service and Other Performance Measures
Level of service, LOS B
Volume to capacity ratio, v/c 0.19
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1781 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 761 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2382 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 818 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.2 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2083 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 884 Speed, S (mi/h): 45.0 D (pc/mi/ln): 19.9 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1975 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 765 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1752 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 671 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1394 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 510 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1685 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 617 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1446 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 518 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1715 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 601 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1490 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 534 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1919 Peak-Hour Factor, PHF: 0.95 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 673 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1539 Peak-Hour Factor, PHF: 0.90 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 570 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year 2016-Existing Full Occupancy+P
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.71 %
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 1112 veh/h
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.998
Two-way flow rate, (note-1) vp 1569 pc/h
Highest directional split proportion (note-2) 957 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 22.8 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.0
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 1.000
Two-way flow rate, (note-1) vp 1566 pc/h
Highest directional split proportion (note-2) 955
Base percent time-spent-following, BPTSF 74.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 74.8 %

Level of Service and Other Performance Measures

Level of service, LOS D
Volume to capacity ratio, v/c 0.49
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1153 pc/h
Highest directional split proportion (note-2)	703
Base percent time-spent-following, BPTSF	63.7 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	63.7 %

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.36
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi /mi
Up/down	%
Two-way hourly volume, V	840 veh/h
Directional split	61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	1167 pc/h
Highest directional split proportion (note-2)	712 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	25.9 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	640 pc/h
Highest directional split proportion (note-2)	365
Base percent time-spent-following, BPTSF	43.0 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	43.0 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	543 veh/h
Directional split	57 / 43 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	641 pc/h
Highest directional split proportion (note-2)	365 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.0 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	641 pc/h
Highest directional split proportion (note-2)	365 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.0 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year 2016-Existing Full Occupancy+P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.81
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 617 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 765 pc/h
Highest directional split proportion (note-2) 413 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 763 pc/h
Highest directional split proportion (note-2) 412
Base percent time-spent-following, BPTSF 48.9 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 48.9 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.24
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2016-Existing Full Occupancy+P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82 %
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 276 veh/h
Directional split 53 / 47 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 341 pc/h
Highest directional split proportion (note-2) 181 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.4 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 337 pc/h
Highest directional split proportion (note-2) 179 %
Base percent time-spent-following, BPTSF 25.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.3
Percent time-spent-following, PTSF 25.9 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c
Peak 15-min vehicle-miles of travel, VMT15 0.11
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2302 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 825 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.3 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2161 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 750 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h/ln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2212 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 847 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.8 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2269 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 779 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1749 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 677 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1746 AADT(veh/h): Peak-Hour Factor, PHF: 0.98 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 593 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1679 AADT(veh/h): Peak-Hour Factor, PHF: 0.92 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 608 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1662 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 571 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1737 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 603 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1850 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 649 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1729 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 633 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1992 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 691 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1094
Highest directional split proportion (note-2)	558
Base percent time-spent-following, BPTSf	61.8
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	61.8
Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	994 veh/h
Directional split	51 / 49 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1097
Highest directional split proportion (note-2)	559
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.5 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction 2016-Existing Full Occupancy+P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.87 %
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 696 veh/h
Directional split 53 / 47 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 811 pc/h
Highest directional split proportion (note-2) 430 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 28.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 802 pc/h
Highest directional split proportion (note-2) 425 %
Base percent time-spent-following, BPTSF 50.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 50.6 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.25
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis		
Analyst	NP	
Agency/Co.	LSA Associates, Inc.	
Date Performed	11/28/2016	
Analysis Time Period	PM Peak Hour	
Highway	Montecito Road	
From/To	Copa de Oro Dr to Mainway Dr	
Jurisdiction		
Analysis Year	2016-Existing Full Occupancy+P	
Description	Health Club within the Shops at Rossmoor	

Input Data		
Highway class	Class 2	
Shoulder width	6.0 ft	Peak-hour factor, PHF
Lane width	12.0 ft	% Trucks and buses
Segment length	0.0 mi	% Recreational vehicles
Terrain type	Level	% No-passing zones
Grade:	length Up/down	Access points/mi
		%

Two-way hourly volume, V	505 veh/h
Directional split	56 / 44 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	634 pc/h
Highest directional split proportion (note-2)	355 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	633 pc/h
Highest directional split proportion (note-2)	354
Base percent time-spent-following, BPTSF	42.7 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	42.7 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	616
Highest directional split proportion (note-2)	333
Base percent time-spent-following, BPTSF	41.8
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	41.8
Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	504 veh/h
Directional split	54 / 46 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	617
Highest directional split proportion (note-2)	333
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.2 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	617
Highest directional split proportion (note-2)	333
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.2 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2016-Existing Full Occupancy+P
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.83
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 522 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 631 pc/h
Highest directional split proportion (note-2) 341 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 630 pc/h
Highest directional split proportion (note-2) 340
Base percent time-spent-following, BPTSF 42.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 42.5 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1941 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 710 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.8 LOS: B			
Design Design (N): Required Number of Lanes, N: 710 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 15.8 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1836 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h/ln): 644 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.3 LOS: B			
Design Design (N): Required Number of Lanes, N: 644 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h/ln): 14.3 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2134 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: 817 Flow Rate, v _p (pc/h): 45.0 Speed, S (mi/h): 18.2 D (pc/mi/h): C LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1986 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: 689 Flow Rate, v _p (pc/h): 45.0 Speed, S (mi/h): 15.3 D (pc/mi/h): B LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1680 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: DDHV (veh/h): Length (mi): Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS:			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 651 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1496 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: DDHV (veh/h): Length (mi): Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS:			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 524 Speed, S (mi/h): 45.0 D (pc/mi/h): 11.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1550 AADT(veh/h): Peak-Hour Factor, PHF: 0.90 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 574 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1463 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 524 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.6 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1596 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 584 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1674 AADT(veh/h): Peak-Hour Factor, PHF: 0.94 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 593 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, θ</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, θ</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, θ	Design (N)	FFS, LOS, V_p	N, S, D	Planning (N)	FFS, LOS, V_p	V_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, θ	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, θ																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (N)	FFS, LOS, V_p	V_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, θ																						
Planning (N)	FFS, LOS, AADT	N, S, D																						
Planning (LOS)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1613 Peak-Hour Factor, PHF: 0.93 AADT(veh/h): %Trucks and Buses, P_T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P_R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 f_{wv} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f_{LC} (mi/h): Access Points, A (A/mi): 0 f_A (mi/h): Median Type, M: f_M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 578 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.8 LOS: B																								
Design Design (N): Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, θ</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, N, AADT</td> <td>LOS, S, θ</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, θ	Design (N)	FFS, LOS, V_p	N, S, D	Planning (N)	FFS, LOS, V_p	V_p , S, D	Planning (LOS)	FFS, N, AADT	LOS, S, θ	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, θ																						
Design (N)	FFS, LOS, V_p	N, S, D																						
Planning (N)	FFS, LOS, V_p	V_p , S, D																						
Planning (LOS)	FFS, N, AADT	LOS, S, θ																						
Planning (N)	FFS, LOS, AADT	N, S, D																						
Planning (LOS)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2016-Existing Full Occupancy+P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1652 Peak-Hour Factor, PHF: 0.93 AADT(veh/h): %Trucks and Buses, P_T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P_R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 f_{wv} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f_{LC} (mi/h): Access Points, A (A/mi): 0 f_A (mi/h): Median Type, M: f_M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 592 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B																								
Design Design (N): Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1069
Highest directional split proportion (note-2)	556
Base percent time-spent-following, BPTSF	60.9
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	60.9

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.33
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	971 veh/h
Directional split	52 / 48 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1071
Highest directional split proportion (note-2)	557

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	26.7

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	741
Highest directional split proportion (note-2)	400
Base percent time-spent-following, BPTSF	47.9
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	47.9

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.23
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	

Two-Way Two-Lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	688 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	750
Highest directional split proportion (note-2)	405

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	29.2

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2016-Existing Full Occupancy+P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.93
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 469 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 511 pc/h
Highest directional split proportion (note-2) 276 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 31.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 505 pc/h
Highest directional split proportion (note-2) 273
Base percent time-spent-following, BPTSF 35.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 35.9 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.16
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	488
Highest directional split proportion (note-2)	264
Base percent time-spent-following, BPTSF	34.9
Adj.for directional distribution and no-passing zones, fd/np	0.1
Percent time-spent-following, PTSF	35.0

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.15
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2016-Existing Full Occupancy+P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	419 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fg	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	494
Highest directional split proportion (note-2)	267

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	31.2

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	677 pc/h
Highest directional split proportion (note-2)	366
Base percent time-spent-following, BPTSF	44.8 %
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	44.8 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.21
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Rossmoor Center Way
From/To	Montecito Rd to E. Internal
Jurisdiction	2016-Existing Full Occupancy+P
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	554 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	678 pc/h
Highest directional split proportion (note-2)	366 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	30 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	30.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	24.7 mi/h

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1799 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 768 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2410 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 828 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.4 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2018 - Opening Year Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2113 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 902 Speed, S (mi/h): 45.0 D (pc/mi/h): 20.0 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2018 - Opening Year Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2036 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 789 Speed, S (mi/h): 45.0 D (pc/mi/h): 17.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1770 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: DDHV (veh/h): Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 678 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1456 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: DDHV (veh/h): Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 533 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1703 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _w (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 623 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1511 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _w (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 541 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1733 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS:			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 608 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1556 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS:			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 557 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1954 AADT(veh/h): 1954 Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 685 Speed, S (mi/h): 45.0 D (pc/mi/h): 15.2 LOS: B			
Design Design (N): Required Number of Lanes, N: 685 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h): 15.2 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1635 AADT(veh/h): 1635 Peak-Hour Factor, PHF: 0.90 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 605 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.4 LOS: B			
Design Design (N): Required Number of Lanes, N: 605 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h): 13.4 Design LOS: B			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.0
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	1.000
Two-way flow rate,(note-1) vp	1585 pc/h
Highest directional split proportion (note-2)	967
Base percent time-spent-following, BPTSf	75.2 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	75.2 %

Level of Service and Other Performance Measures	
Level of service, LOS	D
Volume to capacity ratio, v/c	0.50
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	AM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2018 - Opening Year
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi /mi
Up/down	%
Two-way hourly volume, V	1125 veh/h
Directional split	61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate,(note-1) vp	1588 pc/h
Highest directional split proportion (note-2)	969 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	22.7 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.73
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 846 veh/h
Directional split 61 / 39 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 1175 pc/h
Highest directional split proportion (note-2) 717 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.9 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1161 pc/h
Highest directional split proportion (note-2) 708
Base percent time-spent-following, BPTSF 64.0 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 64.0 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.37
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.85
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 546 veh/h
Directional split 57 / 43 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 645 pc/h
Highest directional split proportion (note-2) 368 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 644 pc/h
Highest directional split proportion (note-2) 367
Base percent time-spent-following, BPTSF 43.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 43.2 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.81
Lane width	12.0 ft	% Trucks and buses	2
Segment length	0.0 mi	% Recreational vehicles	4
Terrain type	Level	% No-passing zones	0
Grade:	Length	Access points/mi	8
	Up/down	%	/mi
Two-way hourly volume, V	54 / 46	veh/h	
Directional split			
Average Travel Speed			

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 770 pc/h
Highest directional split proportion (note-2) 416 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 768 pc/h
Highest directional split proportion (note-2) 415
Base percent time-spent-following, BPTSF 49.1 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 49.1 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.24
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period AM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 253 veh/h
Directional split 53 / 47 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 313 pc/h
Highest directional split proportion (note-2) 166 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 309 pc/h
Highest directional split proportion (note-2) 164
Base percent time-spent-following, BPTSF 23.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.3
Percent time-spent-following, PTSF 24.1 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.10
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2310 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 827 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.4 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2168 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 752 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2230 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 854 Speed, S (mi/h): 45.0 D (pc/mi/ln): 19.0 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2271 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 780 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			
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Generated: 12/4/2016 5:05 PM			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1765 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 684 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1749 AADT(veh/h): Peak-Hour Factor, PHF: 0.98 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 594 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1703 AADT(veh/h): Peak-Hour Factor, PHF: 0.92 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Speed, S (mi/h): Max Service Flow Rate (pc/h/mi): Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1664 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Speed, S (mi/h): Max Service Flow Rate (pc/h/mi): Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)					
		General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)					
Flow Inputs Volume, V (veh/h): 1771 AADT(veh/h): 1771 Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3					
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0					
Calc Speed Adj and FFS f _{tw} (mi/h): f _{tc} (mi/h): f _a (mi/h): f _m (mi/h): FFS (mi/h): 45.0					
Operations Operational (LOS): Flow Rate, v _p (pc/h): 614 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.6 LOS: B					
Design Design (N): Required Number of Lanes, N: 614 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h): 13.6 Design LOS: B					

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1781 AADT(veh/h): 1781 Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 652 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.5 LOS: B			
Design Design (N): Required Number of Lanes, N: 652 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h): 14.5 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2000 AADT(veh/h): 2000 Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 694 Speed, S (mi/h): 45.0 D (pc/mi/h): 15.4 LOS: B			
Design Design (N): Required Number of Lanes, N: 694 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/h): 15.4 Design LOS: B			

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis		
Analyst	NP	
Agency/Co.	LSA Associates, Inc.	
Date Performed	11/28/2016	
Analysis Time Period	PM Peak Hour	
Highway	Saint Cloud Drive	
From/To	Seal Beach Blvd to Yellowtail	
Jurisdiction		
Analysis Year	2018 - Opening Year	
Description	Health Club within the Shops at Rossmoor	

Input Data		
Highway class	Class 2	
Shoulder width	6.0 ft	Peak-hour factor, PHF
Lane width	12.0 ft	% Trucks and buses
Segment length	0.0 mi	% Recreational vehicles
Terrain type	Level	% No-passing zones
Grade:	mi	Access points/mi
Up/down	%	
Two-way hourly volume, V	1003 veh/h	
Directional split	51 / 49 %	
Average Travel Speed		

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 1107 pc/h
Highest directional split proportion (note-2) 565 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 26.4 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1104 pc/h
Highest directional split proportion (note-2) 563
Base percent time-spent-following, BPTSF 62.1 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 62.1 %

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.35
Peak 15-min vehicle-miles of travel, VMT15	veh-mi
Peak-hour vehicle-miles of travel, VMT60	veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

- Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data									
Highway class	Class 2								
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.87					%
Lane width	12.0	ft	% Trucks and buses	2					%
Segment length	0.0	mi	% Recreational vehicles	4					%
Terrain type	Level		% No-passing zones	0					%
Grade:	Length	mi	Access points/mi	8					/mi
	Up/down	%							
Two-way hourly volume, V	53	/	47	%					
Directional split									
Average Travel Speed									

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 811 pc/h
Highest directional split proportion (note-2) 430 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 28.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 802 pc/h
Highest directional split proportion (note-2) 425
Base percent time-spent-following, BPTSF 50.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 50.6 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.25
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.80
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 505 veh/h
Directional split 56 / 44 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 634 pc/h
Highest directional split proportion (note-2) 355 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 633 pc/h
Highest directional split proportion (note-2) 354
Base percent time-spent-following, BPTSF 42.7 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 42.7 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 505 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 618 pc/h
Highest directional split proportion (note-2) 334 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 617 pc/h
Highest directional split proportion (note-2) 333
Base percent time-spent-following, BPTSF 41.9 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 41.9 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.19
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period PM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.83
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 463 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 566 pc/h
Highest directional split proportion (note-2) 306 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 559 pc/h
Highest directional split proportion (note-2) 302
Base percent time-spent-following, BPTSF 38.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 38.9 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.18
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1957 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 716 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1840 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 645 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2167 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 830 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.4 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Analysis Year: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1986 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 689 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	LOS, S, D	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	V_p , S, D
Application	Input	Output																			
Operational (LOS)	FFS, N , V_p	LOS, S, D																			
Design (N)	FFS, LOS, V_p	N, S, D																			
Planning (LOS)	FFS, LOS, V_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, N	V_p , S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1708 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 662 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.7 LOS: B																					
Design (N) Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																					
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	LOS, S, D	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	V_p , S, D
Application	Input	Output																			
Operational (LOS)	FFS, N , V_p	LOS, S, D																			
Design (N)	FFS, LOS, V_p	N, S, D																			
Planning (LOS)	FFS, LOS, V_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, N	V_p , S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1498 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 525 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.7 LOS: B																					
Design (N) Required Number of Lanes, N: Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 1)									
				General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore			Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Seal Beach Boulevard Analysis Year: 2018 - Opening Year		
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)									
Flow Inputs Volume, V (veh/h): 1587 AADT(veh/h): 0 Peak-Hour Factor, PHF: 0.90 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 General Terrain: Level Peak-Hour Direction Prop, D: 0.00 Length (mi): 0.00 DDHV (veh/h): 1.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3									
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000									
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0									
Operations Operational (LOS): 587 Flow Rate, v _p (pc/hln): 45.0 Speed, S (mi/h): 13.0 D (pc/mi/h): B LOS: B									
Design Design (N): Required Number of Lanes, N: 587 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 13.0 Design LOS: B									

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1629 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 596 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1682 AADT(veh/h): Peak-Hour Factor, PHF: 0.94 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 596 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
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Application	Input	Output																			
Operational (LOS)	FFS, N , V_p	LOS, S, D																			
Design (N)	FFS, LOS, V_p	N, S, D																			
Planning (LOS)	FFS, LOS, V_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, N	LOS, S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Analysis Year: 2018 - Opening Year																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1665 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 596 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.2 LOS: B																					
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																					
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>LOS, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N, S, D	Planning (LOS)	FFS, LOS, V_p	LOS, S, D	Planning (N)	FFS, LOS, AADT	N, S, D	Planning (LOS)	FFS, LOS, N	LOS, S, D
Application	Input	Output																			
Operational (LOS)	FFS, N , V_p	LOS, S, D																			
Design (N)	FFS, LOS, V_p	N, S, D																			
Planning (LOS)	FFS, LOS, V_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, N	LOS, S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/28/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Analysis Year: 2018 - Opening Year																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1670 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 598 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.3 LOS: B																					
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1081
Highest directional split proportion (note-2)	562
Base percent time-spent-following, BPTSF	61.3
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	61.3
Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2018 - Opening Year
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	982 veh/h
Directional split	52 / 48 %
Average Travel Speed	

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1083
Highest directional split proportion (note-2)	563
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.6 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	743
Highest directional split proportion (note-2)	401
Base percent time-spent-following, BPTSF	48.0
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	48.0
Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.23
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	
Two-Way Two-Lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/28/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2018 - Opening Year
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	690 veh/h
Directional split	54 / 46 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	752
Highest directional split proportion (note-2)	406
	pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	29.2
	mi/h

Peak-hour factor, PHF	0.93
% Trucks and buses	2
% Recreational vehicles	4
% No-passing zones	0
Access points/mi	8
	/mi

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2018 - Opening Year
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.93
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 470 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 512 pc/h
Highest directional split proportion (note-2) 276 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 31.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 506 pc/h
Highest directional split proportion (note-2) 273
Base percent time-spent-following, BPTSF 35.9 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 36.0 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.16
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.86
Lane width	12.0 ft	% Trucks and buses	2
Segment length	0.0 mi	% Recreational vehicles	4
Terrain type	Level	% No-passing zones	0
Grade:	Length	Access points/mi	8
	Up/down	%	/mi

Two-way hourly volume, V	420 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	495 pc/h
Highest directional split proportion (note-2)	267 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	31.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	489 pc/h
Highest directional split proportion (note-2)	264
Base percent time-spent-following, BPTSF	34.9 %
Adj. for directional distribution and no-passing zones, fd/np	0.1
Percent time-spent-following, PTSF	35.0 %

Level of Service and Other Performance Measures

Level of service, LOS	A
Volume to capacity ratio, v/c	0.15
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/28/2016
Analysis Time Period Sat Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2018 - Opening Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 508 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 622 pc/h
Highest directional split proportion (note-2) 336 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.2 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 621 pc/h
Highest directional split proportion (note-2) 335
Base percent time-spent-following, BPTSF 42.1 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 42.1 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.19
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1809 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 773 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2420 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 831 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.5 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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Application	Input	Output																						
Operational (LOS)	FFS, H , N	LOS, S, D																						
Design (N)	FFS, LOS, N	N , S, D																						
Design (N)	FFS, LOS, N	N , S, D																						
Planning (LOS)	FFS, LOS, N	LOS, S, D																						
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2018 - Opening Year + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2126 AADT(veh/h): Peak-Hour Factor, PHF: 0.78 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 908 Speed, S (mi/h): 45.0 D (pc/mi/ln): 20.2 LOS: C																								
Design Design (N): Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, H, N</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, N</td> <td>N, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, N</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, N</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>N, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, H , N	LOS, S, D	Design (N)	FFS, LOS, N	N , S, D	Design (N)	FFS, LOS, N	N , S, D	Planning (LOS)	FFS, LOS, N	LOS, S, D	Planning (N)	FFS, LOS, N	N , S, D	Planning (N)	FFS, LOS, N	N , S, D
Application	Input	Output																						
Operational (LOS)	FFS, H , N	LOS, S, D																						
Design (N)	FFS, LOS, N	N , S, D																						
Design (N)	FFS, LOS, N	N , S, D																						
Planning (LOS)	FFS, LOS, N	LOS, S, D																						
Planning (N)	FFS, LOS, N	N , S, D																						
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2018 - Opening Year + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2049 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 794 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.6 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1781 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 682 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.2 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1467 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 537 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1714 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 627 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1522 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 545 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1744 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: 611 Flow Rate, v _p (pc/hln): 45.0 Speed, S (mi/h): 13.6 D (pc/mi/ln): B LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1567 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: 561 Flow Rate, v _p (pc/hln): 45.0 Speed, S (mi/h): 12.5 D (pc/mi/ln): B LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1965 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 689 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1646 AADT(veh/h): Peak-Hour Factor, PHF: 0.90 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 609 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data				
Highway class	Class 2			
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.71	%
Lane width	12.0 ft	% Trucks and buses	2	%
Segment length	0.0 mi	% Recreational vehicles	4	%
Terrain type	Level	% No-passing zones	0	%
Grade:	Length mi	Access points/mi	8	/mi
	Up/down %			

Two-way hourly volume, V 1127 veh/h
Directional split 61 / 39 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate, (note-1) vp	1590 pc/h
Highest directional split proportion (note-2)	970 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 22.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.0
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 1.000
Two-way flow rate, (note-1) vp 1587 pc/h
Highest directional split proportion (note-2) 968
Base percent time-spent-following, BPTSF 75.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 75.2 %

Level of Service and Other Performance Measures

Level of service, LOS D
Volume to capacity ratio, v/c 0.50
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.73
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 848 veh/h
Directional split 61 / 39 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 1178 pc/h
Highest directional split proportion (note-2) 719 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.9 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1164 pc/h
Highest directional split proportion (note-2) 710
Base percent time-spent-following, BPTSF 64.1 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 64.1 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.37
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2018 - Opening Year + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.85
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 548 veh/h
Directional split 57 / 43 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 647 pc/h
Highest directional split proportion (note-2) 369 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 646 pc/h
Highest directional split proportion (note-2) 368
Base percent time-spent-following, BPTSF 43.3 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 43.3 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2018 - Opening Year + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	623 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	772 pc/h
Highest directional split proportion (note-2)	417 pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.0 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	771 pc/h
Highest directional split proportion (note-2)	416
Base percent time-spent-following, BPTSF	49.2 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	49.2 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.82 %
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 279 veh/h
Directional split 53 / 47 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 345 pc/h
Highest directional split proportion (note-2) 183 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.3 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 341 pc/h
Highest directional split proportion (note-2) 181
Base percent time-spent-following, BPTSF 25.9 %
Adj. for directional distribution and no-passing zones, fd/np 0.2 %
Percent time-spent-following, PTSF 26.1 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c
Peak 15-min vehicle-miles of travel, VMT15 0.11
Peak-hour vehicle-miles of travel, VMT60
Peak 15-min total travel time, TT15 0.0 veh-h
veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1795 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 695 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1774 AADT(veh/h): Peak-Hour Factor, PHF: 0.98 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 603 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1736 AADT(veh/h): Peak-Hour Factor, PHF: 0.92 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 628 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1689 AADT(veh/h): Peak-Hour Factor, PHF: 0.97 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 580 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1795 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/h): 623 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.8 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: 2018 - Opening Year + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1879 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/h): 659 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.6 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1805 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 661 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2032 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 705 Speed, S (mi/h): 45.0 D (pc/mi/h): 15.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1112 pc/h
Highest directional split proportion (note-2)	567
Base percent time-spent-following, BPTSf	62.4 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	62.4 %

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.35
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	Fax:
E-Mail:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	PM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	2018 - Opening Year + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	1010 veh/h
Directional split	51 / 49 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1114 pc/h
Highest directional split proportion (note-2)	568 pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.4 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.87 %
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 703 veh/h
Directional split 53 / 47 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 819 pc/h
Highest directional split proportion (note-2) 434 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 28.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 810 pc/h
Highest directional split proportion (note-2) 429 %
Base percent time-spent-following, BPTSF 50.9 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 50.9 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.26
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	639
Highest directional split proportion (note-2)	358
Base percent time-spent-following, BPTSF	43.0
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	43.0
Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	
Analysis Year	2018 - Opening Year + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	510 veh/h
Directional split	56 / 44 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	640
Highest directional split proportion (note-2)	358
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.0

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	640
Highest directional split proportion (note-2)	358
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
Free-flow speed, FFS	35.0
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.0

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	639
Highest directional split proportion (note-2)	358
Base percent time-spent-following, BPTSF	43.0
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	43.0
Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.20
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	2018 - Opening Year + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	509 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	623
Highest directional split proportion (note-2)	336 pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	30.2 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	622 pc/h
Highest directional split proportion (note-2)	336
Base percent time-spent-following, BPTSF	42.1 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	42.1 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.83
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 527 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 637 pc/h
Highest directional split proportion (note-2) 344 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 636 pc/h
Highest directional split proportion (note-2) 343
Base percent time-spent-following, BPTSF 42.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 42.8 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.20
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1974 AADT(veh/h): Peak-Hour Factor, PHF: 0.91 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 723 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.1 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1862 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 653 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2190 AADT(veh/h): Peak-Hour Factor, PHF: 0.87 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: 339 Flow Rate, v _p (pc/hln): 45.0 Speed, S (mi/h): 18.6 D (pc/mi/ln): C Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2014 AADT(veh/h): Peak-Hour Factor, PHF: 0.96 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Design Design (N): Required Number of Lanes, N: 699 Flow Rate, v _p (pc/hln): 45.0 Speed, S (mi/h): 15.5 D (pc/mi/ln): B Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1727 AADT(veh/h): Peak-Hour Factor, PHF: 0.86 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 669 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.9 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/hln): Design LOS			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Analysis Year: 2018 - Opening Year + P	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1523 AADT(veh/h): Peak-Hour Factor, PHF: 0.95 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 534 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.9 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h) Max Service Flow Rate (pc/hln): Design LOS			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1690 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 605 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: 2018 - Opening Year + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1690 AADT(veh/h): Peak-Hour Factor, PHF: 0.93 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 605 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period Sat Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.91
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 987 veh/h
Directional split 52 / 48 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 1089 pc/h
Highest directional split proportion (note-2) 566 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 26.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1087 pc/h
Highest directional split proportion (note-2) 565
Base percent time-spent-following, BPTSF 61.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 61.5 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.34
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	
Analysis Year	2018 - Opening Year + P
Description	Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.93
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length	Access points/mi	8 /mi
	Up/down		

Two-way hourly volume, V	695 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	758 pc/h
Highest directional split proportion (note-2)	409 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	
Observed volume, Vf	35 mi/h
Estimated Free-Flow Speed:	0 veh/h
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	749 pc/h
Highest directional split proportion (note-2)	404
Base percent time-spent-following, BPTSF	48.2 %
Adj. for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	48.2 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction 2018 - Opening Year + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	0.93
Lane width	12.0 ft	% Trucks and buses	2
Segment length	0.0 mi	% Recreational vehicles	4
Terrain type	Level	% No-passing zones	0
Grade:	Length	Access points/mi	8
	Up/down	%	/mi

Two-way hourly volume, V 474 veh/h
Directional split 54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	517
Highest directional split proportion (note-2)	279 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 31.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 511 pc/h
Highest directional split proportion (note-2) 276
Base percent time-spent-following, BPTSF 36.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 36.3 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.16
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year 2018 - Opening Year + P
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 0.86
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 423 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 499 pc/h
Highest directional split proportion (note-2) 269 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 31.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 493 pc/h
Highest directional split proportion (note-2) 266
Base percent time-spent-following, BPTSF 35.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 35.3 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.16
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Rossmoor Center Way
From/To	Montecito Rd to E. Internal
Jurisdiction	
Analysis Year	2018 - Opening Year + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	559 veh/h
Directional split	54 / 46 %
Average Travel Speed	

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	684
Highest directional split proportion (note-2)	369
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	30 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	30.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	24.7 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	683
Highest directional split proportion (note-2)	369
Base percent time-spent-following, BPTSF	45.1
Adj. for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	45.1
Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.21
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1947 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 649 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2610 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 870 Speed, S (mi/h): 45.0 D (pc/mi/ln): 19.3 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2287 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 762 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2201 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 733 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																		
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Application	Input	Output																
Operational (LOS)	FFS, N , v_p	LOS, S, D																
Design (N)	FFS, LOS, v_p	N , S, D																
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																
Planning (N)	FFS, LOS, v_p	N , S, D																
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout Analysis Year:																
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																		
Flow Inputs Volume, V (veh/h): 1916 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																		
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																		
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																		
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																		
Operations Operational (LOS): Flow Rate, v_p (pc/h): 638 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.2 LOS: B																		
Design (N) Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																		

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																		
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Application	Input	Output																
Operational (LOS)	FFS, N , v_p	LOS, S, D																
Design (N)	FFS, LOS, v_p	N , S, D																
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																
Planning (N)	FFS, LOS, v_p	N , S, D																
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout Analysis Year:																
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																		
Flow Inputs Volume, V (veh/h): 1572 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																		
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																		
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																		
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																		
Operations Operational (LOS): Flow Rate, v_p (pc/h): 524 Speed, S (mi/h): 45.0 D (pc/mi/h): 11.6 LOS: B																		
Design (N) Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																		

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1843 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 614 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.6 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1631 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 543 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.1 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1876 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 625 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1679 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 559 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2115 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/h): 705 Speed, S (mi/h): 45.0 D (pc/mi/h): 15.7 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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Application	Input	Output																						
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Design (N)	FFS, LOS, V_p	N , S, D																						
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Planning (LOS)	FFS, LOS, AADT	N , S, D																						
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1763 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/h): 587 Speed, S (mi/h): 45.0 D (pc/mi/h): 13.0 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/h): Design LOS:																								

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.0
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	1.000
Two-way flow rate,(note-1) vp	1219 pc/h
Highest directional split proportion (note-2)	744
Base percent time-spent-following, BPTSF	65.8 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	65.8 %

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.38
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	AM Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Fax:

Phone:

E-Mail:

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	1219 veh/h
Directional split	61 / 39 %
Average Travel Speed	

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.998
Two-way flow rate,(note-1) vp	1221 pc/h
Highest directional split proportion (note-2)	745
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	25.5 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction Future (2035) Buildout
Analysis Year
Description Health Club within the Shops at Rossmoor

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 917 veh/h
Directional split 61 / 39 %

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 930 pc/h
Highest directional split proportion (note-2) 567 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.8 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 919 pc/h
Highest directional split proportion (note-2) 561
Base percent time-spent-following, BPTSF 55.4 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 55.4 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.29
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	593
Highest directional split proportion (note-2)	338
Base percent time-spent-following, BPTSF	40.6
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	40.6
Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	mi
Up/down	%
Two-way hourly volume, V	592 veh/h
Directional split	57 / 43 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	600
Highest directional split proportion (note-2)	342
	pc/h
	pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.3
	mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction Future (2035) Buildout
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 673 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 676 pc/h
Highest directional split proportion (note-2) 365 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.8 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 674 pc/h
Highest directional split proportion (note-2) 364
Base percent time-spent-following, BPTSF 44.7 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 44.7 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.21
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	AM Peak Hour
Highway	Rossmoor Center Way
From/To	Montecito Rd to E. Internal
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%

Two-way hourly volume, V	274 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	278
Highest directional split proportion (note-2)	150 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	30 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	30.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	27.8 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	275 pc/h
Highest directional split proportion (note-2)	149
Base percent time-spent-following, BPTSF	21.5 %
Adj. for directional distribution and no-passing zones, fd/np	0.5 %
Percent time-spent-following, PTSF	21.9 %

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.09
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2501 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{uw} (mi/h): f _{lc} (mi/h): f _a (mi/h): f _m (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 833 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.5 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2349 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{uw} (mi/h): f _{lc} (mi/h): f _a (mi/h): f _m (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 783 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2412 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 804 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2460 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 820 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.2 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1909 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 636 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.1 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1894 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 631 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.0 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1842 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 614 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.6 LOS: B			
Design Design (N): Required Number of Lanes, N: 614 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 13.6 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1801 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 600 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.3 LOS: B			
Design Design (N): Required Number of Lanes, N: 600 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 13.3 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1915 AADT(veh/h): 1.00 Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 638 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.2 LOS: B			
Design Design (N): Required Number of Lanes, N: 638 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 14.2 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2000 AADT(veh/h): 1.00 Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 666 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.8 LOS: B			
Design Design (N): Required Number of Lanes, N: 666 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 14.8 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1925 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 641 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.2 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2165 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 721 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.0 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year Future (2035) Buildout
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 1087 veh/h
Directional split 51 / 49 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 1091 pc/h
Highest directional split proportion (note-2) 556 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 26.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1089 pc/h
Highest directional split proportion (note-2) 555
Base percent time-spent-following, BPTSF 61.6 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 61.6 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.34
Peak 15-min vehicle-miles of travel, VMT15 veh-mi
Peak-hour vehicle-miles of travel, VMT60 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction Future (2035) Buildout
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	1.00
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length mi	Access points/mi	8 /mi
Up/down	%		

Two-way hourly volume, V 754 veh/h
Directional split 53 / 47 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	765 pc/h
Highest directional split proportion (note-2)	405 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 756 pc/h
Highest directional split proportion (note-2) 401
Base percent time-spent-following, BPTSF 48.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 48.5 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.24
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

- If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 - If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction Future (2035) Buildout
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	1.00
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length mi	Access points/mi	8 /mi
Up/down	%		

Two-way hourly volume, V 547 veh/h
Directional split 56 / 44 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	555 pc/h
Highest directional split proportion (note-2)	311 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 548 pc/h
Highest directional split proportion (note-2) 307 %
Base percent time-spent-following, BPTSF 38.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.1 %
Percent time-spent-following, PTSF 38.3 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.17
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction
Analysis Year Future (2035) Buildout
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 547 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 555 pc/h
Highest directional split proportion (note-2) 300 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 548 pc/h
Highest directional split proportion (note-2) 296
Base percent time-spent-following, BPTSF 38.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 38.3 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c
Peak 15-min vehicle-miles of travel, VMT15 0.17 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	503 pc/h
Highest directional split proportion (note-2)	272
Base percent time-spent-following, BPTSF	35.7 %
Adj.for directional distribution and no-passing zones, fd/np	0.1 %
Percent time-spent-following, PTSF	35.8 %

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	PM Peak Hour
Highway	Rossmoor Center Way
From/To	Montecito Rd to E. Internal
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%

Two-way hourly volume, V	502 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	509 pc/h
Highest directional split proportion (note-2)	275 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	30 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	30.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	26.1 mi/h

MULTILANE HIGHWAYS WORKSHEET(Direction 1)									
				General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore			Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout Analysis Year:		
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)									
Flow Inputs Volume, V (veh/h): 2118 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3									
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000									
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS:									
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0									
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 706 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.7 LOS: B									
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:									

MULTILANE HIGHWAYS WORKSHEET(Direction 2)									
				General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore			Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout Analysis Year:		
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)									
Flow Inputs Volume, V (veh/h): 1992 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3									
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000									
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS:									
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0									
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 664 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.8 LOS: B									
Design Design (N): Required Number of Lanes, N: 									

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2344 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 781 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.4 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2150 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 716 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.9 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, v_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, v_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , v_p	LOS, S, D	Design (N)	FFS, LOS, v_p	N , S, D	Planning (LOS)	FFS, LOS, v_p	N , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D
Application	Input	Output																			
Operational (LOS)	FFS, N , v_p	LOS, S, D																			
Design (N)	FFS, LOS, v_p	N , S, D																			
Planning (LOS)	FFS, LOS, v_p	N , S, D																			
Planning (N)	FFS, LOS, AADT	LOS, S, D																			
Planning (LOS)	FFS, LOS, AADT	N , S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout Analysis Year:																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1847 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 615 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.7 LOS: B																					
Design Design (N): Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																					
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Application	Input	Output																			
Operational (LOS)	FFS, N , v_p	LOS, S, D																			
Design (N)	FFS, LOS, v_p	N , S, D																			
Planning (LOS)	FFS, LOS, v_p	N , S, D																			
Planning (N)	FFS, LOS, AADT	LOS, S, D																			
Planning (LOS)	FFS, LOS, AADT	N , S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout Analysis Year:																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1621 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 540 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.0 LOS: B																					
Design Design (N): Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																					
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Application	Input	Output																			
Operational (LOS)	FFS, N , v_p	LOS, S, D																			
Design (N)	FFS, LOS, v_p	N, S, D																			
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, AADT	LOS, S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout Analysis Year:																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1715 AADT (veh/h): 1715 Peak-Hour Factor, PHF : 1.00 % Trucks and Buses, P_T : 0 % RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D : Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M : FFS (measured): 45.0 Base Free-Flow Speed, $BFFS$: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 571 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.7 LOS: B																					
Design (N) Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																					
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Application	Input	Output																			
Operational (LOS)	FFS, N , v_p	LOS, S, D																			
Design (N)	FFS, LOS, v_p	N, S, D																			
Planning (LOS)	FFS, LOS, v_p	LOS, S, D																			
Planning (N)	FFS, LOS, AADT	N, S, D																			
Planning (LOS)	FFS, LOS, AADT	LOS, S, D																			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout Analysis Year:																			
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																					
Flow Inputs Volume, V (veh/h): 1584 AADT (veh/h): 1584 Peak-Hour Factor, PHF : 1.00 % Trucks and Buses, P_T : 0 % RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): 0 Peak-Hour Direction Prop, D : Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																					
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																					
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M : FFS (measured): 45.0 Base Free-Flow Speed, $BFFS$: 45.0																					
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																					
Operations Operational (LOS): Flow Rate, v_p (pc/hln): 528 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.7 LOS: B																					
Design (N) Required Number of Lanes, N : Flow Rate, v_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																					

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1761 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 587 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1820 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 606 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1737 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{tc} (mi/h): f _a (mi/h): f _m (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 599 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.3 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1806 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{nv} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{tc} (mi/h): f _a (mi/h): f _m (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 602 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.4 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1066
Highest directional split proportion (note-2)	554
Base percent time-spent-following, BPTSF	60.8
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	60.8

Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.33
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	1064 veh/h
Directional split	52 / 48 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1068
Highest directional split proportion (note-2)	555
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	26.7
	mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1068
Highest directional split proportion (note-2)	555
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	26.7
	mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	748 pc/h
Highest directional split proportion (note-2)	404
Base percent time-spent-following, BPTSF	48.2 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	48.2 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	747 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	757 pc/h
Highest directional split proportion (note-2)	409 pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.1 mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	757 pc/h
Highest directional split proportion (note-2)	409 pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.1 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction Future (2035) Buildout
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 509 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 516 pc/h
Highest directional split proportion (note-2) 279 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 31.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 510 pc/h
Highest directional split proportion (note-2) 275
Base percent time-spent-following, BPTSF 36.1 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 36.2 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.16
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	456 pc/h
Highest directional split proportion (note-2)	246
Base percent time-spent-following, BPTSF	33.0 %
Adj.for directional distribution and no-passing zones, fd/np	0.1 %
Percent time-spent-following, PTSF	33.2 %

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.14
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	Future (2035) Buildout
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	455 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	461 pc/h
Highest directional split proportion (note-2)	249 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	31.4 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	552 pc/h
Highest directional split proportion (note-2)	298
Base percent time-spent-following, BPTSF	38.4 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	38.5 %

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.17
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Rossmoor Center Way
From/To	Montecito Rd to E. Internal
Jurisdiction	Future (2035) Buildout
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
Up/down	%
Two-way hourly volume, V	551 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	559 pc/h
Highest directional split proportion (note-2)	302 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	30 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	30.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	25.7 mi/h

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1957 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 652 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2620 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 873 Speed, S (mi/h): 45.0 D (pc/mi/ln): 19.4 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2300 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 766 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.0 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2214 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _W (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 738 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.4 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1927 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 642 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.3 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1583 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 527 Speed, S (mi/h): 45.0 D (pc/mi/ln): 11.7 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1854 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_b : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 618 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.7 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
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Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1642 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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Operations Operational (LOS): Flow Rate, V_p (pc/hln): 547 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.2 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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Application	Input	Output																						
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Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, θ																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1887 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
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Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 629 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.0 LOS: B																								
Design (N) Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, θ																						
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Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1690 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 563 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.5 LOS: B																								
Design (N) Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2126 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 708 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.7 LOS: B			
Design Design (N): Required Number of Lanes, N: 708 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 15.7 Design LOS: B			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: All Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1774 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 1.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 591 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.1 LOS: B			
Design Design (N): Required Number of Lanes, N: 591 Flow Rate, v _p (pc/h): 45.0 Max Service Flow Rate (pc/hln): 13.1 Design LOS: B			

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year Future (2035) Buildout + P
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 1221 veh/h
Directional split 61 / 39 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.998
Two-way flow rate, (note-1) vp 1223 pc/h
Highest directional split proportion (note-2) 746 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.0
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 1.000
Two-way flow rate, (note-1) vp 1221 pc/h
Highest directional split proportion (note-2) 745
Base percent time-spent-following, BPTSF 65.8 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 65.8 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.38
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 919 veh/h
Directional split 61 / 39 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 932 pc/h
Highest directional split proportion (note-2) 569 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.8 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 921 pc/h
Highest directional split proportion (note-2) 562 %
Base percent time-spent-following, BPTSF 55.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 55.5 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.29
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	595
Highest directional split proportion (note-2)	339
Base percent time-spent-following, BPTSF	40.7
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	40.7

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.19
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	Future (2035) Buildout + P
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	594 veh/h
Directional split	57 / 43 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	596
Highest directional split proportion (note-2)	340
	pc/h
	pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	30.4
	mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	676 pc/h
Highest directional split proportion (note-2)	365
Base percent time-spent-following, BPTSF	44.8 %
Adj.for directional distribution and no-passing zones, fd/np	0.0 %
Percent time-spent-following, PTSF	44.8 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.21
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	AM Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	Future (2035) Buildout + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%

Two-way hourly volume, V	675 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	678 pc/h
Highest directional split proportion (note-2)	366 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.7 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period AM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 300 veh/h
Directional split 53 / 47 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 304 pc/h
Highest directional split proportion (note-2) 161 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 27.6 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 301 pc/h
Highest directional split proportion (note-2) 160
Base percent time-spent-following, BPTSF 23.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.3
Percent time-spent-following, PTSF 23.6 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.09
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2528 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 842 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.7 LOS: C																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2370 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
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Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 790 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.6 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2449 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 816 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.1 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2488 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P _T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P _R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 f _{tw} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f _{LC} (mi/h): Access Points, A (A/mi): 0 f _A (mi/h): Median Type, M: f _M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 829 Speed, S (mi/h): 45.0 D (pc/mi/ln): 18.4 LOS: C			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1939 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS:			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 646 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.4 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1919 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): 45.0 Base Free-Flow Speed, BFFS:			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/h): 639 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.2 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/h): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1875 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _w (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 625 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1826 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _w (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 608 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1939 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P_T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P_R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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Operations Operational (LOS): Flow Rate, V_p (pc/hln): 646 Speed, S (mi/h): 45.0 D (pc/mi/h): 14.4 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2032 Peak-Hour Factor, PHF: 1.00 AADT(veh/h): %Trucks and Buses, P_T : 0 Peak-Hour Prop of AADT (veh/h): %RVs, P_R : 0 Peak-Hour Direction Prop. D: General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 f_{wv} (mi/h): Total Lateral Clearance, LC (ft): 12.0 f_{LC} (mi/h): Access Points, A (A/mi): 0 f_A (mi/h): Median Type, M: f_M (mi/h): FFS (measured): 45.0 FFS (mi/h): Base Free-Flow Speed, BFFS: FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 677 Speed, S (mi/h): 45.0 D (pc/mi/h): 15.0 LOS: B																								
Design Design (N): Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1949 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0																								
Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 649 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.4 LOS: B																								
Design (N) Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
		<table border="1"> <thead> <tr> <th>Application</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>Operational (LOS)</td> <td>FFS, N, V_p</td> <td>LOS, S, D</td> </tr> <tr> <td>Design (N)</td> <td>FFS, LOS, V_p</td> <td>N, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, V_p</td> <td>V_p, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, AADT</td> <td>LOS, S, D</td> </tr> <tr> <td>Planning (LOS)</td> <td>FFS, LOS, AADT</td> <td>N, S, D</td> </tr> <tr> <td>Planning (N)</td> <td>FFS, LOS, N</td> <td>V_p, S, D</td> </tr> </tbody> </table>		Application	Input	Output	Operational (LOS)	FFS, N , V_p	LOS, S, D	Design (N)	FFS, LOS, V_p	N , S, D	Planning (LOS)	FFS, LOS, V_p	V_p , S, D	Planning (N)	FFS, LOS, AADT	LOS, S, D	Planning (LOS)	FFS, LOS, AADT	N , S, D	Planning (N)	FFS, LOS, N	V_p , S, D
Application	Input	Output																						
Operational (LOS)	FFS, N , V_p	LOS, S, D																						
Design (N)	FFS, LOS, V_p	N , S, D																						
Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
Planning (N)	FFS, LOS, AADT	LOS, S, D																						
Planning (LOS)	FFS, LOS, AADT	N , S, D																						
Planning (N)	FFS, LOS, N	V_p , S, D																						
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: PM Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 2197 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Grade: 0.00 Driver Type Adjustment: 1.00 Up/Down %: Number of Lanes: 3																								
Calculate Flow Adjustments f_p : 1.00 E_R : 1.2 E_T : 1.5 f_{HV} : 1.000																								
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Calc Speed Adj and FFS f_{wv} (mi/h): f_{LC} (mi/h): f_A (mi/h): f_M (mi/h): FFS (mi/h): 45.0																								
Operations Operational (LOS): Flow Rate, V_p (pc/hln): 732 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.3 LOS: B																								
Design (N) Required Number of Lanes, N : Flow Rate, V_p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:																								

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Saint Cloud Drive
From/To Seal Beach Blvd to Yellowtail
Jurisdiction
Analysis Year Future (2035) Buildout + P
Description Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	1.00
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length mi	Access points/mi	8 /mi
Up/down	%		

Two-way hourly volume, V 1094 veh/h
Directional split 51 / 49 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate, (note-1) vp	1098 pc/h
Highest directional split proportion (note-2)	560 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 26.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 1096 pc/h
Highest directional split proportion (note-2)
Base percent time-spent-following, BPTSF 559 %
Adj. for directional distribution and no-passing zones, fd/np 61.8 %
Percent time-spent-following, PTSF 61.8 %

Level of Service and Other Performance Measures

Level of service, LOS C
Volume to capacity ratio, v/c 0.34
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	PM Peak Hour
Highway	Montecito Road
From/To	Yellowtail Dr to Copa de Oro D
Jurisdiction	Future (2035) Buildout + P
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data			
Highway class	Class 2		
Shoulder width	6.0 ft	Peak-hour factor, PHF	1.00
Lane width	12.0 ft	% Trucks and buses	2 %
Segment length	0.0 mi	% Recreational vehicles	4 %
Terrain type	Level	% No-passing zones	0 %
Grade:	Length mi	Access points/mi	8 /mi
Up/down	%		

Two-way hourly volume, V	761 veh/h
Directional split	53 / 47 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7*
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate, (note-1) vp	772 pc/h
Highest directional split proportion (note-2)	409 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	
Observed volume, Vf	35 mi/h
Estimated Free-Flow Speed:	0 veh/h
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	29.0 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate, (note-1) vp	763 pc/h
Highest directional split proportion (note-2)	404
Base percent time-spent-following, BPTSF	48.9 %
Adj. for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	48.9 %

Level of Service and Other Performance Measures	
Level of service, LOS	B
Volume to capacity ratio, v/c	0.24
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
* These items have been entered or edited to override calculated value

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Copa de Oro Dr to Mainway Dr
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 552 veh/h
Directional split 56 / 44 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 560 pc/h
Highest directional split proportion (note-2) 314 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 553 pc/h
Highest directional split proportion (note-2) 310
Base percent time-spent-following, BPTSF 38.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.1
Percent time-spent-following, PTSF 38.6 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.17
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Montecito Road
From/To Mainway Dr to Bradbury Rd
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 551 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 559 pc/h
Highest directional split proportion (note-2) 302 pc/h

Free-Flow Speed from Field Measurement:

Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h

Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 30.7 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 552 pc/h
Highest directional split proportion (note-2) 298
Base percent time-spent-following, BPTSF 38.4 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 38.5 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c
Peak 15-min vehicle-miles of travel, VMT15 0.17
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period PM Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data

Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2
Segment length 0.0 mi % Recreational vehicles 4
Terrain type Level % No-passing zones 0
Grade: Length mi Access points/mi 8
Up/down %

Two-way hourly volume, V 566 veh/h
Directional split 54 / 46 %

Average Travel Speed

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 574 pc/h
Highest directional split proportion (note-2) 310 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.5 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 567 pc/h
Highest directional split proportion (note-2) 306
Base percent time-spent-following, BPTSF 39.2 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 39.3 %

Level of Service and Other Performance Measures

Level of service, LOS A
Volume to capacity ratio, v/c 0.18
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2135 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 711 Speed, S (mi/h): 45.0 D (pc/mi/ln): 15.8 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: I405 NB Ramps to Lampson Ave Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2014 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{tw} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 671 Speed, S (mi/h): 45.0 D (pc/mi/ln): 14.9 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2367 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 789 Speed, S (mi/h): 45.0 D (pc/mi/ln): 17.5 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Lampson Av to St. Cloud Dr Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 2178 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: 45.0 FFS (measured): Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 726 Speed, S (mi/h): 45.0 D (pc/mi/ln): 16.1 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1866 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 622 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.8 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: St. Cloud Drive to Town Center Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1646 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calculated Speed Adj and FFS f _W (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 548 Speed, S (mi/h): 45.0 D (pc/mi/ln): 12.2 LOS: B			
Design (N) Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1736 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Town Center to Rossmore Center Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1609 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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MULTILANE HIGHWAYS WORKSHEET(Direction 1)																								
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1786 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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MULTILANE HIGHWAYS WORKSHEET(Direction 2)																								
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Planning (LOS)	FFS, LOS, V_p	V_p , S, D																						
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General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmoor		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Rossmoor Center to Bradbury Rd Jurisdiction: Future (2035) Buildout + P Analysis Year:																						
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)																								
Flow Inputs Volume, V (veh/h): 1840 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P_T : 0 %RVs, P_R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D : General Terrain: Level DDHV (veh/h): Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3																								
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MULTILANE HIGHWAYS WORKSHEET(Direction 1)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1822 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 607 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

MULTILANE HIGHWAYS WORKSHEET(Direction 2)			
General Information Analyst: NP Agency or Company: LSA Associates, Inc. Date Performed: 11/29/2016 Analysis Time Period: Sat Peak Hour Project Description: Health Club within the Shops at Rossmore		Site Information Highway/Direction to Travel: Seal Beach Boulevard From/To: Bradbury Rd to Rossmore Way Jurisdiction: Future (2035) Buildout + P Analysis Year:	
☒ Oper. (LOS) ☐ Des. (N) ☐ Plan. (vp)			
Flow Inputs Volume, V (veh/h): 1826 AADT(veh/h): Peak-Hour Factor, PHF: 1.00 %Trucks and Buses, P _T : 0 %RVs, P _R : 0 Peak-Hour Prop of AADT (veh/h): Peak-Hour Direction Prop, D: Level DDHV (veh/h): 0.00 Length (mi): 0.00 Driver Type Adjustment: 1.00 Up/Down %: 0.00 Number of Lanes: 3			
Calculate Flow Adjustments f _p : 1.00 E _R : 1.2 E _T : 1.5 f _{HV} : 1.000			
Speed Inputs Lane Width, LW (ft): 12.0 Total Lateral Clearance, LC (ft): 12.0 Access Points, A (A/mi): 0 Median Type, M: FFS (measured): 45.0 Base Free-Flow Speed, BFFS: 45.0			
Calc Speed Adj and FFS f _{ww} (mi/h): f _{LC} (mi/h): f _A (mi/h): f _M (mi/h): FFS (mi/h): 45.0			
Operations Operational (LOS): Flow Rate, v _p (pc/hln): 608 Speed, S (mi/h): 45.0 D (pc/mi/ln): 13.5 LOS: B			
Design Design (N): Required Number of Lanes, N: Flow Rate, v _p (pc/h): Max Service Flow Rate (pc/hln): Design LOS:			

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	1071
Highest directional split proportion (note-2)	557
Base percent time-spent-following, BPTSf	61.0
Adj.for directional distribution and no-passing zones, fd/np	0.0
Percent time-spent-following, PTSF	61.0
Level of Service and Other Performance Measures	
Level of service, LOS	C
Volume to capacity ratio, v/c	0.34
Peak 15-min vehicle-miles of travel, VMT15	0
Peak-hour vehicle-miles of travel, VMT60	0
Peak 15-min total travel time, TT15	0.0
	veh-h
	veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
	Fax:
Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Saint Cloud Drive
From/To	Seal Beach Blvd to Yellowtail
Jurisdiction	
Analysis Year	Future (2035) Buildout + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length
	Up/down
	%
Two-way hourly volume, V	1069 veh/h
Directional split	52 / 48 %
Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1073
Highest directional split proportion (note-2)	558
	pc/h
	pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	26.7
	mi/h

Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.2
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.996
Two-way flow rate,(note-1) vp	1073
Highest directional split proportion (note-2)	558
	pc/h
	pc/h
Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35
Observed volume, Vf	0
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	-
Adj. for lane and shoulder width, fLS	-
Adj. for access points, fA	-
	mi/h
	mi/h
	mi/h
Free-flow speed, FFS	35.0
	mi/h
Adjustment for no-passing zones, fnp	0.0
Average travel speed, ATS	26.7
	mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-Lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period Sat Peak Hour
Highway Montecito Road
From/To Yellowtail Dr to Copa de Oro D
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 752 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.7*
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.986
Two-way flow rate, (note-1) vp 763 pc/h
Highest directional split proportion (note-2) 412 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 35 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 35.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 29.1 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 754 pc/h
Highest directional split proportion (note-2) 407 %
Base percent time-spent-following, BPTSF 48.5 %
Adj. for directional distribution and no-passing zones, fd/np 0.0 %
Percent time-spent-following, PTSF 48.5 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.24
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
 2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.
- * These items have been entered or edited to override calculated value

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	514 pc/h
Highest directional split proportion (note-2)	278
Base percent time-spent-following, BPTSF	36.4 %
Adj.for directional distribution and no-passing zones, fd/np	0.1 %
Percent time-spent-following, PTSF	36.4 %

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.16
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Copa de Oro Dr to Mainway Dr
Jurisdiction	Future (2035) Buildout + P
Analysis Year	
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	513 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	520 pc/h
Highest directional split proportion (note-2)	281 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	31.0 mi/h

Percent Time-Spent-Following	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.1
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor, fHV	0.998
Two-way flow rate,(note-1) vp	459 pc/h
Highest directional split proportion (note-2)	248
Base percent time-spent-following, BPTSF	33.2 %
Adj.for directional distribution and no-passing zones, fd/np	0.1 %
Percent time-spent-following, PTSF	33.3 %

Level of Service and Other Performance Measures	
Level of service, LOS	A
Volume to capacity ratio, v/c	0.14
Peak 15-min vehicle-miles of travel, VMT15	0 veh-mi
Peak-hour vehicle-miles of travel, VMT60	0 veh-mi
Peak 15-min total travel time, TT15	0.0 veh-h

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

Phone:	
E-Mail:	
Fax:	

Two-Way Two-lane Highway Segment Analysis	
Analyst	NP
Agency/Co.	LSA Associates, Inc.
Date Performed	11/29/2016
Analysis Time Period	Sat Peak Hour
Highway	Montecito Road
From/To	Mainway Dr to Bradbury Rd
Jurisdiction	
Analysis Year	Future (2035) Buildout + P
Description	Health Club within the Shops at Rossmoor

Input Data	
Highway class	Class 2
Shoulder width	6.0 ft
Lane width	12.0 ft
Segment length	0.0 mi
Terrain type	Level
Grade:	Length mi
Up/down	%
Two-way hourly volume, V	458 veh/h
Directional split	54 / 46 %

Average Travel Speed	
Grade adjustment factor, fG	1.00
PCE for trucks, ET	1.7
PCE for RVs, ER	1.0
Heavy-vehicle adjustment factor,	0.986
Two-way flow rate,(note-1) vp	464 pc/h
Highest directional split proportion (note-2)	251 pc/h

Free-Flow Speed from Field Measurement:	
Field measured speed, SFM	35 mi/h
Observed volume, Vf	0 veh/h
Estimated Free-Flow Speed:	
Base free-flow speed, BFFS	- mi/h
Adj. for lane and shoulder width, fLS	- mi/h
Adj. for access points, fA	- mi/h
Free-flow speed, FFS	35.0 mi/h
Adjustment for no-passing zones, fnp	0.0 mi/h
Average travel speed, ATS	31.4 mi/h

Phone:
E-Mail:

Fax:

Two-Way Two-lane Highway Segment Analysis

Analyst NP
Agency/Co. LSA Associates, Inc.
Date Performed 11/29/2016
Analysis Time Period Sat Peak Hour
Highway Rossmoor Center Way
From/To Montecito Rd to E. Internal
Jurisdiction Future (2035) Buildout + P
Analysis Year
Description Health Club within the Shops at Rossmoor

Input Data
Highway class Class 2
Shoulder width 6.0 ft Peak-hour factor, PHF 1.00
Lane width 12.0 ft % Trucks and buses 2 %
Segment length 0.0 mi % Recreational vehicles 4 %
Terrain type Level % No-passing zones 0 %
Grade: Length mi Access points/mi 8 /mi
Up/down %

Two-way hourly volume, V 602 veh/h
Directional split 54 / 46 %

Average Travel Speed
Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.2
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, 0.996
Two-way flow rate, (note-1) vp 604 pc/h
Highest directional split proportion (note-2) 326 pc/h

Free-Flow Speed from Field Measurement:
Field measured speed, SFM 30 mi/h
Observed volume, Vf 0 veh/h
Estimated Free-Flow Speed:
Base free-flow speed, BFFS - mi/h
Adj. for lane and shoulder width, fLS - mi/h
Adj. for access points, fA - mi/h

Free-flow speed, FFS 30.0 mi/h
Adjustment for no-passing zones, fnp 0.0 mi/h
Average travel speed, ATS 25.3 mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG 1.00
PCE for trucks, ET 1.1
PCE for RVs, ER 1.0
Heavy-vehicle adjustment factor, fHV 0.998
Two-way flow rate, (note-1) vp 603 pc/h
Highest directional split proportion (note-2) 326
Base percent time-spent-following, BPTSF 41.1 %
Adj. for directional distribution and no-passing zones, fd/np 0.0
Percent time-spent-following, PTSF 41.1 %

Level of Service and Other Performance Measures

Level of service, LOS B
Volume to capacity ratio, v/c 0.19
Peak 15-min vehicle-miles of travel, VMT15 0 veh-mi
Peak-hour vehicle-miles of travel, VMT60 0 veh-mi
Peak 15-min total travel time, TT15 0.0 veh-h

Notes:

1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

APPENDIX D

ACCIDENT DATA



REPORT 8 - TOTAL COLLISIONS

01/01/2015 thru 12/31/2015

Total Count: 177

Jurisdiction(s): Seal Beach

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		10TH ST		Distance (ft)		450		Direction		N		Secondary Rd		OCEAN AV		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		361		Collision Date		20150317		Time		1619 Day TUE																					
Primary Collision Factor		STRTNG BCKNG				Violation		22106		Collision Type		HIT OBJECT		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date 20150918																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																	
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int																															
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		23		F		W						BACKING		S		A		0000		DODGE		2010		-		-		-		-		-		G															
2		DRVR		30		M		A						STOPPED		S		C		0000		HONDA		2006		-		-		-		-		-		W															

Primary Rd		10TH ST		Distance (ft)		57		Direction		S		Secondary Rd		PACIFIC COAST		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		002		Type		0		CalTrans		Badge		362		Collision Date		20150827		Time		1702 Day THU																			
Primary Collision Factor		IMPROP TURN				Violation		22107		Collision Type		SIDESWIPE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date 20160109																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																	
Hit and Run		Motor Vehicle Involved With				PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int																															
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		53		F		A		HNBD				ENT TRAF		-		A		0800		TOYOT		2014		-		3		N		-		M		G															
2		PRKD		998		-		HNBD						PARKED		W		C		0200		HARLE		2013		-		3		N		-		-		-															

Primary Rd		11TH ST		Distance (ft)		8		Direction		N		Secondary Rd		OCEAN AV		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		361		Collision Date		20150819		Time		1648 Day WED																					
Primary Collision Factor		DRVR ALC DRG				Violation		23152A		Collision Type		HIT OBJECT		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date 20160104																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																	
Hit and Run		Motor Vehicle Involved With				FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int																															
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		47		F		H		HBD-UI				BACKING		N		-		0000		GMC		2000		A		-		-		-		G		-															
2		PRKD		998		-				null						-		-		0000		CHEVR		2005		-		-		-		-		-		-															

Primary Rd		12TH ST		Distance (ft)		325		Direction		S		Secondary Rd		LANDING		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		362		Collision Date		20150416		Time		0933 Day THU																					
Primary Collision Factor		STRTNG BCKNG				Violation		22106		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date 20151002																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																	
Hit and Run		Motor Vehicle Involved With				PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int																															
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		41		M		A		HNBD				BACKING		N		A		0100		FORD		2005		-		3		N		-		M		G															
2		PRKD		998		-		HNBD						PARKED		S		A		0100		VOLKS		1965		-		3		N		-		-		-															

Primary Rd 14TH ST		Distance (ft) 7		Direction S		Secondary Rd		SEAL WY		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 257		Collision Date		20150329		Time 2132		Day SUN				
Primary Collision Factor		STRTNG BCKNG		Violation 22106		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20150916				
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	W	HNBD		BACKING	N	D	2200	FORD	2006	-	3	N	-	M	G	PASS		15	F	3	0	M	G
Primary Rd 1ST ST		Distance (ft) 325		Direction N		Secondary Rd		MARINA DR		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 300		Collision Date		20150125		Time 1455		Day SUN				
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HEAD-ON		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20150812				
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	37	F	O	HNBD		PROC ST	N	A	0000	TOYOT	2007	-	-	N	-	-	-								
Primary Rd 1ST ST		Distance (ft) 574		Direction S		Secondary Rd		PCH		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date		20150619		Time 1224		Day FRI				
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20151110				
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	M	W	HNBD		RGT TURN	W	F	2600	GMC	2000	-	3	N	-	M	G								
2	PRKD	998	-	HNBD			PARKED	-	A	0100	HYUND	2010	-	3	N	-	-	-								
Primary Rd 5TH ST		Distance (ft) 209		Direction S		Secondary Rd		PACIFIC COAST		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 257		Collision Date		20150113		Time 1748		Day TUE				
Primary Collision Factor		LANE CHANGE		Violation 21658A		Collision Type		SIDESWIPE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20150807				
Weather1 RAINING		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	85	F	W	HBD-NUI		PROC ST	N	A	0700	LEXUS	2012	-	3	N	-	L	G	PASS		86	F	3	0	L	G
2	PRKD	998	-			null		N	A	0100	JAGUA	2014	-	-	-	-	-	-								
Primary Rd 6TH ST		Distance (ft) 295		Direction N		Secondary Rd		OCEAN AV		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 423		Collision Date		20151205		Time 0957		Day SAT				
Primary Collision Factor		STRTNG BCKNG		Violation 22106		Collision Type		AUTO/PED		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date		20160120				
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		PED		Lighting		DAYLIGHT		Ped Action		IN RD,		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	M	B	HNBD		BACKING	W	A	0000	FORD	1997	-	-	N	-	G	-								
2	PRKD	998	-				STOPPED	S	A	0000	FORD	2002	-	-	N	-	-	-								
3	PED	44	M	H	HNBD		STOPPED	-	N	0000	-	-	-	-	N	-	-	-	PED	OTH VIS	44	M	9	3	-	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd 6TH ST		Distance (ft) 3		Direction N		Secondary Rd OCEAN AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 423		Collision Date 20151205		Time 0855		Day SAT					
Primary Collision Factor		UNKNOWN		Violation		Collision Type		BROADSIDE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With				PKD MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	998	-		IMP UNK	IMP UNK	OTHER	-	M	0000	-	-	-	M	-	-	-								
2	PRKD	998	-				PARKED	S	A	0000	FORD	2007	-	-	N	-	-	-							

Primary Rd ALMOND AV		Distance (ft) 0		Direction		Secondary Rd ALMOND		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 257		Collision Date 20151221		Time 2052		Day MON					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160225					
Weather1 CLOUDY		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With				FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	M	O	HNBD		LFT TURN	N	A	0100	HONDA	2002	-	3	M	-	M	G							

Primary Rd ALMOND AV		Distance (ft) 0		Direction		Secondary Rd BLUEBELL		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date 20151023		Time 1551		Day FRI					
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160201					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With				FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	M	W	HNBD		PROC ST	-	A	0700	FORD	2003	-	3	N	-	L	G							

Primary Rd ALMOND AV		Distance (ft) 33		Direction E		Secondary Rd DAHLIA CIR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date 20151230		Time 1317		Day WED						
Primary Collision Factor		UNKNOWN		Violation		Collision Type		HEAD-ON		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160121						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With				FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	87	M	W	HNBD		PROC ST	E	A	0000	CHEVR	2007	-	-	M	-	G	-	DRVR	OTH VIS	87	M	1	0	W	-

Primary Rd ALMOND AV		Distance (ft) 246		Direction E		Secondary Rd JASMIN CIR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 191		Collision Date 20150614		Time 1059		Day SUN					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HEAD-ON		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20151110					
Weather1 CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With				FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	60	F	H	HNBD		PROC ST	E	-	0000	TOYOT	2006	-	-	N	-	G	-							

Primary Rd		ALMOND AV		Distance (ft)		60		Direction		E		Secondary Rd		ROSE ST		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		361		Collision Date		20150520		Time		1221 Day WED	
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type		SIDESWIPE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20151021	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0			
Hit and Run				Motor Vehicle Involved With										PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																								Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	85	F	W			PROC ST	E	A	0000	MERCU	1997	-	-	-	-	G	-															
2	PRKD	998	-				PARKED	-	A	0000	CADIL	1989	-	-	-	-	-	-															

Primary Rd		ASTER		Distance (ft)		0		Direction				Secondary Rd		ALMOND		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		00S		Type		0		CalTrans		Badge		152		Collision Date		20150324		Time 2315 Day TUE	
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		HIT OBJECT		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20150918	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0			
Hit and Run				Motor Vehicle Involved With										FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																								Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	21	M		HNBD		PROC ST	S	A	0000	MITSU	2015	-	-	-	-	G	-															
2	PRKD	998	-				PARKED	-	A	0000	CADIL	1989	-	-	-	-	-	-															

Primary Rd		BALBOA DR		Distance (ft)		255		Direction				Secondary Rd		DRIFTWOOD AV		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		7		Beat		007		Type		0		CalTrans		Badge		174		Collision Date		20150118		Time 0545 Day SUN	
Primary Collision Factor				DRVR ALC DRG				Violation		23152A		Collision Type		HEAD-ON		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20150801			
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0					
Hit and Run				Motor Vehicle Involved With										OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info																								Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected										
1F	DRVR	27	M			DRUG	PROC ST	N	A	0000	BMW	2004	-	-	-	-	L	-																	
2	PRKD	998	-				PARKED	-	A	0000	HONDA	2011	-	-	-	-	-	-																	

Primary Rd		BIRCHWOOD AV		Distance (ft)		200		Direction		W		Secondary Rd		DAISY ST		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		ROVER		Type		0		CalTrans		Badge		178		Collision Date		20150903		Time 2007 Day THU	
Primary Collision Factor				DRVR ALC DRG				Violation		212005		Collision Type		REAR END		Severity		INJURY		#Killed		0		#Injured		1		Tow Away?		N		Process Date 20151124	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0			
Hit and Run				Motor Vehicle Involved With										BICYCLE		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																								Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	BICY	49	-	H	HBD-UI		PROC ST	E	L	0400	-	2011	-	3	N	-	-	-	BICY	COMP PN	49	M	1	1	P	W							
2	DRVR	50	M	H	HNBD		PROC ST	E	A	0100	INFIN	2006	-	3	N	-	M	G															

Primary Rd		BOLSA AV		Distance (ft)		0		Direction				Secondary Rd		BAYSIDE DR		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		298		Collision Date		20150404		Time 0404 Day SAT			
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type		HEAD-ON		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20151002	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0			
Hit and Run				Motor Vehicle Involved With										FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																								Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected								
1F	DRVR	16	M	H	HNBD		UNS TURN	E	A	0000	NISSA	2014	-	-	A	22350	-	G	-	PASS		16	F	3	0	G	-						

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		CENTER AV		Distance (ft)		0		Direction		Secondary Rd		11TH ST		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		362			
Primary Collision Factor		R-O-W AUTO		Violation		21802A		Collision Type		BROADSIDE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?			
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Process Date		20150801		Time			
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	60	M	O	HNBD		PROC ST	-	A	0100	FORD	2001	-	3	N	-	M	G									
2	DRVR	62	M	W	HNBD		PROC ST	W	A	0700	TOYOT	1970	-	3	N	-	M	G									
Primary Rd		CENTRAL AV		Distance (ft)		60		Direction		W		Secondary Rd		3RD ST		NCIC		3020 State Hwy?		Y Route		Postmile Prefix		Postmile			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		09011		Beat		Y0620		Type		0		CalTrans			
Primary Collision Factor		IMPROP TURN		Violation		22107		Collision Type		SIDESWIPE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?			
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Process Date		20160120		Time			
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	20	M	W			PROC ST	E	A	0000	TOYOT	2014	-	-	-	-	G	-									
2	PRKD	998	-				PARKED	-	D	0000	CHEVR	2010	-	-	-	-	-	-									
3	PRKD	998	-				PARKED	-	A	0000	NISSA	2005	-	-	-	-	-	-									
4	PRKD	998	-				PARKED	-	A	0000	AUDI	2015	-	-	-	-	-	-									
Primary Rd		CENTRAL AV		Distance (ft)		90		Direction		E		Secondary Rd		6TH ST		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		ROVER		Type		0		CalTrans		Badge			
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		SIDESWIPE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?			
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Process Date		20150807		Time			
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	31	F	W	HBD-UNK		PROC ST	E	-	0000	PONTI	1999	A	-	N	-	G	-									
2	PRKD	998	-				PARKED	E	-	0000	DODGE	2010	A	-	N	-	-	-									
Primary Rd		CENTRAL AV		Distance (ft)		0		Direction		W		Secondary Rd		8TH ST		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		3		Beat		SOUTH		Type		0		CalTrans			
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		BROADSIDE		Severity		PDO		#Killed		0		#Injured		0		Tow Away?			
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Process Date		20150817		Time			
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	24	F	W	HNBD		PROC ST	N	-	0000	VOLVO	2000	A	-	N	-	G	-									
2	DRVR	24	F	W	HNBD		PROC ST	W	-	0000	BMW	2013	A	-	N	-	G	-	PASS		998	M	3	3	G	-	
Primary Rd		COLLEGE PARK DR		Distance (ft)		473		Direction		W		Secondary Rd		HARVARD LN		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile			
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		363			
Primary Collision Factor		UNKNOWN		Violation		23103B		Collision Type		OVERTURNED		Severity		INJURY		#Killed		0		#Injured		1		Tow Away?			
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		HOLES		Rdwy Cond2		LOOSE MATRL		Spec Cond		0		Process Date		20150610			
Hit and Run		Motor Vehicle Involved With		NON-CLSN		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info															Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	18	M	W	HNBD		RGT TURN	N	C	0200	FORD	2001	-	3	A	22350	-	G	M	DRVR	COMP PN	18	M	1	0	G	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		DEL MONTE DR		Distance (ft) 45		Direction N		Secondary Rd		MCKINNEY WY		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date		20151230		Time 1441 Day WED			
Primary Collision Factor		UNKNOWN		Violation		Collision Type		HEAD-ON		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date		20160506			
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	72	F	W	IMP UNK	IMP UNK	PROC ST	N	A	0000	MAZDA 2016	-	-	N	-	G	-	DRVR	OTH VIS	72	F	1	0	G	-
2	PRKD	998	-				PARKED	N	A	0000	FORD 2016	-	-	N	-	-	-								
3	PRKD	998	-				PARKED	N	A	0000	TOYOT 1997	-	-	N	-	-	-								
Primary Rd		DOLPHIN ST		Distance (ft) 17		Direction N		Secondary Rd		OCEAN AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 178		Collision Date		20150127		Time 1822 Day TUE			
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		SIDESWIPE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150803			
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	70	F	W	IMP UNK	IMP UNK	PROC ST	N	D	0000	FORD 2006	-	-	N	-	G	-								
2	PRKD	998	-				PARKED	N	A	0000	HONDA 2011	-	-	N	-	-	-								
3	PRKD	998	-				PARKED	N	A	0000	MERCE 2002	-	-	N	-	-	-								
Primary Rd		ELECTRIC AV		Distance (ft) 13		Direction W		Secondary Rd		11TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 178		Collision Date		20150820		Time 2218 Day THU			
Primary Collision Factor		DRVR ALC DRG		Violation		23152A		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160104			
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	W		DRUG	PROC ST	N	A	0000	LINCO 2003	-	-	N	-	G	-								
Primary Rd		ELECTRIC AV		Distance (ft) 357		Direction E		Secondary Rd		MAIN ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date		20150904		Time 1511 Day FRI			
Primary Collision Factor		STRTNG BCKNG		Violation		22106		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160120			
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	66	F	W	HNBD		BACKING	-	A	0100	TOYOT 2005	-	3	N	-	M	G								
2	PRKD	998	-		HNBD		PARKED	-	A	0100	DODGE 2008	-	3	N	-	-	-								
Primary Rd		ELECTRIC AV		Distance (ft) 0		Direction		Secondary Rd		MARINE		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date		20151231		Time 1141 Day THU			
Primary Collision Factor		DRVR ALC DRG		Violation		23152A		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160217			
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	67	M	W	HBD-UI		PARKING	-	D	2200	CHEVR 2003	-	3	A	22350	-	M	G							
2	DRVR	60	F	H	HNBD		PARKED	-	A	0100	TOYOT 2002	-	3	N	-	-	M	G							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		FIR AV		Distance (ft) 58		Direction W		Secondary Rd		OLEANDER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat 006		Type 0		CalTrans		Badge 422		Collision Date		20150205		Time 2049 Day THU			
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20150826					
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With				PKD MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	39	M	W	HNBD		LFT TURN	W	A	0000	BMW	2009	-	-	A	23123	F	G	M						
2	PRKD	998	-		HNBD		PARKED	-	A	0000	FORD	2008	-	-	N	-	-	-							

Primary Rd		FIR AV		Distance (ft) 100		Direction E		Secondary Rd		ROSE ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date		20150719		Time 1709 Day SUN			
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20151218					
Weather1		RAINING		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With				OTHER OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	W	HNBD		LFT TURN	E	-	0000	FORD	2002	-	-	N	-	G	-							
2	PRKD	998	-				PARKED	-	-	0000	-	1987	-	-	N	-	-	-							

Primary Rd		FIRST ST		Distance (ft) 51		Direction S		Secondary Rd		MARINA DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 365		Collision Date		20151205		Time 0021 Day SAT			
Primary Collision Factor				DRVR ALC DRG		Violation 23152A		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225					
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	101	M	W	HBD-UI		PROC ST	S	A	0000	ACURA	2006	-	-	N	-	G	-							

Primary Rd		IRIS ST		Distance (ft) 107		Direction N		Secondary Rd		HAZELNUT AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat 206		Type 0		CalTrans		Badge 368		Collision Date		20150104		Time 2111 Day SUN			
Primary Collision Factor				DRVR ALC DRG		Violation 23152A		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150807					
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With				PKD MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	F	W	HBD-UI		PROC ST	S	-	0000	HONDA	1999	-	-	A	-	G	-							
2	PRKD	998	-				STOPPED	N	-	0000	JEEP	2000	-	-	A	-	-	-							

Primary Rd		LAMPSON		Distance (ft) 0		Direction		Secondary Rd		CANDLEBERRY		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 152		Collision Date		20151209		Time 1629 Day WED				
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		HIT OBJECT		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160121						
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	F	W	HNBD		RGT TURN	W	A	0000	JEEP	1991	-	-	N	-	-	-	DRVR	OTH VIS	27	-	1	3	-	-

Primary Rd LAMPSON		Distance (ft) 1		W		Secondary Rd		HEATHER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 314		Collision Date		20151208		Time 2151		Day TUE			
Primary Collision Factor		DRVR ALC DRG		Violation 23152A		Collision Type		HEAD-ON		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	36	F	H	HBD-UI		LFT TURN	N	A	0000	VOLKS 2014	-	-	-	-	G	-								

Primary Rd LAMPSON AV		Distance (ft) 75		Direction E		Secondary Rd		BASSWOOD AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist 19		Beat 006		Type 0		CalTrans		Badge 174		Collision Date		20150124		Time 1000		Day SAT			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150801					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	39	F		HNBD		PROC ST	E	A	0000	MAZDA 2005	-	-	N	-	G	-								
2	DRVR	42	M	W	HNBD		STOPPED	E	A	0000	HONDA 2000	-	-	N	-	G	-								
3	DRVR	46	F	H	HNBD		STOPPED	E	A	0000	VOLKS 2007	-	-	N	-	G	-								

Primary Rd LAMPSON AV		Distance (ft) 0		Direction E		Secondary Rd		HEATHER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20150508		Time 1357		Day FRI				
Primary Collision Factor		STOP SGN SIG		Violation 21453A		Collision Type		BROADSIDE		Severity		INJURY		#Killed 0		#Injured 4		Tow Away? Y		Process Date 20150610						
Weather1 CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	44	M	A	HNBD		PROC ST	-	A	0700	FORD 2014	-	3	M		N	L	G	DRVR	OTH VIS	44	M	1	3	L	G
2	DRVR	45	F	O	HNBD		LFT TURN	-	A	0700	TOYOT 2015	-	3	N		-	L	G	DRVR	COMP PN	45	F	1	0	L	G
																			PASS	OTH VIS	0	M	4	0	P	Q
3	DRVR	61	F	O	HNBD		STOPPED	W	A	0700	HYUND 2010	-	3	N		-	M	G	DRVR	COMP PN	61	F	1	3	M	G

Primary Rd LAMPSON AV		Distance (ft) 38		Direction E		Secondary Rd		HEATHER ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist 20		Beat NORTH		Type 0		CalTrans		Badge 313		Collision Date		20150104		Time 1903		Day SUN				
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20150304						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	67	F	W	HNBD		PROC ST	W	A	0100	NISSA 1997	-	3	N		-	M	G	DRVR	COMP PN	67	F	1	0	M	G
2	DRVR	19	M	W	HNBD		STOPPED	W	A	0100	TOYOT 2002	-	3	N		-	M	G	PASS		998	M	3	0	M	G

Primary Rd LAMPSON AV		Distance (ft) 0		Direction E		Secondary Rd		HEATHER ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20151218		Time 1438		Day FRI			
Primary Collision Factor		STOP SGN SIG		Violation 21453A		Collision Type		BROADSIDE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	40	F	O	HNBD		LFT TURN	-	A	0100	VOLKS 2013	-	3	N		-	M	G							
2	DRVR	49	F	O	HNBD		PROC ST	-	A	0100	TOYOT 2015	-	3	N		-	M	G							

Include State Highways cases

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Primary Rd LAMPSON AV		Distance (ft) 0		Direction		Secondary Rd		OLD RANCH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 006		Type 0		CalTrans		Badge 422		Collision Date		20150113		Time 2027		Day TUE			
Primary Collision Factor STOP SGN SIG				Violation 21453A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150801							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run											
Motor Vehicle Involved With				OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	M	W	HNBD		PROC ST	E	A	0000	TOYOT	2014	-	-	F	-	G	-							
2	DRVR	27	M	H	HNBD		LFT TURN	N	A	0000	NISSA	2005	-	-	N	-	G	-							

Primary Rd LAMPSON AV		Distance (ft) 0		Direction		Secondary Rd		TULIP		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20150321		Time 1052		Day SAT				
Primary Collision Factor UNSAFE SPEED				Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150918								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run												
Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	17	M	W	HNBD		PROC ST	-	A	0800	DODGE	1994	-	3	N	-	M	G								
2	DRVR	68	F	W	HNBD		STOPPED	-	A	0700	BUICK	2010	-	3	N	-	M	G	PASS		74	M	3	0	M	G
																		PASS		14	M	6	0	M	G	

Primary Rd LAMPSON ST		Distance (ft) 0		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date		20150804		Time 1343		Day TUE			
Primary Collision Factor IMPROP TURN				Violation 22107		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160104							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		CONS ZONE		Rdwy Cond2		Spec Cond 0		Hit and Run											
Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	53	M	W	HNBD		U-TURN	S	A	0000	DODGE	2014	-	-	N	-	G	-							
2	DRVR	58	M	W	HNBD		LFT TURN	S	A	0000	FORD	2003	-	-	N	-	-	-							

Primary Rd MAIN ST		Distance (ft) 47		Direction		Secondary Rd		ELECTRIC		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date		20150626		Time 1556		Day FRI				
Primary Collision Factor STRTNG BCKNG				Violation 22106		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20151110								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run												
Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	H	IMP UNK	IMP UNK	BACKING	E	D	2200	DODGE	2007	-	3	N	-	M	G								
2	DRVR	22	F	H	HNBD		PROC ST	N	A	0100	FORD	2008	-	3	N	-	M	G	PASS		5	F	5	0	M	Q

Primary Rd MAIN ST		Distance (ft) 220		Direction		Secondary Rd		OCEAN AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date		20150306		Time 0924		Day FRI			
Primary Collision Factor UNKNOWN				Violation		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150918							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run											
Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	40	F	W	HNBD		PROC ST	N	A	0700	JEEP	2012	-	3	N	-	M	G							
2	DRVR	998	M	W	HNBD		STOPPED	N	A	0100	CHEVR	2000	-	3	N	-	M	G							

Include State Highways cases

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Primary Rd MAIN ST		Distance (ft) 30		Direction S		Secondary Rd PACIFIC COAST		NCIC 3020		State Hwy? Y		Route 1		Postmile Prefix -		Postmile 33.18		Side of Hwy N							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	TRAFF	Type	0	CalTrans	12	Badge	298	Collision Date	20150416	Time	2153	Day	THU					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161202							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H		Ramp/Int -							
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	24	F		HNBD		PROC ST	W	A	0000	SATUR	2006	-	-	F	-	G	-							
2	DRVR	24	F		HNBD		STOPPED	W	A	0000	AUDI	2014	-	-	N	-	G	-							
Primary Rd MAIN ST		Distance (ft) 25		Direction W		Secondary Rd PCH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	006	Type	0	CalTrans		Badge	422	Collision Date	20150509	Time	2243	Day	SAT					
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20151014							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		Loc Type		Ramp/Int									
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	77	M	W	HNBD		PROC ST	N	-	0000	TOYOT	1999	-	-	F	-	G	M							
Primary Rd MARINA AV		Distance (ft) 0		Direction		Secondary Rd 5TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	SOUTH	Beat	001	Type	0	CalTrans		Badge	304	Collision Date	20150824	Time	1848	Day	MON				
Primary Collision Factor		NOT STATED		Violation		Collision Type		AUTO/PED		Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	N	Process Date 20151124							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		PED		Lighting		DUSK/DAWN		Ped Action		X-WLK AT		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	-	W	HNBD		PROC ST	W	B	0101	FORD	2006	-	3	A	21950	K	M	G						
2	PED	63	F	W	HNBD		PROC ST	S	N	6000	-	-	3	-	-	-	-	PED	SEVERE	63	F	0	0	P	-
3	PED	74	F	W	HNBD		PROC ST	S	N	6000	-	-	3	-	-	-	-	PED	SEVERE	74	F	0	0	P	-
Primary Rd MARINA DR		Distance (ft) 500		Direction W		Secondary Rd 1ST ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Q	Beat		Type	0	CalTrans		Badge	257	Collision Date	20150726	Time	1925	Day	SUN				
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type		HEAD-ON		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20151218							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	31	F	W	HBD-UI		PROC ST	W	A	0100	NISSA	2014	-	1	A	22350	-	M	G						
Primary Rd MARINA DR		Distance (ft) 0		Direction		Secondary Rd 5TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	002	Type	0	CalTrans		Badge	362	Collision Date	20150509	Time	1323	Day	SAT				
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20151014							
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	79	F	W	HNBD		UNS TURN	-	A	0700	HONDA	2000	-	3	N	-	N	G							
2	PRKD	998	-		HNBD		PARKED	N	A	0100	NISSA	2013	-	3	N	-	-	-							
3	PRKD	998	-		HNBD		PARKED	N	A	0100	TOYOT	2013	-	3	N	-	-	-							

Primary Rd MARINA DR		Distance (ft) 0		Direction		Secondary Rd		CARVEL AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	300	Collision Date	20150721	Time	1223	Day	TUE							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160809							
Weather1 CLEAR		Weather2		Rdwy Surface		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT FNCT		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	23	F	O			U-TURN	S	-	0000	MAZDA	2011	-	-	N	-	G	-							
2	DRVR	36	F	H			PROC ST	W	-	0000	JEEP	2014	-	-	N	-	G	-							

Primary Rd NORTHGATE RD		Distance (ft) 20		Direction		Secondary Rd		NORTHGATE		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	362	Collision Date	20150123	Time	1642	Day	FRI							
Primary Collision Factor		WRONG SIDE		Violation	21650	Collision Type	SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20150801							
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	F	W	HNBD		PASSING	E	A	0000	TOYOT	1994	-	-	N	-	G	-							
2	DRVR	68	F	W	HNBD		PROC ST	E	A	0000	TOYOT	2005	-	-	N	-	G	-							

Primary Rd NORTHGATE RD		Distance (ft) 185		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans	Badge	361	Collision Date	20150316	Time	1149	Day	MON							
Primary Collision Factor		R-O-W AUTO		Violation	21804A	Collision Type	REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20150918							
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	83	F	W			ENT TRAF	S	A	0000	TOYOT	2007	-	-	-	-	G	-							
2	DRVR	35	M	A			PROC ST	S	A	0000	KIA	2013	-	-	-	-	G	-							

Primary Rd OCEAN AV		Distance (ft) 0		Direction		Secondary Rd		8TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	1	Beat	007	Type	0	CalTrans	Badge	174	Collision Date	20150816	Time	1555	Day	SUN					
Primary Collision Factor		R-O-W AUTO		Violation	21802A	Collision Type	SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160104							
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	26	F	H	HNBD		PROC ST	S	A	0000	NISSA	2012	-	-	A	12500	-	G	-						
2	DRVR	49	F	W	HNBD		RGT TURN	E	A	0000	JEEP	2014	-	-	N	-	G	-							

Primary Rd OCEAN AV		Distance (ft) 0		Direction		Secondary Rd		MAIN ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	001	Type	0	CalTrans	Badge	362	Collision Date	20150606	Time	1153	Day	SAT						
Primary Collision Factor		UNKNOWN		Violation	22517A	Collision Type	SIDESWIPE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20151110							
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		BICYCLE		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	M	W	HNBD		PARKED	-	A	0700	HYUND	2012	-	3	N	-	M	G							
2	BICY	66	M	H	HNBD		RGT TURN	W	L	0400	-	-	3	A	21201	-	-	-	BICY	COMP PN 66	M	1	1	M	G

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd OCEAN AV		Distance (ft) 0		Direction		Secondary Rd		MAIN ST		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat	Type 0	CalTrans	Badge 362	Collision Date	20150725	Time 1722	Day SAT																			
Primary Collision Factor		DRVR ALC DRG		Violation 23152A		Collision Type		REAR END		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20150919										
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0																		
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int												
Party Info														Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	22	M	H		DRUG	PROC ST	-	D	2200	JEEP	1998	-	3	A	22350	-	M	G											
2	DRVR	38	F	W	HNBD		STOPPED	-	A	0700	HONDA	2008	-	3	N		-	N	G	DRVR	COMP PN	38	F	1	0	N	G			
																		PASS		38	M	3	0	M	G					
																		PASS		9	M	4	0	M	Q					
Primary Rd OCEAN AV		Distance (ft) 0		Direction		Secondary Rd		MAIN ST		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4	Rpt Dist 2	Beat 007	Type 0	CalTrans	Badge 174	Collision Date	20151209	Time 1626	Day WED																			
Primary Collision Factor		UNKNOWN		Violation		Collision Type		SIDESWIPE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160225										
Weather1 FOG		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0																		
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int												
Party Info														Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1	DRVR	71	M	A	HNBD		RGT TURN	W	A	0000	LEXUS	2005	-	-	N		-	G	-	PASS		64	F	3	0	G	-			
2	DRVR	63	M	W	HNBD		PROC ST	W	A	0000	TOYOT	2010	-	-	N		-	G	-											
Primary Rd PACIFIC COAST		Distance (ft) 0		Direction		Secondary Rd		10TH ST		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 33.141		Side of Hwy S										
City Seal Beach	County Orange	Population 4	Rpt Dist 10	Beat	Type 0	CalTrans	12	Badge 155	Collision Date	20150619	Time 0731	Day FRI																		
Primary Collision Factor		R-O-W AUTO		Violation 21802A		Collision Type		BROADSIDE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20161202										
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0																		
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type I		Ramp/Int 5												
Party Info														Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	62	F	W	HNBD		ENT TRAF	S	A	0100	FORD	2009	-	3	-		-	M	C											
2	DRVR	39	F		HNBD		PROC ST	E	A	0100	NISSA	2015	-	3	N		-	M	C											
Primary Rd PACIFIC COAST		Distance (ft) 0		Direction		Secondary Rd		12TH ST		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 33.01		Side of Hwy N										
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	12	Badge 362	Collision Date	20150530	Time 0723	Day SAT																		
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20161109										
Weather1 CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0																		
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type H		Ramp/Int -												
Party Info														Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	18	M	W	HNBD		PROC ST	-	A	0100	HONDA	2000	-	3	N		-	M	G											
2	DRVR	33	M	W	HNBD		PROC ST	-	C	0200	HARLE	2011	-	3	N		-	P	W	DRVR	OTH VIS	33	M	1	1	P	W			
Primary Rd PACIFIC COAST		Distance (ft) 118		Direction		N	Secondary Rd		1ST ST		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 33.64		Side of Hwy N									
City Seal Beach	County Orange	Population 4	Rpt Dist	Beat 002	Type 0	CalTrans	12	Badge 362	Collision Date	20150515	Time 1247	Day FRI																		
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161202										
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0																		
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type H		Ramp/Int -												
Party Info														Victim Info																
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected					
1F	DRVR	26	M	W	HNBD		LFT TURN	N	A	0100	LINCO	2002	-	3	N		-	M	G											

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		PACIFIC COAST		Distance (ft) 0		Direction		Secondary Rd		24TH ST		NCIC		3020		State Hwy?		Y		Route		1		Postmile Prefix		-		Postmile		31.46		Side of Hwy		S																			
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		002		Type		0		CalTrans		12		Badge		352		Collision Date		20150514		Time		1649		Day		THU															
Primary Collision Factor				DRVR ALC DRG		Violation		23152A		Collision Type		HIT OBJECT		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date		20161202																					
Weather1		RAINING		Weather2		Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																			
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H						Ramp/Int		-																									
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		34		M		W		HBD-UI				PROC ST		-		A		0100		ACURA		2003		-		3		A		22107		-		M		G															
Primary Rd		PACIFIC COAST		Distance (ft) 73		Direction		S		Secondary Rd		5TH ST		NCIC		3020		State Hwy?		Y		Route		1		Postmile Prefix		-		Postmile		33.41		Side of Hwy		N																	
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		12		Badge		257		Collision Date		20150330		Time		2144		Day		MON																	
Primary Collision Factor				UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date		20160922																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																			
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H						Ramp/Int		-																									
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		20		M		H		HNBD				PROC ST		W		A		0100		BMW		1999		-		3		N		-		M		G																	
2		DRVR		19		F		H		HNBD				STOPPED		W		A		0100		TOYOT		2015		-		3		N		-		M		G		PASS				19		F		3		0		M		G	
																																				PASS				18		M		4		0		P		G			
																																				PASS				16		M		5		0		P		G			
																																				PASS				18		M		6		0		P		G			
Primary Rd		PACIFIC COAST		Distance (ft) 120		Direction		W		Secondary Rd		ANDERSON ST		NCIC		3020		State Hwy?		Y		Route		1		Postmile Prefix		-		Postmile		31.13		Side of Hwy		S																	
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		12		Badge		363		Collision Date		20150101		Time		2316		Day		THU																	
Primary Collision Factor				DRVR ALC DRG		Violation		23152A		Collision Type		OVERTURNED		Severity		PDO		#Killed		0		#Injured		0		Tow Away?				Process Date		20160922																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																			
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		H						Ramp/Int		-																									
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		47		M		H		HBD-UI				PROC ST		E		A		0000		DODGE		2001		-		-		-		-		G		M																	
Primary Rd		PACIFIC COAST		Distance (ft) 0		Direction				Secondary Rd		ANDERSON ST		NCIC		3020		State Hwy?		Y		Route		1		Postmile Prefix		-		Postmile		31.1		Side of Hwy		N																	
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		12		Badge		363		Collision Date		20150227		Time		2252		Day		FRI																	
Primary Collision Factor				UNSAFE SPEED		Violation		22350		Collision Type		OTHER		Severity		INJURY		#Killed		0		#Injured		1		Tow Away?		Y		Process Date		20161025																					
Weather1		CLOUDY		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																			
Hit and Run				Motor Vehicle Involved With		NON-CLSN		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H						Ramp/Int		-																									
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		25		M		A		HNBD				PROC ST		N		-		0000		SUZUK		2006		-		3		M		-		M		W		PASS		OTH VIS		20		F		9		1		-		Y	
Primary Rd		PACIFIC COAST		Distance (ft) 335		Direction		W		Secondary Rd		ANDERSON ST		NCIC		3020		State Hwy?		Y		Route		1		Postmile Prefix		-		Postmile		31.17		Side of Hwy		N																	
City	Seal Beach	County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		12		Badge		363		Collision Date		20150418		Time		2132		Day		SAT																	
Primary Collision Factor				R-O-W AUTO		Violation		21804A		Collision Type		BROADSIDE		Severity		INJURY		#Killed		0		#Injured		1		Tow Away?				Process Date		20161109																					
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0																																			
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		H						Ramp/Int		-																									
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		33		M		B		HNBD				ENT TRAF		N		C		0000		KAWA		2012		-		-		N		-		W		-		DRVR		OTH VIS		32		M		1		1		W		-	

2		DRVR	19	M	H	HNBD	PROC ST		S	A	0000	HONDA 1996		-	-	N	-	G	-												
Primary Rd		PACIFIC COAST				Distance (ft)		0	Direction		Secondary Rd		EDISON POWER		NCIC	3020	State Hwy?		Y	Route	1	Postmile Prefix		-	Postmile	32.07	Side of Hwy		N		
City		Seal Beach	CA	92686	County	Orange	Population		4	Rpt Dist		Beat		Type	0	CalTrans		12	Badge	257	Collision Date		20150330		Time		0158	Day	MON		
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		SIDESWIPE		Severity		INJURY		#Killed		0	#Injured		1	Tow Away?		Y	Process Date		20161025
Weather1		CLEAR				Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H		Ramp/Int							
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Victim Info												
1F	DRVR	21	M	H	HBD-UNK			PROC ST	N	-	0000	HONDA	1999	-	3	N	-	L	B	DRVR	OTH VIS	21	M	1	0	L	B				
Primary Rd		PACIFIC COAST				Distance (ft)		0	Direction		Secondary Rd		MARINA DR		NCIC	3020	State Hwy?		Y	Route	1	Postmile Prefix		-	Postmile	33.281	Side of Hwy		N		
City		Seal Beach	CA	92686	County	Orange	Population		4	Rpt Dist		Beat		002	Type	0	CalTrans		12	Badge	362	Collision Date		20150521		Time		0759	Day	THU	
Primary Collision Factor				R-O-W AUTO				Violation		21801A		Collision Type		HEAD-ON		Severity		INJURY		#Killed		0	#Injured		2	Tow Away?		Y	Process Date		20161109
Weather1		CLEAR				Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		I		Ramp/Int		5					
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Victim Info												
1F	DRVR	22	F	H	HNBD			LFT TURN	-	A	0100	FORD	2014	-	3	N	-	M	G	DRVR	OTH VIS	22	F	1	3	M	G				
2	DRVR	63	F	W	HNBD			PROC ST	-	A	0100	FORD	2011	-	3	N	-	M	G	DRVR	COMP PN	63	F	1	0	M	G				
Primary Rd		PACIFIC COAST				Distance (ft)		765	Direction		S	Secondary Rd		PHILLIPS		NCIC	3020	State Hwy?		Y	Route		Postmile Prefix			Postmile		Side of Hwy			
City		Seal Beach	CA	92686	County	Orange	Population		4	Rpt Dist		Beat		Type	0	CalTrans			Badge	362	Collision Date		20150418		Time		1053	Day	SAT		
Primary Collision Factor				NOT DRIVER				Violation				Collision Type		OTHER		Severity		INJURY		#Killed		0	#Injured		1	Tow Away?			Process Date		20151002
Weather1		CLEAR				Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run				Motor Vehicle Involved With				BICYCLE		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type				Ramp/Int							
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Victim Info												
1	BICY	21	M	O	HNBD			PROC ST	-	L	0400	-	-	3	N	-	-	-	BICY	COMP PN	21	M	1	3	V	-					
Primary Rd		PACIFIC COAST				Distance (ft)		936	Direction		S	Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?		Y	Route	1	Postmile Prefix		-	Postmile	32.54	Side of Hwy		N	
City		Seal Beach	CA	92686	County	Orange	Population		4	Rpt Dist		Beat		Type	0	CalTrans		12	Badge	257	Collision Date		20150216		Time		0033	Day	MON		
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		HIT OBJECT		Severity		INJURY		#Killed		0	#Injured		1	Tow Away?		Y	Process Date		20161025
Weather1		CLEAR				Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H		Ramp/Int							
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Victim Info												
1F	DRVR	26	M	W	HBD-UNK			PROC ST	N	C	0200	HARLE	2003	-	3	N	-	P	W	DRVR	SEVERE	26	M	1	1	P	W				
Primary Rd		PACIFIC COAST				Distance (ft)		171	Direction		N	Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?		Y	Route	1	Postmile Prefix		-	Postmile	32.75	Side of Hwy		S	
City		Seal Beach	CA	92686	County	Orange	Population		4	Rpt Dist		Beat		Type	0	CalTrans		12	Badge	257	Collision Date		20150325		Time		1727	Day	WED		
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed		0	#Injured		2	Tow Away?		Y	Process Date		20161024
Weather1		CLEAR				Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		H		Ramp/Int							
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	Victim Info												
1F	DRVR	21	F	W	HNBD	FATG		PROC ST	S	A	0100	HONDA	2006	-	3	N	-	L	G	DRVR	OTH VIS	21	-	1	0	L	G				
2	DRVR	53	M	W	HNBD			STOPPED	S	A	0100	MERCE	2012	-	3	N	-	M	G												
3	DRVR	50	M	H	HNBD			STOPPED	S	A	0700	AMERI	1984	-	3	N	-	P	G	PASS	COMP PN	47	F	3	0	M	G				
																			PASS		15	F	4	0	M	C					

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															PASS	20	F	6	0	M	C														
Primary Rd	PACIFIC COAST		Distance (ft)	145	Direction	E	Secondary Rd	SEAL BEACH BL		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	3.69	Side of Hwy	N														
City	Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	191	Collision Date	20150422	Time	0811	Day	WED														
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20161109																	
Weather1	CLOUDY		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0																					
Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		FNCTNG	Loc Type	H	Ramp/Int		-																			
Party Info															Victim Info																				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected										
1F	DRVR	45	M	W	HNBD		PROC ST	W	A	0000	TOYOT	1997	-	-	A	21750	-	L	-	DRVR	OTH VIS	45	M	1	3	L	-								
2	DRVR	39	F	O	HNBD		STOPPED	W	D	0000	TOYOT	2004	-	-	-	-	G	-																	
Primary Rd															PACIFIC COAST		Distance (ft)	82	Direction	W	Secondary Rd	SEAL BEACH BL		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.7	Side of Hwy	S
City	Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		002	Type	0	CalTrans	12	Badge	362	Collision Date	20150510	Time	1323	Day	SUN													
Primary Collision Factor	DRVR ALC DRG		Violation	23152A	Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20161202																	
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0																					
Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		FNCTNG	Loc Type	H	Ramp/Int		-																			
Party Info															Victim Info																				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected										
1F	DRVR	36	F	W	HBD-UI		PROC ST	S	A	0100	MAZDA	2014	-	3	A	22350	-	L	G																
2	DRVR	24	M	H	HNBD		STOPPED	-	D	2200	DODGE	2004	-	3	N	-	M	G	PASS		18	F	3	0	M	G									
															PASS						0	M	5	0	P	Q									
Primary Rd	PCH		Distance (ft)	30	Direction	E	Secondary Rd	5TH ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	33.41	Side of Hwy	S														
City	Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		00S	Type	0	CalTrans	12	Badge	152	Collision Date	20150423	Time	1817	Day	THU													
Primary Collision Factor	UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20161109																	
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0																					
Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		FNCTNG	Loc Type	H	Ramp/Int		-																			
Party Info															Victim Info																				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected										
1F	DRVR	58	M	W	HNBD		PROC ST	E	-	0000	NISSA	2002	-	3	F	-	M	G																	
2	DRVR	61	M	W	HNBD		SLOWING	E	-	0000	TOYOT	2005	-	3	N	-	M	G	PASS	COMP PN	55	F	2	0	M	G									
Primary Rd	ROAD B		Distance (ft)	215	Direction	S	Secondary Rd	WESTMINSTER AV		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy															
City	Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		001	Type	0	CalTrans		Badge	362	Collision Date	20151106	Time	1137	Day	FRI													
Primary Collision Factor	WRONG SIDE		Violation	21650	Collision Type	BROADSIDE		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160210																	
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0																					
Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		FNCTNG	Loc Type	Ramp/Int																						
Party Info															Victim Info																				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected										
1F	DRVR	64	M	W	HNBD		RGT TURN	-	A	0100	HYUND	2014	-	3	M	-	M	G																	
2	DRVR	26	M	A	HNBD		PROC ST	-	A	0100	HONDA	2012	-	3	N	-	M	G																	
Primary Rd	RT 1		Distance (ft)	40	Direction	E	Secondary Rd	16TH ST		NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.81	Side of Hwy	S														
City	Seal Beach		County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	12	Badge	361	Collision Date	20150414	Time	0902	Day	TUE														
Primary Collision Factor	IMPROP TURN		Violation	22107	Collision Type	SIDESWIPE		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date	20161202																	
Weather1	CLEAR		Weather2	Rdwy Surface		DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2	Spec Cond		0																					
Hit and Run	Motor Vehicle Involved With		OTHER MV		Lighting	DAYLIGHT		Ped Action	Cntrl Dev		Loc Type		H	Ramp/Int		-																			
Party Info															Victim Info																				
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected										
1F	DRVR	80	F	W		PHYS	PROC ST	E	A	0000	TOYOT	2004	-	-	-	-	G	-																	
2	PRKD	998	-				PARKED	-	A	0000	FORD	2009	-	-	-	-	-	-																	
3	PRKD	998	-				PARKED	-	A	0000	CADIL	2007	-	-	-	-	-	-																	

Include State Highways cases

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Primary Rd RT 1		Distance (ft) 620		Direction N		Secondary Rd		1ST ST		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 32.74		Side of Hwy N					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		ROVER Type 0		CalTrans 12		Badge 178		Collision Date 20150218		Time 0736		Day WED					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160922							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type H		Ramp/Int -									
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	43	M	W	HNBD		PROC ST	N	A	0000	LEXUS 2006	-	-	M	-	G	-								
2	DRVR	39	M	H	HNBD		STOPPED	N	D	0000	CHEVR 1996	-	-	N	-	G	-								

Primary Rd RT 1		Distance (ft) 25		Direction E		Secondary Rd		1ST ST		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 3.36		Side of Hwy N					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans 12		Badge 361		Collision Date 20150316		Time 1431		Day MON					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160922							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type H		Ramp/Int -									
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	60	M	W			PROC ST	W	A	0000	TOYOT 2000	-	-	-	-	-	G								
2	DRVR	19	F	O			STOPPED	W	A	0000	HONDA 2008	-	-	-	-	-	G								

Primary Rd RT 1		Distance (ft) 45		Direction W		Secondary Rd		MAIN ST		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 33.2		Side of Hwy S					
City Seal Beach		County Orange		Population 4		Rpt Dist 2		Beat 00S		Type 0		CalTrans 12		Badge 313		Collision Date 20150112		Time 1141		Day MON					
Primary Collision Factor		DRVR ALC DRG		Violation 23152E		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160922							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type H		Ramp/Int -									
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	20	M	W		DRUG	PROC ST	E	F	0000	FORD 2000	-	-	A	22350	-	G	-							
2	DRVR	51	M	W	HNBD		STOPPED	E	A	0000	FORD 1991	-	-	N	-	G	-								

Primary Rd RT 1		Distance (ft) 345		Direction E		Secondary Rd		MARINER DR		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 31.37		Side of Hwy S						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans 12		Badge 361		Collision Date 20150223		Time 1048		Day MON						
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20161025								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type H		Ramp/Int -										
Party Info																Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	90	M	W	HNBD		LFT TURN	S	A	0000	HONDA		-	-	-	-	G	-	DRVR	COMP PN	90	M	1	3	G	-
																		PASS		65	M	3	3	G	-	
																		PASS		66	F	4	3	G	-	
2	DRVR	53	M	H	HNBD		PROC ST	W	A	0000	JEEP 2014	-	-	-	-	G	-									
3	DRVR	66	M	W	HNBD		PROC ST	E	A	0000	TOYOT 1998	-	-	-	-	G	-									
4	DRVR	32	M	W	HNBD		STOPPED	E	A	0000	FORD 1998	-	-	-	-	G	-									

Primary Rd RT 1		Distance (ft) 471		Direction W		Secondary Rd		MARINER DR		NCIC		3020 State Hwy?		Y Route 1		Postmile Prefix -		Postmile 33.36		Side of Hwy N					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans 12		Badge 300		Collision Date 20150629		Time 0834		Day MON					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161202							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		NON-CLSN		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type H		Ramp/Int -									
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	23	F		HNBD		SLOWING	N	-	0000	VOLKS 2012	-	-	N	-	G	-								

Include State Highways cases

Report Run On: 12/12/2016

2	DRVR	54	M	HNBD	PROC ST	N	-	0000	TOYOT 2013	-	-	N	-	G	-
3	DRVR	22	F	HNBD	PROC ST	N	-	0000	CHEVR 2003	-	-	A	-	G	-

Primary Rd		RT 1		Distance (ft)		2309		Direction		E		Secondary Rd		SEAL BEACH BL		NCIC		3020		State Hwy?		Y		Route		1		Postmile Prefix		-		Postmile		32.28		Side of Hwy		S																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		12		Badge		314		Collision Date		20150207		Time		1816		Day		SAT																					
Primary Collision Factor				NOT DRIVER				Violation				Collision Type				HEAD-ON				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20160922			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																					
Hit and Run				Motor Vehicle Involved With				OTHER OBJ				Lighting				DARK - ST				Ped Action				Cntrl Dev				NT PRS/FCTR				Loc Type				H				Ramp/Int				-															
																		Party Info										Victim Info																															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																		
1	DRVR	28	M	O	HNBD		PROC ST	E	A	0000	TOYOT	2010	-	-	N	-	G	-	PASS		7	M	6	0	G	-																																	
																		PASS		3	M	4	0	G	-																																		

Primary Rd	RT 1	Distance (ft)	2309	Direction	E	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.28	Side of Hwy	S						
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	TRAFFI Type	0	CalTrans	12	Badge	314	Collision Date	20150207	Time	1817	Day	SAT						
Primary Collision Factor	NOT DRIVER	Violation		Collision Type	HEAD-ON	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20160922										
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0														
Hit and Run		Motor Vehicle Involved With	OTHER OBJ	Lighting	DARK - ST	Ped Action		Cntrl Dev		NT PRS/FCTR	Loc Type	H		Ramp/Int	-										
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	36	M	H	HNBD		PROC ST	E	A	0000	BMW	2000	-	-	N	-	G	-							

Primary Rd	RT 1	Distance (ft)	243	Direction	E	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	1	Postmile Prefix	-	Postmile	32.67	Side of Hwy	N						
City	Seal Beach	County	Orange	Population	4	Rpt Dist	6	Beat	SOUTH	Type	0	CalTrans	12	Badge	313	Collision Date	20150314	Time	1823	Day	SAT				
Primary Collision Factor	UNSAFE SPEED			Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20160922								
Weather1	CLEAR	Weather2	Rdwy Surface			DRY	Rdwy Cond1	NO UNUSL CND			Rdwy Cond2	Spec Cond			0										
Hit and Run	Motor Vehicle Involved With			OTHER MV			Lighting	DAYLIGHT			Ped Action	Cntrl Dev			FNCTNG	Loc Type	H	Ramp/Int			-				
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	F	W	HNBD		PROC ST	W	A	0000	HYUND 2012	-	-	N	-	-	G								
2	DRVR	17	M	W	HNBD		STOPPED	W	D	0000	TOYOT 2013	-	-	N	-	-	G								

Primary Rd RT 1		Distance (ft) 0		Direction		Secondary Rd		SEAL BEACH BL		NCIC		3020		State Hwy? Y		Route 1		Postmile Prefix -		Postmile 32.73		Side of Hwy S			
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans 12		Badge 178		Collision Date		20150623		Time 1732		Day TUE			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20161202			
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type H		Ramp/Int -							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	F	W	HNBD		PROC ST	S	-	0000	KIA	2013	- -	N	-	G	-								
2	DRVR	22	M	O	HNBD		STOPPED	S	-	0000	SCION	2006	- -	N	-	G	-	PASS		27	F	3	0	G	-
3	DRVR	32	M	W	HNBD		PROC ST	S	-	0000	TOYOT	2013	- -	N	-	G	-								

Primary Rd	RT 405	Distance (ft)	200	Direction	S	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	Y	Route	405	Postmile Prefix	-	Postmile	22.6	Side of Hwy	N							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 044	Type	0	CalTrans	12	Badge	19290	Collision Date	20150606	Time	1823	Day	SAT							
Primary Collision Factor	UNSAFE SPEED	Violation	22350	Collision Type	REAR END	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20161202											
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0															
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev		NT PRS/FCTR	Loc Type	H		Ramp/Int	-											
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	M	W	HNBD		PROC ST	N	D	2200	FORD	2012	-	3	N	-	M	G	PASS		17	M	3	0	M	G
																		PASS		16	F	4	0	M	G	
																		PASS		17	F	6	0	M	G	

Include State Highways cases

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2	DRVR	50	M	W	HNBD	STOPPED	N	A	0100	TOYOT 2014	-	3	N	-	M	G	PASS	45	F	3	0	M	G			
3	DRVR	60	M	W	HNBD	STOPPED	N	A	0700	TOYOT 1997	-	3	N	-	M	G	PASS	52	F	3	0	M	G			
Primary Rd SAINT ANDREWS Distance (ft) 0 Direction Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 298 Collision Date 20150809 Time 1000 Day SUN Primary Collision Factor STOP SGN SIG Violation 21453A Collision Type BROADSIDE Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160104 Weather1 CLOUDY Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	43	M	W	HNBD		PROC ST	S	D	0000	FORD	2008	-	-	N	-	G	-								
2	DRVR	77	M	W	HNBD		LFT TURN	N	A	0000	NISSA	2010	-	-	N	-	G	-								
Primary Rd SEAL BEACH Distance (ft) 150 Direction N Secondary Rd BOLSA NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20150422 Time 1746 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 2 Tow Away? Y Process Date 20151002 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	47	F	H	HNBD		PROC ST	S	A	0100	BMW	2012	-	3	F	-	L	G	DRVR	COMP PN	47	-	1	0	M	G
																		PASS	OTH VIS	15	M	2	0	L	G	
2	DRVR	19	F	W	HNBD		STOPPED	S	A	0100	HONDA	2002	-	3	N	-	M	G								
3	DRVR	51	M	W	HNBD		STOPPED	S	A	0100	NISSA	2005	-	3	N	-	M	G								
4	DRVR	55	M	W	HNBD		STOPPED	S	A	0100	DODGE	2006	-	3	N	-	M	G								
Primary Rd SEAL BEACH Distance (ft) 120 Direction N Secondary Rd NORTH GATE NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00N Type 0 CalTrans Badge 152 Collision Date 20151117 Time 0841 Day TUE Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160618 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	91	F		HNBD		SLOWING	S	A	0100	BUICK	1998	-	3	F	-	M	G								
2	DRVR	71	F		HNBD		STOPPED	S	A	0100	NISSA	2011	-	3	N	-	M	G	DRVR	COMP PN	71	F	1	0	M	G
3	DRVR	48	F		HNBD		STOPPED	S	A	0100	DODGE	2008	-	3	N	-	M	G								
4	DRVR	54	F		HNBD		STOPPED	S	-	0000	NISSA	2012	-	3	N	-	M	G								
Primary Rd SEAL BEACH Distance (ft) 0 Direction Secondary Rd RT 405 NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist 10 Beat Type 0 CalTrans Badge 155 Collision Date 20150717 Time 1257 Day FRI Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? N Process Date 20151217 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved With OTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																										
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	F	H	HNBD		PROC ST	N	A	0100	HONDA	2005	-	3	A	22350	F	G	-							
2	DRVR	44	M		HNBD		PROC ST	-	-	0000	PORSC	2006	-	3	-	-	G	-								

Include State Highways cases

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Primary Rd SEAL BEACH BL		Distance (ft) 15		Direction S		Secondary Rd 1PLYMOUTH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 361		Collision Date 20150303		Time 0830 Day TUE							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20150921							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	20	M	W	HNBD		SLOWING	N	-	0000	HONDA 2008	A	-	-	-	G	-								
2	DRVR	69	F	A	HNBD		STOPPED	-	-	0000	BMW 2014	A	-	-	-	G	-								

Primary Rd SEAL BEACH BL		Distance (ft) 109		Direction S		Secondary Rd ADOLFO LOPEZ		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 365		Collision Date 20151030		Time 2159 Day FRI							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20151210							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	44	M	H	HNBD		PROC ST	S	D	0000	NISSA 2012	-	-	F	-	G	-	DRVR	COMP PN 44	M	1	0	G	-	
2	DRVR	53	M	H	HNBD		STOPPED	S	I	0000	OTHER 2001	-	-	N	-	G	-	PASS		57	M	9	0	-	-
																		PASS		998	-	9	3	-	-

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd APOLLO		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date 20150510		Time 1627 Day SUN							
Primary Collision Factor		LANE CHANGE		Violation 21658A		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20151022							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	M	W	HNBD		CHANG LN	S	A	0100	VOLKS 1996	-	3	N	-	M	G								
2	DRVR	28	M	W	HNBD		PROC ST	-	A	0100	HONDA 2013	-	3	N	-	M	G	PASS		18	F	3	0	M	G
																		PASS		18	F	4	0	M	G
																		PASS		18	M	6	0	M	G

Primary Rd SEAL BEACH BL		Distance (ft) 20		Direction N		Secondary Rd BOLSA		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00S		Type 0		CalTrans		Badge 152		Collision Date 20150827		Time 0922 Day THU							
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20150917							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		CONS ZONE		Rdwy Cond2		REDUCED RD		Spec Cond 0											
Hit and Run		Motor Vehicle Involved With		BICYCLE		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	63	F	H	HNBD		RGT TURN	S	A	0000	NISSA 1997	-	-	F	-	G	-								
2	BICY	63	M	W	HNBD		PROC ST	S	L	0000	-	-	-	N	-	-	-	BICY	COMP PN 63	M	1	1	W	-	

Primary Rd SEAL BEACH BL		Distance (ft) 35		Direction S		Secondary Rd BOLSA AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat ROVER		Type 0		CalTrans		Badge 178		Collision Date 20150203		Time 1926 Day TUE							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date 20150316							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	70	M	W	HNBD		PROC ST	S	A	0000	PORSC 2006	-	-	N	-	-	G								
2	DRVR	68	F	W	HNBD		PROC ST	S	A	0000	TOYOT 2004	-	-	N	-	-	G	DRVR	COMP PN 68	F	1	0	-	-	G

Include State Highways cases

Report Run On: 12/12/2016

														PASS	COMP PN 76		F	3	0	-	G						
Primary Rd	SEAL BEACH BL		Distance (ft)		0	Direction		Secondary Rd		BRADBURY		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach		County		Orange	Population		4	Rpt Dist		Beat	001	Type	0	CalTrans		Badge	362	Collision Date		20151226	Time	1231	Day	SAT		
Primary Collision Factor			STOP SGN SIG			Violation		21453A		Collision Type		BROADSIDE		Severity		PDO		#Killed	0	#Injured	0	Tow Away?		Y	Process Date		20160217
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run			Motor Vehicle Involved With					OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	55	F	H	HNBD		PROC ST	-	A	0700	CHEVR	1997	- 3	N		-	L M										
2	DRVR	22	F	O	HNBD		LFT TURN	-	D	2200	FORD	2008	- 3	N		-	M G	PASS		23	M	3	0	M	G		
Primary Rd	SEAL BEACH BL		Distance (ft)		75	Direction		Secondary Rd		ELECTRIC AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach		County		Orange	Population		4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans		Badge	361	Collision Date		20150128	Time	0747	Day	WED		
Primary Collision Factor			IMPROP TURN			Violation		22107		Collision Type		BROADSIDE		Severity		PDO		#Killed	0	#Injured	0	Tow Away?		Y	Process Date		20150812
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run			Motor Vehicle Involved With					OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																		Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	66	M	W			LFT TURN	S	A	0000	CHEVR	2015	- -	-		-	G -										
2	DRVR	48	M	W			PROC ST	N	A	0000	TOYOT	2013	- -	-		-	G -										
Primary Rd	SEAL BEACH BL		Distance (ft)		0	Direction		Secondary Rd		ELECTRIC AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach		County		Orange	Population		4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans		Badge	246	Collision Date		20150713	Time	1852	Day	MON		
Primary Collision Factor			UNKNOWN			Violation				Collision Type		BROADSIDE		Severity		PDO		#Killed	0	#Injured	0	Tow Away?		Y	Process Date		20151217
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run			Motor Vehicle Involved With					OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																		Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	69	F	W	HNBD		PROC ST	S	A	0100	NISSA	1997	- -	N		-	L -										
2	DRVR	53	F	W	HNBD		LFT TURN	E	A	0700	LAND	2009	- -	N		-	L -										
Primary Rd	SEAL BEACH BL		Distance (ft)		0	Direction		Secondary Rd		LAMPSON AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach		County		Orange	Population		4	Rpt Dist		Beat	206	Type	0	CalTrans		Badge	368	Collision Date		20150111	Time	1950	Day	SUN		
Primary Collision Factor			STOP SGN SIG			Violation		21453A		Collision Type		BROADSIDE		Severity		INJURY		#Killed	0	#Injured	2	Tow Away?		Y	Process Date		20150316
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run			Motor Vehicle Involved With					OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	52	M	A		PHYS	PROC ST	N	A	0000	FORD	2013	- -	-		-	G -	DRVR	COMP PN 52	M	1	0	G	-			
2	DRVR	31	M	A	HNBD		LFT TURN	E	A	0000	HONDA	1995	- -	-		-	G -	PASS	COMP PN 28	F	3	0	G	-			
																		PASS		5	F	5	0	Q	-		
Primary Rd	SEAL BEACH BL		Distance (ft)		110	Direction		S	Secondary Rd		LAMPSON AV		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach		County		Orange	Population		4	Rpt Dist		Beat	ROVER	Type	0	CalTrans		Badge	178	Collision Date		20151006	Time	1933	Day	TUE		
Primary Collision Factor			UNSAFE SPEED			Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed	0	#Injured	2	Tow Away?		Y	Process Date		20160618
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run			Motor Vehicle Involved With					OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	81	F	W	HNBD		PROC ST	N	-	0000	FORD	2011	- -	N		-	L -	DRVR	OTH VIS	81	F	1	0	G	L		
2	DRVR	47	F	W	HNBD		STOPPED	N	-	0000	TOYOT	2004	- -	N		-	G -	DRVR	COMP PN 47	F	1	0	G	M			

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		MARLIN		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy															
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		00S		Type		0		CalTrans		Badge		152		Collision Date		20151104		Time		0720		Day		WED			
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type				REAR END				Severity		PDO		#Killed		0		#Injured		0		Tow Away?		N		Process Date				20160210	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0											
Hit and Run				Motor Vehicle Involved With								OTHER MV				Lighting		DAYLIGHT				Ped Action				Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																				Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	16	F	W	HNBD		PROC ST	-	A	0000	HONDA	2007	-	-	F	-	G	-																							
2	DRVR	17	F	W	HNBD		STOPPED	-	A	0000	FORD	1994	-	-	N	-	G	-																							

Primary Rd		SEAL BEACH BL		Distance (ft) 183		Direction		Secondary Rd		NORTH GATE		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy															
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		006		Type		0		CalTrans		Badge		Collision Date		20150204		Time		2124		Day		WED					
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type				REAR END				Severity		PDO		#Killed		0		#Injured		0		Tow Away?				Process Date				20150826	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0											
Hit and Run				Motor Vehicle Involved With								OTHER MV				Lighting		DARK - ST				Ped Action				Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																				Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	57	F	A	HNBD		PROC ST	S	A	0000	LEXUS	2000	-	-	F	-	G	M																							
2	DRVR	63	M	W	HNBD		STOPPED	S	D	0000	FORD	2004	-	-	N	-	G	M																							

Primary Rd		SEAL BEACH BL		Distance (ft) 65		Direction		Secondary Rd		NORTH GATE RD		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy															
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat				Type		0		CalTrans		Badge		257		Collision Date		20150804		Time		0002		Day		TUE			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type				REAR END				Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date				20151230	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0											
Hit and Run				Motor Vehicle Involved With								OTHER MV				Lighting		DARK - ST				Ped Action				Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																				Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	26	F	W	HNBD		PROC ST	S	A	0100	MERCE	1984	-	3	A	14601	-	M	G																						
2	DRVR	24	F	W	HNBD		STOPPED	S	A	0700	JEEP	2014	-	3	N	-	M	G																							
3	DRVR	45	F	H	HNBD		STOPPED	S	D	2200	TOYOT	2000	-	3	A	12500	N	M	G																						

Primary Rd		SEAL BEACH BL		Distance (ft) 150		Direction		Secondary Rd		NORTHGATE		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy															
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		00N		Type		0		CalTrans		Badge		152		Collision Date		20150117		Time		0625		Day		SAT			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type				INJURY				Severity		PDO		#Killed		0		#Injured		1		Tow Away?		Y		Process Date				20160428	
Weather1				Weather2		Rdwy Surface								Rdwy Cond1								Rdwy Cond2				Spec Cond				0											
Hit and Run				Motor Vehicle Involved With												Lighting						Ped Action				Cntrl Dev				Loc Type		Ramp/Int									
Party Info																				Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	36	M	H	HNBD		SLOWING	S	A	0100	FORD	2000	-	3	A	22350	F	M	G																						
2	DRVR	46	M	O	HNBD		STOPPED	S	A	0100	CHRY	2013	-	3	N	-	M	G	DRVR	COMP PN	46	-	1	0	M	G															

Primary Rd		SEAL BEACH BL		Distance (ft) 445		Direction		Secondary Rd		NORTHGATE RD		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy															
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat				Type		0		CalTrans		Badge		361		Collision Date		20151027		Time		0811		Day		TUE			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type				REAR END				Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date				20160203	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY				Rdwy Cond1				NO UNUSL CND				Rdwy Cond2				Spec Cond				0											
Hit and Run				Motor Vehicle Involved With								OTHER MV				Lighting		DAYLIGHT				Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info																				Victim Info																					
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																
1F	DRVR	42	F	W	HNBD		STOPPED	S	-	0000	HONDA	2011	A	-	-	-	G	-																							
2	DRVR	62	F	O	HNBD		STOPPED	S	-	0000	TOYOT	2003	A	-	-	-	G	-																							
3	DRVR	41	F	W	HNBD		STOPPED	-	-	0000	LEXUS	2006	A	-	-	-	G	-																							
4	DRVR	42	F	W	HNBD		STOPPED	S	-	0000	FORD	2013	A	-	-	-	G	-																							

Primary Rd		SEAL BEACH BL		Distance (ft)		667		Direction		N		Secondary Rd		NORTHGATE RD		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		001		Type		0		CalTrans		Badge		362		Collision Date		20151129		Time		1354		Day		SUN																									
Primary Collision Factor				LANE CHANGE				Violation				21658A				Collision Type				SIDESWIPE				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20160209			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2						Spec Cond		0																																							
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action								Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																							
Party Info																												Victim Info																																			
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	30	F	H	HNBD		CHANG LN	-	A	0700	JEEP	1998	-	3	N	-	M	G	PASS		33	M	3	0	M	G																																					
2	DRVR	58	M	W	HNBD		PROC ST	S	A	0100	MERCE	2010	-	3	N	-	M	G																																													

Primary Rd		SEAL BEACH BL		Distance (ft)		359		Direction		S		Secondary Rd		OAK RANCH		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		21		Type		0		CalTrans		Badge		313		Collision Date		20151129		Time		2038		Day		SUN																									
Primary Collision Factor				IMPROP TURN				Violation				22107				Collision Type				SIDESWIPE				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				Y				Process Date				20160922			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2						Spec Cond		0																																							
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DARK - ST				Ped Action								Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																							
Party Info																												Victim Info																																			
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	16	M	W	HNBD		PROC ST	N	A	0000	GMC	2003	-	-	N	-	G	-																																													
2	DRVR	17	M	W	HNBD		PROC ST	N	A	0000	LEXUS	1999	-	-	N	-	G	-																																													

Primary Rd		SEAL BEACH BL		Distance (ft)		500		Direction		E		Secondary Rd		OLD RANCH PKWY		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		106		Type		0		CalTrans		Badge		251		Collision Date		20150113		Time		1408		Day		TUE																									
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				REAR END				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				Y				Process Date				20150806			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2						Spec Cond		0																																							
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action								Cntrl Dev				NT PRS/FCTR				Loc Type				Ramp/Int																							
Party Info																												Victim Info																																			
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	69	F	W	HNBD		CHANG LN	S	-	0000	LEXUS	2001	-	D	N	-	G	-																																													
2	DRVR	41	F	W	HNBD		SLOWING	E	-	0000	MERCE	2011	-	D	N	-	G	-																																													

Primary Rd		SEAL BEACH BL		Distance (ft)		145		Direction		S		Secondary Rd		OLD RANCH PKY		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		ROVER		Type		0		CalTrans		Badge		178		Collision Date		20150101		Time		2146		Day		THU																									
Primary Collision Factor				IMPROP TURN				Violation				22107				Collision Type				BROADSIDE				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				Y				Process Date				20160531			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2						Spec Cond		0																																							
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DARK - ST				Ped Action								Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																							
Party Info																												Victim Info																																			
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	22	M	H	HNBD		U-TURN	S	-	0000	TOYOT	2014	A	-	N	-	G	-																																													
2	DRVR	23	M	W	HNBD		PROC ST	S	-	0000	JEEP	2011	A	-	N	-	G	-																																													

Primary Rd		SEAL BEACH BL		Distance (ft)		0		Direction				Secondary Rd		OLD RANCH PKY		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																																	
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat				Type		0		CalTrans		Badge		361		Collision Date		20150826		Time		1154		Day		WED																									
Primary Collision Factor				STOP SGN SIG				Violation				21453A				Collision Type				BROADSIDE				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20160104			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2						Spec Cond		0																																							
Hit and Run				Motor Vehicle Involved With				BICYCLE				Lighting				DAYLIGHT				Ped Action								Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																							
Party Info																												Victim Info																																			
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	BICY	27	M	A			PROC ST	N	L	0000	-	-	-	-	-	-	-	-																																													
2	DRVR	53	F	W		null		E	-	0000	TOYOT	2009	-	-	-	-	G	-																																													

Include State Highways cases

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Primary Rd SEAL BEACH BL		Distance (ft) 53		Direction S		Secondary Rd		OLD RANCH PKY		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20151113		Time 1504		Day FRI			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160209							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	O	HNBD		PROC ST	-	A	0100	FORD	2008	-	3	N	-	M	G							
2	DRVR	69	F	W	HNBD		STOPPED	E	A	0100	HYUND	2015	-	2	N	-	M	G							

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		PACIFIC COAST		NCIC 3020		State Hwy? Y		Route 1		Postmile Prefix -		Postmile 32.721		Side of Hwy N					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date		20150319		Time 0959		Day THU			
Primary Collision Factor		LANE CHANGE		Violation 21658A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160922							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type I		Ramp/Int 5									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	77	F	W	HNBD		LFT TURN	-	A	0800	TOYOT	2004	-	3	N	-	M	G							
2	DRVR	32	M	W	HNBD		LFT TURN	-	A	0100	HONDA	1996	-	3	N	-	B	G							

Primary Rd SEAL BEACH BL		Distance (ft) 40		Direction N		Secondary Rd		PACIFIC COAST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 361		Collision Date		20150818		Time 1516		Day TUE			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160104							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	55	M	W	HNBD		PROC ST	S	D	0000	DODGE	2004	-	-	-	-	G	-							
2	DRVR	54	M	W	HNBD		STOPPED	S	A	0000	BMW	2011	-	-	-	-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 385		Direction N		Secondary Rd		PCH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00S		Type 0		CalTrans		Badge 152		Collision Date		20150805		Time 0546		Day WED				
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		HIT OBJECT		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160726								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int										
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	57	M	W	IMP UNK	IMP UNK	PROC ST	N	A	0100	CHRY	1998	-	3	F	-	L	G	DRVR	OTH VIS	57	M	1	0	L	G

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		PCH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 206		Type 0		CalTrans		Badge 368		Collision Date		20151004		Time 0028		Day SUN			
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160201							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	44	M	W	IMP UNK	IMP UNK	PROC ST	S	A	0000	NISSA	2005	-	-	-	-	G	-							
2	DRVR	20	M	H	HNBD		PROC ST	S	A	0000	TOYOT	2010	-	-	-	-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 10		Direction N		Secondary Rd PLYMOUTH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 429		Collision Date 20151220		Time 1107 Day SUN							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date 20160126							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	66	F	W	HNBD		PROC ST	S	A	0000	-	2014	-	-	G	-	G	-							
2	DRVR	51	F	A	HNBD		STOPPED	S	A	0000	BMW	2011	-	-	G	-	G	-	DRVR	COMP PN 51	F	1	3	-	-
																		PASS	COMP PN 15	F	3	3	G	-	
3	DRVR	74	F	W	HNBD		STOPPED	S	A	0000	DODGE	2015	-	-	G	-	G	-							
4	DRVR	34	M	W	HNBD		STOPPED	S	A	0000	TOYOT	2013	-	-	G	-	G	-							
5	DRVR	58	F	W	HNBD		STOPPED	S	A	0000	BMW	2003	-	-	G	-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 105		Direction S		Secondary Rd RD C		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 241		Type 0		CalTrans		Badge 251		Collision Date 20151023		Time 1849 Day FRI							
Primary Collision Factor		WRONG SIDE		Violation 21651A		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160201							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	67	M		HNBD		PROC ST	N	A	0000	GMC	2003	-	-	N	-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 42		Direction N		Secondary Rd ROSSMOOR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 429		Collision Date 20151228		Time 1151 Day MON							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20160322							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	W	HNBD		PROC ST	S	A	0000	FORD	1998	-	-	G	-	G	-	DRVR	COMP PN 75	M	1	3	G	-
2	DRVR	75	M	W	HNBD		STOPPED	S	A	0000	TOYOT	2006	-	-	G	-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd ROSSMOOR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date 20150514		Time 1446 Day THU							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20151014							
Weather1 RAINING		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	84	F	W	HNBD		PROC ST	N	A	0100	KIA	2013	-	3	N	-	M	G							
2	DRVR	66	M	O	HNBD		STOPPED	-	A	0100	AUDI	2014	-	3	N	-	M	G							

Primary Rd SEAL BEACH BL		Distance (ft) 212		Direction N		Secondary Rd ROSSMOOR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date 20151101		Time 0710 Day SUN							
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160209							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	H	IMP UNK	IMP UNK	CHANG LN	N	A	0100	CHEVR	2014	-	3	N	-	M	G							
2	DRVR	43	F	H	HNBD		PROC ST	N	A	0100	VOLVO	2003	-	3	N	-	M	G							

Include State Highways cases

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Primary Rd SEAL BEACH BL		Distance (ft) 35		Direction S		Secondary Rd ROSSMOOR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach	County Orange			Population 4	Rpt Dist	Beat		Type 0	CalTrans		Badge 257	Collision Date		20151015		Time 1925		Day THU							
Primary Collision Factor		LANE CHANGE		Violation 21658A	Collision Type		REAR END		Severity PDO	#Killed 0		#Injured 0	Tow Away? Y		Process Date 20160129										
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	55	F	A	HNBD		CHANG LN	S	A	0100	LEXUS 2005	-	3	A	22350	N	M	G							
2	DRVR	47	M	A	HNBD		STOPPED	S	I	2000	NABOR 2001	-	3	N		-	M	C							

Primary Rd SEAL BEACH BL		Distance (ft) 345		Direction N		Secondary Rd RT 1		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach	County Orange			Population 4	Rpt Dist 6	Beat 007		Type 0	CalTrans		Badge 174	Collision Date		20150315		Time 1230		Day SUN								
Primary Collision Factor		UNSAFE SPEED		Violation 22350	Collision Type		REAR END		Severity INJURY	#Killed 0		#Injured 2	Tow Away? Y		Process Date 20160428											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int										
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	M	W	HNBD		PROC ST	S	A	0000	TOYOT 2012	-	-	F		-	G	-	PASS	COMP PN 7	M	4	0	Q	-	
																		PASS	COMP PN 9	F	6	0	G	-		
2	DRVR	49	F	W	HNBD		STOPPED	S	A	0000	MITSU 2013	-	-	N		-	G	-								
3	DRVR	51	M	W	HNBD		STOPPED	S	A	0000	VOLKS 2014	-	-	N		-	G	-	PASS		50	F	3	0	G	-

Primary Rd SEAL BEACH BL		Distance (ft) 18		Direction N		Secondary Rd SAINT ANDREWS		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach	County Orange			Population 4	Rpt Dist	Beat PATRO		Type 0	CalTrans		Badge 314	Collision Date		20150928		Time 1923		Day MON								
Primary Collision Factor		STOP SGN SIG		Violation 21453A	Collision Type		BROADSIDE		Severity INJURY	#Killed 0		#Injured 1	Tow Away? Y		Process Date 20151124											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int										
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	36	F	H			PROC ST	S	A	0000	NISSA 2015	-	-	N		-	G	-	PASS		25	F	6	0	G	-
																		PASS		61	F	3	0	G	-	
2	DRVR	67	F	W			LFT TURN	W	A	0000	HONDA 2008	-	-	N		-	G	-	DRVR	COMP PN 67	F	1	0	G	-	

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd SAINT ANDREWS		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach	County Orange			Population 4	Rpt Dist	Beat 001		Type 0	CalTrans		Badge 362	Collision Date		20151114		Time 1838		Day SAT							
Primary Collision Factor		STOP SGN SIG		Violation 21453A	Collision Type		BROADSIDE		Severity INJURY	#Killed 0		#Injured 2	Tow Away? Y		Process Date 20160209										
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	F	H	HNBD		PROC ST	S	A	0100	HONDA 2008	-	3	N		-	L	G	DRVR	COMP PN 25	F	1	0	L	G
2	DRVR	61	F	W	HNBD		LFT TURN	-	A	0100	TOYOT 2013	-	3	N		-	L	G	DRVR	COMP PN 61	F	1	0	L	G

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd SAINT ANDREWS		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach	County Orange			Population 4	Rpt Dist	Beat 00N		Type 0	CalTrans		Badge 317	Collision Date		20150516		Time 1637		Day SAT							
Primary Collision Factor		STOP SGN SIG		Violation 21453A	Collision Type		BROADSIDE		Severity PDO	#Killed 0		#Injured 0	Tow Away? Y		Process Date 20151022										
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	F	A	HNBD		PROC ST	S	A	0100	TOYOT 2010	-	3	N		-	M	G							
2	DRVR	83	F	W		null		W	A	0100	CHEVR 2013	-	-	-		-	M	G							

Include State Highways cases

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Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd SAINT ANDREWS		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach		County Orange		Population 4		Rpt Dist 11		Beat		Type 0		CalTrans		Badge 368		Collision Date 20151219		Time 2009 Day SAT								
Primary Collision Factor IMPROP TURN				Violation 22107		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 3		Tow Away? Y		Process Date 20160121								
Weather1 CLOUDY		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With OTHER MV				Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	74	F	W	HNBD		PROC ST	N	A	0100	NISSA	2015	-	3	-	-	L G	DRVR	COMP PN 74	F	1	0	L	G		
2	DRVR	63	M	W	HNBD		STOPPED	N	D	2200	TOYOT	2008	-	3	-	-	M G	DRVR	COMP PN 63	M	1	0	M	G		
														PASS		COMP PN 59	F	3	0	M	G					
Primary Rd SEAL BEACH BL		Distance (ft) 65		Direction S		Secondary Rd SAINT CLOUD DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach		County Orange		Population 4		Rpt Dist 20		Beat		Type 0		CalTrans		Badge 313		Collision Date 20151114		Time 1742 Day SAT								
Primary Collision Factor UNSAFE SPEED				Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160209								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With OTHER MV				Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	88	F	W	HNBD		PROC ST	N	A	0000	TOYOT	2008	-	-	-	-	G -									
2	DRVR	61	F	W	HNBD		STOPPED	N	A	0000	FORD	2006	-	-	N	-	G -	PASS		66	M	3	3	G	-	
Primary Rd SEAL BEACH BL		Distance (ft) 104		Direction S		Secondary Rd ST CLOUD ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 304		Collision Date 20151208		Time 1450 Day TUE								
Primary Collision Factor UNSAFE SPEED				Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With OTHER MV				Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	79	M	W	HNBD		PROC ST	N	A	0000	CHEVR	2014	-	-	F	-	G -									
2	DRVR	52	F	W	HNBD		STOPPED	N	A	0000	SUBAR	2013	-	-	N	-	G -									
3	DRVR	53	F		HNBD		STOPPED	N	A	0000	MERCE	2000	-	-	N	-	G -									
Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd TOWN CENTER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 362		Collision Date 20151217		Time 1643 Day THU								
Primary Collision Factor IMPED TRAFFIC				Violation 22526A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With OTHER MV				Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	34	M	W	HNBD		PROC ST	E	A	0700	ACURA	2013	-	3	N	-	N G	PASS		36	F	3	0	L	G	
2	DRVR	35	M	W	HNBD		PROC ST	-	A	0100	CHEVR	2015	-	3	N	-	M G									
Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd TOWN CENTER DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 257		Collision Date 20150804		Time 2015 Day TUE								
Primary Collision Factor OTHER HAZ				Violation 21451A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160104								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With OTHER MV				Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	54	F	B	HNBD		PROC ST	-	A	0100	HONDA	2006	-	3	N	-	L G									
2	DRVR	70	F	W	HNBD		PROC ST	E	A	0100	TOYOT	2010	-	3	N	-	L G	PASS		71	M	3	0	L	G	

Primary Rd		SEAL BEACH BL		Distance (ft) 292		Direction N		Secondary Rd		TOWN CENTER DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20150815		Time 1240 Day SAT							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160104									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	18	F	W	HNBD		PROC ST	-	A	0100	SATUR	2002	-	3	N	-	L	G	DRVR	OTH VIS	18	F	1	0	L	G	
														PASS			20	M	6	0	M	G					
														PASS			18	M	3	0	P	G					
2	DRVR	57	F	W	HNBD		STOPPED	S	A	0800	HONDA	2013	-	3	N	-	M	G	PASS		11	F	3	0	M	G	
3	DRVR	19	F	O	HNBD		STOPPED	S	A	0700	LEXUS	2001	-	3	N	-	M	G									
Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		TOWN CENTER DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 304		Collision Date		20151021		Time 1748 Day WED							
Primary Collision Factor		NOT STATED		Violation		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20151120									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	25	M	W	HNBD		PROC ST	S	-	0000	HYUND	2014	A	-	N	-	M	G									
2	DRVR	27	F	H	HNBD		LFT TURN	N	-	0000	FORD	2010	A	-	N	-	M	-									
Primary Rd		SEAL BEACH BL		Distance (ft) 68		Direction S		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 365		Collision Date		20150522		Time 1826 Day FRI							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HIT OBJECT		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20150626									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	54	M	W	HNBD		RGT TURN	S	-	0000	HONDA	2001	-	2	N	-	G	-	DRVR	COMP PN	54	M	1	1	G	-	
Primary Rd		SEAL BEACH BL		Distance (ft) 446		Direction S		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat ROVER		Type 0		CalTrans		Badge 178		Collision Date		20150603		Time 1805 Day WED							
Primary Collision Factor		LANE CHANGE		Violation 21658A		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20151110									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int											
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	28	F	W	HNBD		PASSING	N	-	0000	TOYOT	2007	-	-	N	-	G	-									
2	DRVR	41	F	W	HNBD		CHANG LN	N	-	0000	INFIN	2014	-	-	N	-	G	-	PASS		3	M	4	0	Q	-	
														PASS			6	M	6	0	Q	-					
Primary Rd		SEAL BEACH BL		Distance (ft) 190		Direction S		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date		20150712		Time 1547 Day SUN							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		OTHER		Severity INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20150825									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	51	M	B	HNBD		SLOWING	N	C	0000	YAMAH	2002	-	-	N	-	W	-	DRVR	COMP PN	51	M	1	0	W	-	

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		SEAL BEACH BL		Distance (ft) 25		Direction N		Secondary Rd		WESTMINSTER AV NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy							
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 300		Collision Date		20150810		Time 0017 Day MON					
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160809							
Weather1		CLEAR		Weather2		Rdwy Surface		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	18	F	H	HBD-UI		PROC ST	N	A	0000	DODGE	2009	-	-	A	23136	-	G	-	PASS		20	M	3	0	G	-
Primary Rd		SEAL BEACH BL		Distance (ft) 40		Direction N		Secondary Rd		WESTMINSTER AV NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy							
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 365		Collision Date		20151114		Time 0343 Day SAT					
Primary Collision Factor				DRVR ALC DRG		Violation 23152A		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160209							
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	24	M	W	HBD-UI		LFT TURN	N	A	0000	HONDA	2006	-	-	A	22107	-	G	-	PASS							
Primary Rd		SEAL BEACH BL		Distance (ft) 60		Direction N		Secondary Rd		WESTMINSTER AV NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy							
City		Seal Beach		County Orange		Population 4		Rpt Dist 11		Beat		Type 0		CalTrans		Badge 368		Collision Date		20151219		Time 1848 Day SAT					
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		OVERTURNED		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160121							
Weather1		CLOUDY		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	19	M	H	HNBD		PROC ST	N	D	2200	NISSA	2008	-	3	-	-	L	G	PASS	COMP PN	19	F	3	0	L	G	
Primary Rd		SEAL BEACH BL		Distance (ft) 500		Direction N		Secondary Rd		WESTMINSTER BL NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy							
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 423		Collision Date		20150121		Time 1915 Day WED					
Primary Collision Factor				IMPROP TURN		Violation 22107		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 2		Tow Away?		Process Date 20150304							
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	M	W	HNBD		LFT TURN	W	A	0000	CHRYSL	1997	-	-	N	-	G	-	PASS		50	F	3	0	G	-	
2	DRVR	55	M	W	HNBD		PROC ST	S	C	0000	HARLE	2010	-	-	N	-	W	-	DRVR	SEVERE	55	M	1	0	W	-	
																		PASS	SEVERE	49	F	2	1	Y	-		
Primary Rd		SEAL BEACH BL		Distance (ft) 15		Direction N		Secondary Rd		WESTMINSTER BL NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy							
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 361		Collision Date		20150121		Time 0655 Day WED					
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150812							
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	54	M	W	HNBD		PROC ST	S	A	0000	TOYOT	2007	-	-	-	-	G	-									
2	DRVR	34	M	W	HNBD		STOPPED	S	A	0000	FORD	2013	-	-	-	-	G	-									

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		SEAL BEACH BL		Distance (ft) 48		Direction S		Secondary Rd		WESTMINSTER BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange				Population 4		Rpt Dist		Beat		PATRO Type 0		CalTrans		Badge 314		Collision Date		20150216		Time 0057		Day MON	
Primary Collision Factor				DRVR ALC DRG		Violation 23152A		Collision Type SIDESWIPE				Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20150820					
Weather1 CLEAR		Weather2		Rdwy Surface DRY				Rdwy Cond1 NO UNUSL CND				Rdwy Cond2				Spec Cond 0									
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	53	F	W	HBD-UI		RGT TURN	N	A	0000	TOYOT	2002	-	-	-	-	G	-							

Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		WESTMINSTER BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange				Population 4		Rpt Dist		Beat 007		Type 0		CalTrans		Badge 363		Collision Date		20150412		Time 2241		Day SUN	
Primary Collision Factor				DRVR ALC DRG		Violation 23152A		Collision Type HIT OBJECT				Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160719					
Weather1 CLEAR		Weather2		Rdwy Surface DRY				Rdwy Cond1 NO UNUSL CND				Rdwy Cond2				Spec Cond 0									
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	H	HBD-UI		PROC ST	S	-	0000	TOYOT	2012	A	-	A	22350	-	G	M						

Primary Rd		SEAL BEACH BL		Distance (ft) 336		Direction S		Secondary Rd		WESTMINSTER BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy				
City Seal Beach		County Orange				Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 423		Collision Date		20151211		Time 0939		Day FRI		
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type HIT OBJECT				Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160225						
Weather1 CLEAR		Weather2		Rdwy Surface WET				Rdwy Cond1 NO UNUSL CND				Rdwy Cond2				Spec Cond 0										
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	42	M	H	HNBD		RAN OFF RD	S	D	0000	CHEVR	1991	-	-	K	-	G	-	PASS		34	M	3	0	G	-

Primary Rd		SEAL BEACH BL		Distance (ft) 97		Direction S		Secondary Rd		WESTMINSTER BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy				
City Seal Beach		County Orange				Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date		20151224		Time 1423		Day THU		
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type HIT OBJECT				Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160121						
Weather1 CLEAR		Weather2		Rdwy Surface DRY				Rdwy Cond1 NO UNUSL CND				Rdwy Cond2				Spec Cond 0										
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																		Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	56	M	W	HNBD		PROC ST	S	C	0200	HONDA	2015	-	3	N	-	P	W	DRVR	OTH VIS	56	M	1	1	P	W

Primary Rd		SOUTHSHORE		Distance (ft) 350		Direction N		Secondary Rd		BOLSA		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange				Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date		20150207		Time 1202		Day SAT	
Primary Collision Factor				UNKNOWN		Violation		Collision Type OTHER				Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20150825					
Weather1 CLEAR		Weather2		Rdwy Surface DRY				Rdwy Cond1 NO UNUSL CND				Rdwy Cond2				Spec Cond 0									
Hit and Run				Motor Vehicle Involved With				PKD MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	PRKD	998	-		HNBD		PARKING	S	A	0700	TOYOT	2012	-	3	N	-	-	-							
2	PRKD	998	-		HNBD		PARKING	S	A	0100	TOYOT	1999	-	3	N	-	-	-							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		ST CLOUD		Distance (ft)	150	Direction	S	Secondary Rd		DRUID LN		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach		County	Orange		Population	4	Rpt Dist		Beat		Type	0	CalTrans		Badge	361	Collision Date	20150728	Time	0643	Day	TUE		
Primary Collision Factor		IMPROP TURN			Violation	22107		Collision Type	HEAD-ON		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date 20151207					
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Vehicle Involved With					FIXED OBJ		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	88	M	A	HNBD		RAN OFF RD	W	-	0000	NISSA	2002	-	-	-	-	G	-							

Primary Rd		WESTMINSTER AV		Distance (ft)	0	Direction		Secondary Rd		APOLLO		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach		County	Orange		Population	4	Rpt Dist		Beat	001	Type	0	CalTrans		Badge	362	Collision Date	20150730	Time	1601	Day	THU		
Primary Collision Factor		UNSAFE SPEED			Violation	22350		Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20151207					
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Vehicle Involved With					OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type		Ramp/Int						
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	38	F	W	HNBD		PROC ST	E	A	0100	CHRY	2004	-	3	N	-	L	G							
2	DRVR	31	M	H	HNBD		STOPPED	E	A	0100	VOLVO	2001	-	3	N	-	L	G							

Primary Rd		WESTMINSTER AV		Distance (ft)	30	Direction	E	Secondary Rd		APOLLO		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach		County	Orange		Population	4	Rpt Dist		Beat	00N	Type	0	CalTrans		Badge	152	Collision Date	20151118	Time	0710	Day	WED		
Primary Collision Factor		UNKNOWN			Violation			Collision Type	HIT OBJECT		Severity	INJURY		#Killed	0	#Injured	2	Tow Away?	N	Process Date 20151221					
Weather1				Weather2		Rdwy Surface			Rdwy Cond1			Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Vehicle Involved With					BICYCLE		Lighting			Ped Action		Cntrl Dev	NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	BICY	45	M		HNBD		PROC ST	W	L	0400	-	-	3	M	-	-	-	BICY	OTH VIS	45	-	1	1	P	W
2	BICY	31	M		HNBD		PROC ST	W	L	0400	-	-	3	N	-	-	-	BICY	COMP PN	31	M	1	1	P	W

Primary Rd		WESTMINSTER AV		Distance (ft)	1104	Direction	W	Secondary Rd		BOLSA CHICA		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach		County	Orange		Population	4	Rpt Dist		Beat		Type	0	CalTrans		Badge	362	Collision Date	20150725	Time	1016	Day	SAT		
Primary Collision Factor		UNSAFE SPEED			Violation	22350		Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20151207					
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Vehicle Involved With					OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev	FNCTNG		Loc Type		Ramp/Int						
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	F	H	HNBD		PROC ST	-	A	0100	CHEVR	2013	-	3	N	-	L	G							
2	DRVR	19	F	W	HNBD		STOPPED	-	A	0100	MERCE	2005	-	3	N	-	M	G							

Primary Rd		WESTMINSTER AV		Distance (ft)	78	Direction	W	Secondary Rd		BOLSA CHICA		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach		County	Orange		Population	4	Rpt Dist		Beat	002	Type	0	CalTrans		Badge	362	Collision Date	20151016	Time	0722	Day	FRI		
Primary Collision Factor		UNSAFE SPEED			Violation	22350		Collision Type	REAR END		Severity	PDO		#Killed	0	#Injured	0	Tow Away?	N	Process Date 20160204					
Weather1		CLEAR		Weather2		Rdwy Surface	DRY		Rdwy Cond1	NO UNUSL CND		Rdwy Cond2		Spec Cond	0										
Hit and Run		Motor Vehicle Involved With					OTHER MV		Lighting	DUSK/DAWN		Ped Action		Cntrl Dev	FNCTNG		Loc Type		Ramp/Int						
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	M	W	HNBD		PROC ST	E	A	0700	KIA	2014	-	3	N	-	M	G							
2	DRVR	48	M	H	HNBD		STOPPED	-	D	2200	CHEVR	2002	-	3	N	-	M	G							

Primary Rd		WESTMINSTER AV		Distance (ft)	4484	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	006	Type	0	CalTrans	Badge	363	Collision Date	20150117	Time	0236	Day	SAT							
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20150801							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	23	F	B	HBD-UI		PROC ST	E	A	0000	HONDA	2004	-	-	A	22350	G	G	M	PASS		18	M	3	0	G	-
																		PASS		21	M	5	0	G	-		
2	DRVR	39	M		HNBD		STOPPED	-	A	0000	TOYOT	2002	-	-	G	-	G	M									
Primary Rd		WESTMINSTER AV		Distance (ft)	180	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	006	Type	0	CalTrans	Badge	363	Collision Date	20150314	Time	1814	Day	SAT							
Primary Collision Factor		STRTNG BCKNG		Violation	22106	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20150918							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		CONS ZONE		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	24	M	W	HNBD		BACKING	W	D	0000	DODGE	1998	-	-	N	-	-	G									
Primary Rd		WESTMINSTER AV		Distance (ft)	530	Direction	E	Secondary Rd		ISLAND VILLAGE		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans	Badge	246	Collision Date	20150716	Time	0248	Day	THU							
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20151218							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	25	M	W	HBD-UI		PROC ST	E	A	0000	PONTI	2008	-	-	A	22107	-	M	-	PASS		25	M	3	0	M	-
Primary Rd		WESTMINSTER AV		Distance (ft)	0	Direction		Secondary Rd		KITTS		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	001	Type	0	CalTrans	Badge	362	Collision Date	20150306	Time	1623	Day	FRI							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20150918							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	21	M	O	HNBD		PROC ST	W	A	0700	SUBAR	1998	-	3	N	-	M	G									
2	DRVR	48	M	W	HNBD		PARKING	-	C	0200	TRIUM	2001	-	3	N	-	P	W									
Primary Rd		WESTMINSTER AV		Distance (ft)	786	Direction	E	Secondary Rd		KITTS		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	002	Type	0	CalTrans	Badge	362	Collision Date	20151022	Time	0635	Day	THU							
Primary Collision Factor		LANE CHANGE		Violation	21658A	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20160201							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	52	M	W	HNBD		CHANG LN	E	A	0100	CHEVR	1995	-	3	N	-	M	G									
2	DRVR	21	F	H	HNBD		PROC ST	-	A	0100	HONDA	2006	-	3	N	-	M	G									

Primary Rd WESTMINSTER AV		Distance (ft) 0		Direction		Secondary Rd		KITTS HWY		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	422	Collision Date	20150327	Time	1225	Day	FRI							
Primary Collision Factor		STOP SGN SIG		Violation	21453A	Collision Type	BROADSIDE		Severity	INJURY	#Killed	0	#Injured	2	Tow Away?	Y	Process Date	20160428								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		MV ON OTHER RD		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	70	M	W	HNBD		PROC ST	E	A	0000	CHRY	2003	-	-	F	-	G	M	DRVR	COMP PN	69	M	1	0	G	-
2	DRVR	56	F	H	HNBD		LFT TURN	N	A	0000	NISSA	1999	-	-	N	-	G	M	DRVR	COMP PN	56	F	1	0	G	-
Primary Rd WESTMINSTER AV		Distance (ft) 575		Direction		E	Secondary Rd		KITTS RD		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	TRAFFI	Type	0	CalTrans	Badge	246	Collision Date	20150527	Time	1828	Day	WED							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type	SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20151021								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	62	M	W	HNBD		PROC ST	W	A	0000	MITSU	2010	-	-	N	-	M	-								
2	DRVR	64	F	A	HNBD		PROC ST	W	A	0000	LEXUS	2005	-	-	N	-	M	-								
Primary Rd WESTMINSTER AV		Distance (ft) 315		Direction		E	Secondary Rd		ROAD B		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	246	Collision Date	20150217	Time	2340	Day	TUE							
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type	HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20150820								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	26	F	W	HBD-UI		PROC ST	E	A	0000	KIA	2012	-	-	A	22107	-	L	-							
Primary Rd WESTMINSTER AV		Distance (ft) 740		Direction		E	Secondary Rd		ROAD C		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	11	Beat	006	Type	0	CalTrans	Badge	174	Collision Date	20150315	Time	1508	Day	SUN						
Primary Collision Factor		UNKNOWN		Violation		Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date	20150422								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	85	F	W	HNBD		U-TURN	E	A	0000	NISSA	2006	-	-	N	-	G	-								
2	DRVR	45	M	W	HNBD		PROC ST	E	C	0000	HARLE	2007	-	-	N	-	W	-	DRVR	OTH VIS	45	M	1	1	W	-
Primary Rd WESTMINSTER AV		Distance (ft) 15		Direction		E	Secondary Rd		SEAL BEACH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	00N	Type	0	CalTrans	Badge	152	Collision Date	20150107	Time	1205	Day	WED							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type	REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20150312								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	32	M		HNBD		SLOWING	W	A	0000	TOYOT	2011	-	-	F	-	G	-								
2	DRVR	71	F		HNBD		STOPPED	W	A	0000	NISSA	2001	-	-	N	-	G	-	DRVR	COMP PN	71	-	1	0	G	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		WESTMINSTER AV		Distance (ft)	185	Direction	E	Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	Badge	257	Collision Date	20150218	Time	1811	Day	WED							
Primary Collision Factor		DRVR ALC[DRG		Violation	23152E	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20150820							
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	27	F	W		DRUG	PROC ST	W	A	0100	TOYOT	2007	-	3	A	22350	-	L	G								
2	DRVR	41	F	W	HNBD		STOPPED	W	A	0100	HYUND	2015	-	3	N		-	M	G								
3	DRVR	35	M	W	HNBD		STOPPED	W	A	0100	HONDA	2010	-	3	N		-	M	G								
Primary Rd		WESTMINSTER AV		Distance (ft)	0	Direction		Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	WOC	Beat		Type	0	CalTrans	Badge	362	Collision Date	20150219	Time	1645	Day	THU							
Primary Collision Factor		UNKNOWN		Violation	23100B	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20150820							
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	46	M	A	HNBD		LFT TURN	-	A	0100	NISSA	2014	-	3	A	21658	-	M	G								
2	DRVR	84	F	W	HNBD		RGT TURN	E	A	0700	TOYOT	2002	-	3	N		-	M	G	PASS		47	-	9	3	-	-
Primary Rd		WESTMINSTER AV		Distance (ft)	1320	Direction	W	Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans	Badge	152	Collision Date	20150311	Time	0109	Day	WED							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		HEAD-ON		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date		20150422							
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	21	M	H	HNBD		LFT TURN	W	-	0000	HONDA	1996	A	-	F		-	L	-								
2	DRVR	59	F	W	HNBD		PROC ST	E	-	0000	NISSA	2013	A	-	N		-	L	-	DRVR		COMP PN 59	-	1	0	G	-
Primary Rd		WESTMINSTER AV		Distance (ft)	900	Direction	W	Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	Badge	298	Collision Date	20150517	Time	1547	Day	SUN							
Primary Collision Factor		R-O-W AUTO		Violation	21804A	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20151021							
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	31	M	H	HNBD		LFT TURN	N	A	0000	DODGE	2010	-	-	N		-	G	-	PASS		40	F	3	0	G	-
																				PASS		4	M	6	0	G	-
																				PASS		2	M	4	0	G	-
2	DRVR	81	M	W	HNBD		PROC ST	E	A	0000	HONDA	1990	-	-	N		-	G	-								
Primary Rd		WESTMINSTER AV		Distance (ft)	70	Direction	E	Secondary Rd		SEAL BEACH BL		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	NORTT	Type	0	CalTrans	Badge	246	Collision Date	20150518	Time	1751	Day	MON							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20151019							
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info																Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	46	M	H	HNBD		PROC ST	W	-	0000	GMC	1984	-	D	N		-	X	P								
2	DRVR	40	M	W	HNBD		STOPPED	W	-	0000	TOYOT	2007	A	-	N		-	M	-	PASS		4	F	5	0	Q	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd WESTMINSTER AV		Distance (ft) 0		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat	001	Type	0	CalTrans	Badge	362	Collision Date	20150605	Time	1314	Day	FRI					
Primary Collision Factor		LANE CHANGE		Violation	21658A	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?		Process Date 20151110							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	75	F	O	HNBD		RGT TURN	-	A	0100	HYUND	2014	-	3	N	-	M	G							
2	DRVR	52	F	W	HNBD		LFT TURN	-	D	2200	DODGE	1999	-	3	N	-	M	G							

Primary Rd WESTMINSTER AV		Distance (ft) 395		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	Badge	246	Collision Date	20150614	Time	1732	Day	SUN						
Primary Collision Factor		R-O-W AUTO		Violation	21801A	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20151110								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	73	F	W	HNBD		LFT TURN	N	A	0100	FORD	2008	-	-	N	-	L	G								
2	DRVR	23	M	H	HNBD		PROC ST	W	A	0100	BMW	2007	-	-	N	-	L	-	PASS		21	F	3	0	G	-

Primary Rd WESTMINSTER AV		Distance (ft) 630		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach	County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	Badge	300	Collision Date	20150615	Time	1135	Day	MON						
Primary Collision Factor		R-O-W AUTO		Violation	21804A	Collision Type		SIDESWIPE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date 20160620								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		MV ON OTHER RD		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	73	M		HNBD		RGT TURN	W	-	0000	HONDA	2014	A	-	-	-	G	-	DRVR	OTH VIS	73	M	1	0	G	-
2	DRVR	22	F		HNBD		PROC ST	W	-	0000	FORD	2010	A	-	-	-	G	-								

Primary Rd WESTMINSTER AV		Distance (ft) 406		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	11	Beat	NORTH	Type	0	CalTrans	Badge	361	Collision Date	20150707	Time	1311	Day	TUE					
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20151217							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	F	W	HNBD		LFT TURN	N	-	0000	TOYOT	2011	-	-	-	-	G	-							
2	DRVR	70	M	W	HNBD		PROC ST	W	-	0000	FORD	2001	-	-	-	-	G	-							

Primary Rd WESTMINSTER AV		Distance (ft) 492		Direction		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy						
City	Seal Beach	County	Orange	Population	4	Rpt Dist	11	Beat	NORTH	Type	0	CalTrans	Badge	313	Collision Date	20150801	Time	1724	Day	SAT						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date 20150917								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	24	M	W	HNBD		PROC ST	E	C	0000	HARLE	2015	-	-	N	-	W	-	DRVR	COMP PN	24	M	1	0	G	-
2	DRVR	44	M	B	HNBD		STOPPED	E	A	0000	MERCE	2010	-	-	N	-	G	-								

Primary Rd		WESTMINSTER AV		Distance (ft) 12		Direction E		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 365		Collision Date		20150813		Time 1819		Day THU			
Primary Collision Factor		STRTNG BCKNG		Violation 22106		Collision Type		REAR END		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date		20160726			
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action			
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	63	M	W	HNBD		PROC ST	W	E	0000	FORD	1997	-	-	E	-	G	-							
2	DRVR	54	F	B	HNBD		STOPPED	W	E	0000	GMC	1995	-	-	N	-	G	-	DRVR	COMP PN 54	F	1	0	G	-

Primary Rd		WESTMINSTER AV		Distance (ft) 108		Direction E		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy				
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date		20151003		Time 1639		Day SAT				
Primary Collision Factor		LANE CHANGE		Violation 21658A		Collision Type		OVERTURNED		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date		20151125				
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DAYLIGHT		Ped Action				
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	998	-		IMP UNK	IMP UNK	CHANG LN	W	D	2200	OTHER	-	3	L	-	-	-									
2	DRVR	72	M	W	HNBD		PROC ST	-	C	0200	HARLE	2008	-	3	L	-	P	W	DRVR	OTH VIS	72	M	1	1	P	W

Primary Rd		WESTMINSTER AV		Distance (ft) 94		Direction E		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 106		Type 0		CalTrans		Badge 251		Collision Date		20151007		Time 1048		Day WED			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20160201			
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action			
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	F	W	HNBD		PROC ST	W	A	0000	FORD	2004	-	-	F	-	G	-							
2	DRVR	38	M	W	HNBD		STOPPED	W	D	0000	DODGE	2013	-	-	-	-	G	-							

Primary Rd		WESTMINSTER AV		Distance (ft) 200		Direction E		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 152		Collision Date		20151028		Time 1642		Day WED			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type				Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20160201			
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action			
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	F		HNBD		SLOWING	W	-	0000	MAZDA	2002	-	-	F	-	L	G							
2	DRVR	61	F		HNBD		STOPPED	W	-	0000	HONDA	2008	-	-	N	-	M	G							
3	DRVR	29	F		HNBD		STOPPED	W	-	0000	FORD	2014	-	-	N	-	M	G							

Primary Rd		WESTMINSTER AV		Distance (ft) 940		Direction W		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist 11		Beat ROVER		Type 0		CalTrans		Badge 368		Collision Date		20151107		Time 2124		Day SAT			
Primary Collision Factor		R-O-W AUTO		Violation 21801A		Collision Type		BROADSIDE		Severity		INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date		20151215			
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action			
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	62	F	W	HNBD		LFT TURN	S	A	0100	MAZDA	2002	-	-	N	-	L	G	DRVR	COMP PN 62	F	1	0	L	G
2	DRVR	20	F	W	HNBD		PROC ST	E	A	0100	HONDA	2013	-	-	N	-	L	G	DRVR	COMP PN 20	F	1	0	L	G

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		WESTMINSTER BL		Distance (ft)		25		Direction		W		Secondary Rd		APOLLO		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		361		Collision Date		20150310		Time		0917 Day TUE																			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20150918																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting		DAYLIGHT		Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type				Ramp/Int																							
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		65		M		W		HNBD				PROC ST		E		D		0000		CHEVR		1998		-		-		-		-		-		G															
2		DRVR		44		F		W		HNBD				STOPPED		E		A		0000		LEXUS		2012		-		-		-		-		-		G															

Primary Rd		WESTMINSTER BL		Distance (ft)		1800		Direction		W		Secondary Rd		BOLSA CHICA		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		361		Collision Date		20151110		Time		1736 Day TUE																			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20160209																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting		DARK - ST		Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type				Ramp/Int																							
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		43		M		O						PROC ST		E		A		0000		LEXUS		2014		-		-		-		-		G		-															
2		DRVR		52		M		W						SLOWING		E		A		0000		KIA		2012		-		-		-		-		G		-															

Primary Rd		WESTMINSTER BL		Distance (ft)		235		Direction		E		Secondary Rd		ROAD B		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		002		Type		0		CalTrans		Badge		362		Collision Date		20151101		Time		0823 Day SUN																	
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type		HIT OBJECT		Severity		PDO		#Killed		0		#Injured		0		Tow Away?		Y		Process Date 20160210																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting		DAYLIGHT		Ped Action				Cntrl Dev		FNCTNG		Loc Type				Ramp/Int																							
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		88		M		W		HNBD				UNS TURN		-		A		0100		CHEVR		2007		-		3		N		-		M		G															

Primary Rd		WESTMINSTER BL		Distance (ft)		370		Direction		W		Secondary Rd		SEAL BEACH BL		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		361		Collision Date		20150217		Time		1130 Day TUE																			
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type		SIDESWIPE		Severity		INJURY		#Killed		0		#Injured		1		Tow Away?		N		Process Date 20150317																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting		DAYLIGHT		Ped Action				Cntrl Dev		NT PRS/FCTR		Loc Type				Ramp/Int																							
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		69		M		W		HNBD				RGT TURN		W		A		0000		TOYOT		1993		-		-		-		-		G		-															
2		DRVR		22		F		H		HNBD				PROC ST		W		A		0000		HONDA		1988		-		-		-		-		G		-		DRVR		COMP PN 22		F		1		3		G		-	



REPORT 8 - TOTAL COLLISIONS

01/01/2016 thru 12/01/2016

Total Count: 110

Jurisdiction(s): Seal Beach

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		1 POWER SPUR		Distance (ft)		0		Direction		Secondary Rd		ST CLOUD		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy																																							
City	Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		001		Type		0		CalTrans		Badge		362		Collision Date		20160916		Time		1544		Day		FRI																										
Primary Collision Factor				R-O-W PED				Violation				21950A				Collision Type				BROADSIDE				Severity				INJURY				#Killed				0				#Injured				1				Tow Away?				N				Process Date				20161007			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																									
Hit and Run				Motor Vehicle Involved With				PED				Lighting				DAYLIGHT				Ped Action				X-WLK AT				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																							
Party Info																		Victim Info																																													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	49	F	W	HNBD		RGT TURN	E	A	0700	INFIN	2013	A	-	N	-	M	G																																													
2	PED	89	M	W	HNBD		PROC ST	N	N	6000	-	-	-	N	-	-	P	-	PED	COMP PN	89	M	1	0	P	-																																					

Primary Rd		10TH ST		Distance (ft)		335		Direction		S		Secondary Rd		RT 1		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy																																					
City	Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		241		Type		0		CalTrans		Badge		251		Collision Date		20160926		Time		1958		Day		MON																										
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				SIDESWIPE				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20161108			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																									
Hit and Run				Motor Vehicle Involved With				PKD MV				Lighting				DARK - ST				Ped Action				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																											
Party Info																		Victim Info																																													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	64	M	W	HNBD		RGT TURN	N	A	0000	HYUND	2016	-	-	-	-	G	-																																													
2	PRKD	998	-		HNBD		PARKED	N	A	0000	MERCE	2013	-	-	-	-	-	-																																													

Primary Rd		17TH ST		Distance (ft)		254		Direction		N		Secondary Rd		ELECTRIC AV		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy																																					
City	Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		241		Type		0		CalTrans		Badge		251		Collision Date		20161117		Time		1836		Day		THU																										
Primary Collision Factor				STRTNG BCKNG				Violation				22106				Collision Type				HIT OBJECT				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				N				Process Date				20161207			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																									
Hit and Run				Motor Vehicle Involved With				PKD MV				Lighting				DARK - ST				Ped Action				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																											
Party Info																		Victim Info																																													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	64	M	W	HNBD		BACKING	S	A	0000	HONDA	2007	-	-	A	22350	-	G	-																																												
2	PRKD	998	-				PARKED	-	A	0000	FORD	2002	-	-	-	-	-	-																																													
3	PRKD	998	-				PARKED	-	A	0000	HONDA	2010	-	-	-	-	-	-																																													

Primary Rd		1ST ST		Distance (ft)		14		Direction		S		Secondary Rd		OCEAN AV		NCIC		3020 State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy																																					
City	Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		SOUTH		Type		0		CalTrans		Badge		365		Collision Date		20160212		Time		0313		Day		FRI																										
Primary Collision Factor				DRVR ALC DRG				Violation				23152A				Collision Type				HIT OBJECT				Severity				PDO				#Killed				0				#Injured				0				Tow Away?				Y				Process Date				20160315			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																																									
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DARK - ST				Ped Action				Cntrl Dev				FNCTNG				Loc Type				Ramp/Int																											
Party Info																		Victim Info																																													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected																																						
1F	DRVR	30	F	H	HBD-UI		U-TURN	S	A	0000	CHEVR	2006	-	-	A	22107	-	G	-																																												

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd 7TH ST		Distance (ft) 150		Direction S	Secondary Rd ELECTRIC		NCIC 3020 State Hwy? N		Route	Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4		Rpt Dist	Beat	PATRO	Type 0	CalTrans	Badge 314	Collision Date		20160626		Time 1729	Day SUN									
Primary Collision Factor		DRVR ALC DRG		Violation 23152A	Collision Type SIDESWIPE		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y		Process Date 20160830												
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved WithNON-CLSN			Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	M	W	HBD-UNK	PROC ST	S	A	0000	FIAT	2012	-	-	-	-	G	-							
2	PRKD	998	-				S	-	0000	VOLKS	2011	-	-	N	-	-	-							
3	PRKD	998	-		null		S	-	0000	CHEVR	2014	-	-	-	-	-	-							

Primary Rd ALLEY		Distance (ft) 0		Direction N	Secondary Rd MAIN ST 308		NCIC 3020 State Hwy? N		Route	Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4		Rpt Dist 3020	Beat	SOUTH	Type 0	CalTrans	Badge 429	Collision Date		20160110		Time 1227	Day SUN									
Primary Collision Factor		DRVR ALC DRG		Violation 23152A	Collision Type SIDESWIPE		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y		Process Date 20160324												
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		MSDMNR		Motor Vehicle Involved WithFIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	57	F	W	HBD-UI	RGT TURN	E	D	2200	CHEVR	2006	-	-	A	22107	-	M	G						

Primary Rd ALLEY		Distance (ft) 7		Direction S	Secondary Rd RT 1		NCIC 3020 State Hwy? Y		Route	Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4		Rpt Dist	Beat 940	Type 0	CalTrans	Badge 251	Collision Date		20160807		Time 1705	Day SUN										
Primary Collision Factor		NOT STATED		Violation	Collision Type HIT OBJECT		Severity PDO	#Killed 0	#Injured 0	Tow Away? N		Process Date 20161129												
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved WithFIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int										
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	M	W	HNBD	LFT TURN	N	A	0000	CHEVR	2015	-	-	-	-	G	-							

Primary Rd ANDERSON		Distance (ft) 161		Direction S	Secondary Rd RT 1		NCIC 3020 State Hwy? Y		Route	Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4		Rpt Dist	Beat 241	Type 0	CalTrans	Badge 251	Collision Date		20161025		Time 2147	Day TUE										
Primary Collision Factor		STOP SGN SIG		Violation 22450A	Collision Type HIT OBJECT		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y		Process Date 20161208												
Weather1 CLEAR	Weather2	Rdwy Surface DRY		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved WithFIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int										
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	19	M	W	HBD-UI	PROC ST	W	A	0000	MITSU	2002	-	-	A	22350	-	G	-						

Primary Rd BALBOA DR		Distance (ft) 0		Direction	Secondary Rd COASTLINE DR		NCIC 3020 State Hwy? N		Route	Postmile Prefix		Postmile		Side of Hwy										
City Seal Beach	County Orange	Population 4		Rpt Dist	Beat	SOUTH	Type 0	CalTrans	Badge 368	Collision Date		20160306		Time 0422	Day SUN									
Primary Collision Factor		IMPROP TURN		Violation 22107	Collision Type HEAD-ON		Severity PDO	#Killed 0	#Injured 0	Tow Away? Y		Process Date 20160413												
Weather1 RAINING	Weather2	Rdwy Surface WET		Rdwy Cond1 NO UNUSL CND		Rdwy Cond2		Spec Cond 0																
Hit and Run		Motor Vehicle Involved WithFIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int										
Party Info										Victim Info														
Party Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	34	M	W	HNBD	PROC ST	S	A	0100	HONDA	2011	-	3	E	-	M	G							

Primary Rd BAYSIDE DR		Distance (ft) 132		Direction S		Secondary Rd CORAL PL		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	431	Collision Date	20160429	Time	0003	Day	FRI							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		HIT OBJECT		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20160601								
Weather1	CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	29	F	W		FATG	PROC ST	N	-	0000	TOYOT	2001	A	-	F	-	G	-								
2	PRKD	998	-				PARKED	-	-	0000	TOYOT	2013	-	-	-	-	-	-								
Primary Rd BOLSA		Distance (ft) 30		Direction W		Secondary Rd SILVER SHOALS		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	PATRO	Type	0	CalTrans	Badge	314	Collision Date	20160626	Time	2256	Day	SUN							
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type		OVERTURNED		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20160817								
Weather1	CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		NON-CLSN		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	W	HBD-UNK		PROC ST	N	-	0000	HARLE	1990	-	2	A	-	W	-	DRVR	SEVERE	28	M	1	1	W	-
Primary Rd BOLSA AV		Distance (ft) 17		Direction W		Secondary Rd ISLAND VIEW DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	246	Collision Date	20160422	Time	1404	Day	FRI							
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20160531								
Weather1	CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	F	W	HNBD		PROC ST	E	A	0100	KIA	2014	-	3	N	-	M	G								
2	DRVR	69	F	W	HNBD		STOPPED	E	A	0100	HONDA	2007	-	3	N	-	M	G								
Primary Rd CANDLEBERRY AV		Distance (ft) 752		Direction E		Secondary Rd FUCHSIA ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	3	Beat	NORTH	Type	0	CalTrans	Badge	313	Collision Date	20160716	Time	0400	Day	SAT						
Primary Collision Factor		DRVR ALC DRG		Violation	23152A	Collision Type		REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20160816								
Weather1	CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	25	M	A	HBD-UI		PROC ST	E	A	0000	HONDA	2013	-	-	N	-	G	-	DRVR	COMP PN	25	M	1	0	G	-
2	PRKD	998	-			null		-	-	0000	CHEVR	2010	-	-	-	-	-	-								
Primary Rd CENTRAL AV		Distance (ft) 0		Direction		Secondary Rd 7TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	002	Type	0	CalTrans	Badge	362	Collision Date	20160115	Time	2025	Day	FRI							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20160325								
Weather1	CLEAR		Weather2	Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0												
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	57	M	W	HNBD		RGT TURN	W	A	0700	CHEVR	2015	-	3	N	-	M	G								
2	PRKD	998	-			HNBD		PARKED	-	D	2200	TOYOT	2002	-	3	N	-	-	-							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		CENTRAL AV		Distance (ft) 33		Direction E		Secondary Rd		7TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat		SOUTH		Type 0		CalTrans		Badge 246		Collision Date		20160905		Time 1524 Day MON			
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20161011					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		MSDMNR		Motor Vehicle Involved With		PKD MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	M	H	HBD-UNK		UNS TURN	W	A	0100	HONDA 2010	-	1	N	-	M	G								
2	PRKD	998	-				PARKED	W	D	2200	TOYOT 2002	-	-	-	-	-	-								

Primary Rd		COASTLINE DR		Distance (ft) 122		Direction W		Secondary Rd		MARVISTA AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist 7		Beat 007		Type 0		CalTrans		Badge 174		Collision Date		20160612		Time 2310 Day SUN					
Primary Collision Factor		DRVR ALC DRG		Violation 23152A		Collision Type		REAR END		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160721					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	25	M	W	HBD-UI		LFT TURN	S	A	0100	FORD 2013	-	-	A	22350	-	G	-							
2	PRKD	998	-				PARKED	-	A	0100	LEXUS 2004	-	-	N	-	-	-								
3	PRKD	998	-				PARKED	-	A	0100	INFIN 2013	-	-	N	-	-	-								

Primary Rd		ELDORADO		Distance (ft) 265		Direction N		Secondary Rd		CANOE BROOK		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20160114		Time 1556 Day THU					
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		OVERTURNED		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160317					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	F	W	HNBD	FATG	PROC ST	S	A	0100	HONDA 2003	-	3	A	N	L	G								

Primary Rd		ELECTRIC AV		Distance (ft) 78		Direction E		Secondary Rd		12TH ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist 4		Beat 007		Type 0		CalTrans		Badge 174		Collision Date		20160610		Time 2114 Day FRI					
Primary Collision Factor		DRVR ALC DRG		Violation 23152A		Collision Type		HIT OBJECT		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160817					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	18	M	H		DRUG	RAN OFF RD	E	A	0000	HONDA 1994	-	-	A	22107	-	B	-	DRVR	COMP PN 18	M	1	0	B	-

Primary Rd		ELECTRIC AV		Distance (ft) 158		Direction W		Secondary Rd		MAIN ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 304		Collision Date		20160721		Time 1206 Day THU					
Primary Collision Factor		STRTNG BCKNG		Violation 22106		Collision Type		OTHER		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20161010					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	52	F	W	HNBD		BACKING	E	A	0000	VOLVO 2006	-	-	F	-	M	-								
2	DRVR	46	M	W	HNBD		RGT TURN	S	A	0000	TOYOT 2016	-	-	N	-	M	-	PASS		38	M	6	0	G	-

Primary Rd		GOLDEN RAIN		Distance (ft) 0		Direction		Secondary Rd		CANOE BROOK		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County		Orange		Population	4	Rpt Dist	Beat		001		Type	0	CalTrans		Badge	362	Collision Date		20160229		Time	0114	Day	MON			
Primary Collision Factor				OTHER IMPROP DRV				Violation		Collision Type				SIDESWIPE		Severity		PDO		#Killed	0	#Injured	0	Tow Away? N		Process Date 20160413			
Weather1		CLEAR		Weather2		Rdwy Surface				DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond				0							
Hit and Run				Motor Vehicle Involved With				PKD MV		Lighting		DARK - NO		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info																		Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	56	M	W	HBD-UI		PROC ST	S	A	0100	TOYOT	2008	-	3	N	-	M	G											
2	PRKD	998	-		HNBD		PARKED	S	A	0100	NISSA	2009	-	3	N	-	-	-											
Primary Rd		HEATHER ST		Distance (ft) 0		Direction		Secondary Rd		HEATHER ST 3960		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County		Orange		Population	4	Rpt Dist	Beat		NORTH		Type	0	CalTrans		Badge	246	Collision Date		20160422		Time	0847	Day	FRI			
Primary Collision Factor				STRTNG BCKNG				Violation		22106		Collision Type				HIT OBJECT		Severity		PDO		#Killed	0	#Injured	0	Tow Away? N		Process Date 20160531	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond				0							
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info																		Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	46	M	H	HNBD		BACKING	E	I	1100	ISUZU	2005	-	3	N	-	M	G											
Primary Rd		LAMPSON		Distance (ft) 108		Direction		Secondary Rd		BASSWOOD		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County		Orange		Population	4	Rpt Dist	Beat				Type	0	CalTrans		Badge	361	Collision Date		20160708		Time	1336	Day	FRI			
Primary Collision Factor				IMPROP TURN				Violation		22107		Collision Type				SIDESWIPE		Severity		INJURY		#Killed	0	#Injured	1	Tow Away? N		Process Date 20160816	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond				0							
Hit and Run				Motor Vehicle Involved With				BICYCLE		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info																		Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	49	M	H	HNBD		RGT TURN	E	D	0000	CHEVR	1992	-	-	-	-	G	-											
2	BICY	59	F	W	HNBD		RAN OFF RD	E	L	0000	-	-	-	-	-	-	-	BICY	OTH VIS	59	-	9	3	-	-				
Primary Rd		LAMPSON		Distance (ft) 1164		Direction		Secondary Rd		OLD RANCH PLZ		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County		Orange		Population	4	Rpt Dist	3020		Beat		NORTH		Type	0	CalTrans		Badge	429	Collision Date		20160112		Time	0722	Day	TUE	
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type				REAR END		Severity		PDO		#Killed	0	#Injured	0	Tow Away? N		Process Date 20160323	
Weather1		CLEAR		Weather2		Rdwy Surface				DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond				0							
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int							
Party Info																		Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	25	M	W	HNBD		PROC ST	W	A	0100	MAZDA	2012	A	-	F	-	M	G											
2	DRVR	29	M	H	HNBD		PROC ST	W	F	2600	OTHER	2002	A	-	N	-	M	G											
Primary Rd		LAMPSON AV		Distance (ft) 74		Direction		Secondary Rd		BASSWOOD ST		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County		Orange		Population	4	Rpt Dist	Beat		NORTH		Type	0	CalTrans		Badge	432	Collision Date		20161017		Time	0715	Day	MON			
Primary Collision Factor				UNSAFE SPEED				Violation		22350		Collision Type				SIDESWIPE		Severity		PDO		#Killed	0	#Injured	0	Tow Away? Y		Process Date 20161208	
Weather1		RAINING		Weather2		Rdwy Surface				WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond				0							
Hit and Run				Motor Vehicle Involved With				FIXED OBJ		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info																		Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected				
1F	DRVR	16	M	A	HNBD		LFT TURN	W	A	0700	CHEVR	2004	-	3	N	-	M	G											

Primary Rd LAMPSON AV		Distance (ft) 0		Direction		Secondary Rd		CANDLEBERRY		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	001	Type	0	CalTrans	Badge	362	Collision Date	20160115	Time	1110	Day	FRI								
Primary Collision Factor		STOP SGN SIG		Violation		21453A		Collision Type		BROADSIDE		Severity		PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160323					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	21	M	H	HNBD		PROC ST	-	I	1100	ISUZU	2014	-	1	A	23123	-	M	G	PASS		29	M	2	0	M	G
														PASS		28	M	3	0	M	G						
2	DRVR	78	F	W	HNBD		LFT TURN	-	A	0100	LEXUS	2005	-	3	N	-	M	G									
Primary Rd LAMPSON AV		Distance (ft) 238		Direction		W		Secondary Rd		CANDLEBERRY AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	141	Type	0	CalTrans	Badge	251	Collision Date	20160520	Time	1456	Day	FRI								
Primary Collision Factor		UNKNOWN		Violation		21453A		Collision Type		BROADSIDE		Severity		PDO		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160719					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1	DRVR	60	F	A	IMP UNK	IMP UNK	PROC ST	E	A	0000	TOYOT	2009	-	-	-	-	G	-	DRVR	SEVERE	60	F	1	0	L	-	
Primary Rd LAMPSON AV		Distance (ft) 1174		Direction		W		Secondary Rd		HEATHER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	141	Type	0	CalTrans	Badge	251	Collision Date	20160527	Time	0657	Day	FRI								
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		HIT OBJECT		Severity		PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160719					
Weather1 CLOUDY		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	22	F	H	HNBD		PROC ST	W	A	0000	VOLKS	2002	-	-	-	-	L	-									
Primary Rd LAMPSON AV		Distance (ft) 0		Direction		W		Secondary Rd		HEATHER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	20	Beat	006	Type	0	CalTrans	Badge	174	Collision Date	20160123	Time	1617	Day	SAT							
Primary Collision Factor		R-O-W AUTO		Violation		21801A		Collision Type		SIDESWIPE		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20160322					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	43	M	W	HNBD		U-TURN	W	A	0000	JEEP	2013	-	-	N	-	G	-									
2	DRVR	69	F	W	HNBD		PROC ST	E	A	0000	SUBAR	2015	-	-	N	-	G	-	DRVR	COMP PN	69	F	1	0	G	-	
Primary Rd LAMPSON AV		Distance (ft) 38		Direction		E		Secondary Rd		SEAL BEACH BL		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy					
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	ROVER	Type	0	CalTrans	Badge	178	Collision Date	20160809	Time	1807	Day	TUE								
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		BROADSIDE		Severity		INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20161010					
Weather1 CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run		Motor Vehicle Involved With		BICYCLE		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	53	M	W	HNBD		RGT TURN	E	-	0000	-	-	-	N	-	W	-	DRVR	OTH VIS	53	M	1	1	W	-		
2	DRVR	30	M	O	HNBD		RGT TURN	E	-	0000	AUDI	2013	-	-	N	-	G	-									

Primary Rd		MAIN ST		Distance (ft)		0		Direction		Secondary Rd		CENTRAL AV		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																									
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		362		Collision Date		20160307		Time 1219 Day MON																							
Primary Collision Factor				IMPROP TURN				Violation				22107				Collision Type				SIDESWIPE				Severity				INJURY				#Killed 0 #Injured 1 Tow Away? N Process Date 20160412																					
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																															
Hit and Run				Motor Vehicle Involved With				BICYCLE				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				FNCTNG		Loc Type		Ramp/Int																					
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected			
1F		DRVR		68		F		W		HNBD				PARKING		-		A		0700		CHEVR		2012		-		3		N		-		M		G																	
2		BICY		69		M		O		HNBD				PROC ST		-		L		0400		-		-		3		A		21755		N		-		-		BICY		OTH VIS		69		-		1		1		P		V	

Primary Rd		MAIN ST		Distance (ft)		0		Direction		Secondary Rd		MAIN ST 215		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		SOUTH Type		0		CalTrans		Badge		246		Collision Date		20160720		Time 1132 Day WED																					
Primary Collision Factor				STRTNG BCKNG				Violation				22106				Collision Type				BROADSIDE				Severity				PDO				#Killed 0 #Injured 0 Tow Away? N Process Date 20160909																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																			
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		47		M		W		HNBD				BACKING		E		A		0700		TOYOT		1997		-		3		N		-		M		G															
2		DRVR		55		M		W		HNBD				STOPPED		S		I		0900		FREIG		2005		-		3		N		-		M		G															

Primary Rd		N BOUND SEAL BEACH BL		Distance (ft)		273		Direction		S		Secondary Rd		PACIFIC COAST		NCIC		3020		State Hwy?		Y		Route		Postmile Prefix		Postmile		Side of Hwy																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		Type		0		CalTrans		Badge		300		Collision Date		20161003		Time 0240 Day MON																					
Primary Collision Factor				DRVR ALC DRG				Violation				23152A				Collision Type				HEAD-ON				Severity				PDO				#Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				FIXED OBJ				Lighting				DARK - ST				Ped Action				Cntrl Dev				FNCTNG		Loc Type		Ramp/Int																			
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		29		F				HBD-UI				PROC ST		N		A		0000		HYUND		2014		-		-		A		22350		-		G		-													

Primary Rd		NORTH GATE RD		Distance (ft)		0		Direction		Secondary Rd		NORTH GATE RD		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																							
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		NORTH Type		0		CalTrans		Badge		246		Collision Date		20160714		Time 1637 Day THU																					
Primary Collision Factor				UNSAFE SPEED				Violation				22350				Collision Type				REAR END				Severity				PDO				#Killed 0 #Injured 0 Tow Away? Y Process Date 20160816																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				OTHER MV				Lighting				DAYLIGHT				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																			
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		75		M		W		HNBD				PROC ST		W		A		0000		FORD		2012		-		-		N		-		G		-															
2		DRVR		62		M		W		HNBD				LFT TURN		W		A		0000		CHEVR		2006		-		-		N		-		G		-															

Primary Rd		OCEAN ALLEY		Distance (ft)		122		Direction		N		Secondary Rd		OCEAN AV		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy																					
City		Seal Beach		County		Orange		Population		4		Rpt Dist		Beat		ROVER Type		0		CalTrans		Badge		178		Collision Date		20161019		Time 2329 Day WED																					
Primary Collision Factor				DRVR ALC DRG				Violation				23152A				Collision Type				OTHER				Severity				PDO				#Killed 0 #Injured 0 Tow Away? Y Process Date 20161208																			
Weather1		CLEAR		Weather2				Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2				Spec Cond		0																													
Hit and Run				Motor Vehicle Involved With				PKD MV				Lighting				DARK - ST				Ped Action				Cntrl Dev				NT PRS/FCTR		Loc Type		Ramp/Int																			
Party		Type		Age		Sex		Race		Sobriety1		Sobriety2		Move Pre		Dir		SW Veh		CHP Veh		Make		Year		SP Info		OAF1		Viol		OAF2		Safety Equip		ROLE		Ext Of Inj		AGE		Sex		Seat Pos		Safety		EQUIP		Ejected	
1F		DRVR		37		F		H		HBD-UI				BACKING		E		A		0000		CHRY		2001		-		-		N		-		G		-															
2		PRKD		998		-								PARKED		E		A		0000		INFIN		2005		-		-		N		-		-		-															

Primary Rd		PACIFIC COAST		Distance (ft) 0		Direction		Secondary Rd		1ST ST		NCIC		3020		State Hwy?		Y		Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County		Orange		Population 4		Rpt Dist		Beat 002		Type 0		CalTrans		Badge 362		Collision Date		20160202		Time 0727		Day TUE			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type				Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160317									
Weather1 CLEAR		Weather2		Rdwy Surface		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		Loc Type		Ramp/Int															
Party Info												Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	22	F	O	HNBD		PROC ST	N	A	0100	TOYOT	2008	- 3	N	-	L	A										
2	DRVR	67	F	W	HNBD		STOPPED	S	A	0700	ACURA	2004	- 3	N	-	M	G										

Primary Rd		PACIFIC COAST		Distance (ft) 0		Direction		Secondary Rd		MARINA DR		NCIC		3020		State Hwy?		Y		Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County		Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 422		Collision Date		20161008		Time 0532		Day SAT			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HEAD-ON		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161208									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		MSDMNR		Motor Vehicle Involved With		FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	20	M	H	HNBD		OPPOS LN	W	A	0000	HONDA	1995	- -	A	-	G	-										

Primary Rd		ROSSMOOR		Distance (ft) 60		Direction		Secondary Rd		SEAL BEACH BL		NCIC		3020		State Hwy?		N		Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County		Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date		20161021		Time 1446		Day FRI			
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		HEAD-ON		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20161207									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info												Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	89	F	W	HNBD		RGT TURN	W	A	0000	TOYOT	2001	- -	N	-	H	-	DRVR	OTH VIS	89	F	1	0	H	-		
2	DRVR	54	F	B	HNBD		PROC ST	E	A	0000	CADIL	2012	- -	N	-	G	-										

Primary Rd		RT 1		Distance (ft) 172		Direction		Secondary Rd		10TH ST		NCIC		3020		State Hwy?		Y		Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County		Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 246		Collision Date		20161129		Time 0720		Day TUE			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20161207									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info												Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	39	M	W	HNBD		PROC ST	S	A	0100	NISSA	2015	- 3	N	-	L	G										
2	DRVR	29	M	W	HNBD		STOPPED	S	A	0700	JEEP	1996	- 3	N	-	M	G										
3	DRVR	31	F	W	HNBD		STOPPED	S	A	0100	TOYOT	2012	- 3	N	-	M	G										

Primary Rd		RT 1		Distance (ft) 0		Direction		Secondary Rd		13TH ST		NCIC		3020		State Hwy?		Y		Route		Postmile Prefix		Postmile		Side of Hwy	
City	Seal Beach	County		Orange		Population 4		Rpt Dist 6		Beat 007		Type 0		CalTrans		Badge 174		Collision Date		20161021		Time 1839		Day FRI			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20161208									
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0															
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int											
Party Info												Victim Info															
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	17	F	W	HNBD		SLOWING	N	A	0000	NISSA	2010	- -	N	-	G	-	DRVR	COMP PN	44	F	1	0	G	-		
2	DRVR	44	F	W	HNBD		STOPPED	N	A	0000	DODGE	2013	- -	N	-	G	-										

Primary Rd RT 1		Distance (ft) 0		Secondary Rd		8TH ST		NCIC 3020		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy							
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00S		Type 0		CalTrans		Badge 317		Collision Date 20160608		Time 1320 Day WED							
Primary Collision Factor		R-O-W AUTO		Violation 21801A		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 3		Tow Away? Y		Process Date 20160816							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	31	F	W	HNBD		LFT TURN	S	-	0000	FORD	2008	A	-	A	-	-	-	DRVR	COMP PN 31	F	1	0	G	-
																		PASS	COMP PN 6	F	6	0	G	-	
2	DRVR	20	F	W	HNBD		PROC ST	E	-	0000	NISSA	2002	A	-	A	22350	-	-	DRVR	COMP PN 20	F	1	3	-	-

Primary Rd RT 1		Distance (ft) 24		Direction E		Secondary Rd		8TH ST		NCIC 3020		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 298		Collision Date 20161118		Time 1313 Day FRI								
Primary Collision Factor		UNKNOWN		Violation		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161207								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int										
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	23	F		HNBD		LFT TURN	S	A	0000	HONDA	2010	-	-	N	-	G	-	PASS		1	M	6	3	G	-
																		PASS		4	F	4	3	G	-	
2	DRVR	68	F		HNBD		PROC ST	E	A	0000	JAGUA	2006	-	-	N	-	G	-							-	

Primary Rd RT 1		Distance (ft) 291		Direction N		Secondary Rd		ANDERSON ST		NCIC 3020		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy					
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat ROVER		Type 0		CalTrans		Badge 178		Collision Date 20161018		Time 2203 Day TUE							
Primary Collision Factor		R-O-W AUTO		Violation 21801B		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20161207							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	F	W	HNBD		PROC ST	E	A	0000	FORD	1998	-	-	N	-	G	-							-
2	DRVR	40	M	H	HBD-NUI		MERGING	E	A	0000	FORD	1995	-	-	N	-	G	-	DRVR	COMP PN 40	M	1	0	G	-

Primary Rd RT 1		Distance (ft) 631		Direction S		Secondary Rd		MARINER DR		NCIC 3020		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist 12		Beat 007		Type 0		CalTrans		Badge 174		Collision Date 20160925		Time 2249 Day SUN								
Primary Collision Factor		R-O-W AUTO		Violation 21804A		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 4		Tow Away? Y		Process Date 20161208								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int										
Party Info												Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	27	F	W	HNBD		LFT TURN	W	A	0000	VOLKS	2013	-	-	N	-	G	-	DRVR	OTH VIS	27	F	1	0	L	-
																		PASS		29	M	3	0	G	-	
																		PASS	COMP PN 29	M	4	0	G	-		
																		PASS	OTH VIS	28	F	6	0	G	-	
2	DRVR	23	F	W	HNBD		PROC ST	N	A	0000	FORD	2010	-	-	N	-	G	-	DRVR	OTH VIS	23	F	1	0	L	-

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd	RT 1	Distance (ft)	827	Direction	N	Secondary Rd	PHILLIPS ST	NCIC	3020	State Hwy?	Y	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 00S	Type	0	CalTrans		Badge	191	Collision Date	20160723	Time	0906	Day	SAT						
Primary Collision Factor		NOT DRIVER		Violation		Collision Type		HIT OBJECT		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date 20161007							
Weather1	CLOUDY	Weather2		Rdwy Surface		DRY		Rdwy Cond1		OBSTR ON RD		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With				Lighting	DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	BICY	47	F		HNBD		PROC ST	N	-	0000	-	-	-	E	-	-	-	BICY	COMP PN	47	F	9	3	-	-

Primary Rd	SEAL BEACH BL	Distance (ft)	710	Direction	N	Secondary Rd	BOLSA AV	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat SOUTH	Type	0	CalTrans		Badge	246	Collision Date	20160329	Time	0613	Day	TUE							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		HIT OBJECT		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20160412								
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		Motor Vehicle Involved With				FIXED OBJ		Lighting	DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	F	W	HNBD		PROC ST	S	A	0700	JEEP	2005	-	3	N	-	M	G	DRVR	COMP PN	33	F	1	0	M	G

Primary Rd	SEAL BEACH BL	Distance (ft)	566	Direction	S	Secondary Rd	BRADBURY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat NORTH	Type	0	CalTrans		Badge	429	Collision Date	20160228	Time	1849	Day	SUN							
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		BROADSIDE		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20160412								
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting	DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info													Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	76	M	W	HNBD		LFT TURN	N	A	0000	MERCE	1983	-	-	N	-	G	-	DRVR	COMP PN	32	F	1	3	G	-
2	DRVR	32	F	W	HNBD		PROC ST	S	A	0000	BMW	2013	-	-	N	-	G	-								
3	DRVR	52	F	W	HNBD		STOPPED	E	A	0000	CHEVR	2002	-	-	N	-	G	-								

Primary Rd	SEAL BEACH BL	Distance (ft)	1320	Direction	S	Secondary Rd	BRADBURY	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 00N	Type	0	CalTrans		Badge	152	Collision Date	20160928	Time	1443	Day	WED						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161007							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	44	M	W	HNBD		SLOWING	S	A	0100	FORD	2012	-	3	A	22350	F	M	G						
2	DRVR	16	F		HNBD		STOPPED	S	A	0100	HONDA	2008	-	3	N	-	L	G							
3	DRVR	78	M		HNBD		STOPPED	S	A	0800	CHRY	2001	-	3	N	-	M	G							

Primary Rd	SEAL BEACH BL	Distance (ft)	120	Direction	S	Secondary Rd	BRADBURY RD	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 106	Type	0	CalTrans		Badge	251	Collision Date	20160622	Time	1123	Day	WED						
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20160722							
Weather1	CLEAR	Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0									
Hit and Run		Motor Vehicle Involved With				OTHER MV		Lighting	DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	42	F	W	HNBD		PROC ST	S	-	0000	FORD	1998	-	-	-	-	G	-							
2	DRVR	36	F	H	HNBD		RGT TURN	S	-	0000	FORD	2008	-	-	-	-	G	-							
3	DRVR	27	M	H	HNBD		STOPPED	-	-	0000	BMW	2002	-	-	-	-	G	-							

Primary Rd		SEAL BEACH BL		Distance (ft) 65		Direction S		Secondary Rd		BRADBURY RD		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 191		Collision Date		20160729		Time 1737		Day FRI			
Primary Collision Factor		IMPROP TURN		Violation 22107		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20161010					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F	W			LFT TURN	N	A	0000	DODGE 2013	-	-	-	-	G	-								
2	DRVR	76	M	W			PROC ST	N	A	0000	LEXUS 2011	-	-	-	-	G	-								

Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		GOLDEN RAIN		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date		20160120		Time 1352		Day WED			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20160317					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	17	M	W	HNBD		PROC ST	-	A	0700	TOYOT 2009	-	3	N	-	M	G								
2	DRVR	998	F	W	HNBD		STOPPED	-	A	0700	JEEP 2014	-	3	N	-	M	G								

Primary Rd		SEAL BEACH BL		Distance (ft) 50		Direction N		Secondary Rd		GOLDEN RAIN		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 361		Collision Date		20160715		Time 1201		Day FRI			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20160930					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	48	F	B			SLOWING	S	A	0000	FORD 2001	-	-	-	-	G	-								
2	DRVR	44	M	W			STOPPED	S	A	0000	TOYOT 2008	-	-	-	-	G	-								

Primary Rd		SEAL BEACH BL		Distance (ft) 27		Direction S		Secondary Rd		LAMPSON AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 141		Type 0		CalTrans		Badge 251		Collision Date		20160715		Time 1424		Day FRI			
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20160816					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	72	M	W	HNBD		PROC ST	W	A	0000	FORD 1980	-	-	-	-	G	-								

Primary Rd		SEAL BEACH BL		Distance (ft) 560		Direction S		Secondary Rd		LANDING		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 361		Collision Date		20160303		Time 1806		Day THU			
Primary Collision Factor		HAZ PARKING		Violation 22515A		Collision Type		AUTO/PED		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date		20160418					
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		PED		Lighting DUSK/DAWN		Ped Action IN RD,		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info														Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	PED	53	F	W	IMP UNK	IMP UNK	STOPPED	-	-	0000	-	-	-	-	-	-	-	PED	COMP PN 54	54	F	9	3	-	-
2	OTHR	998	-				BACKING	S	B	0000	LEXUS 1994	-	-	-	-	-	-								

Primary Rd SEAL BEACH BL		Distance (ft)	10	Direction	S	Secondary Rd LANDING AV		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	Type	0	CalTrans		Badge	317	Collision Date	20161016	Time	1724	Day SUN									
Primary Collision Factor		LANE CHANGE		Violation	21658A	Collision Type		REAR END	Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161208									
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND	Rdwy Cond2			Spec Cond		0													
Hit and Run		Motor Vehicle Involved WithPKD MV				Lighting		DAYLIGHT	Ped Action			Cntrl Dev		FNCTNG	Loc Type	Ramp/Int											
Party Info													Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	33	M	H	HNBD		PROC ST	S	A	0000	DODGE	2005	-	-	A	23123	-	M	-								
2	PRKD	998	-		HNBD		PARKED	W	A	0000	DODGE	1994	-	-	N		-	-	-								
Primary Rd SEAL BEACH BL		Distance (ft)	452	Direction	S	Secondary Rd N GATE RD		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans		Badge	16-2030	Collision Date	20160927	Time	0845	Day TUE								
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		HIT OBJECT	Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161007									
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND	Rdwy Cond2			Spec Cond		0													
Hit and Run		Motor Vehicle Involved WithFIXED OBJ				Lighting		DAYLIGHT	Ped Action			Cntrl Dev		NT PRS/FCTR	Loc Type	Ramp/Int											
Party Info													Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	M	W	HNBD		PROC ST	S	A	0100	TOYOT	2015	-	3	N		-	L	G								
Primary Rd SEAL BEACH BL		Distance (ft)	55	Direction	N	Secondary Rd NORTH GATE RD		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans		Badge	246	Collision Date	20160304	Time	1224	Day FRI								
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END	Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20160315									
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND	Rdwy Cond2			Spec Cond		0													
Hit and Run		Motor Vehicle Involved WithOTHER MV				Lighting		DAYLIGHT	Ped Action			Cntrl Dev		FNCTNG	Loc Type	Ramp/Int											
Party Info													Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	F	W	HNBD		PROC ST	S	A	0100	TOYOT	2014	-	3	N		-	M	G								
2	DRVR	48	F	W	HNBD		STOPPED	S	A	0700	HYUND	2014	-	3	N		-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft)	545	Direction	N	Secondary Rd NORTH GATE RD		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans		Badge	432	Collision Date	20161011	Time	0628	Day TUE								
Primary Collision Factor		TOO CLOSE		Violation	21703	Collision Type		REAR END	Severity	PDO		#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161208									
Weather1	CLOUDY	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND	Rdwy Cond2			Spec Cond		0													
Hit and Run		Motor Vehicle Involved WithOTHER MV				Lighting		DUSK/DAWN	Ped Action			Cntrl Dev		FNCTNG	Loc Type	Ramp/Int											
Party Info													Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	24	F	W	HNBD		PROC ST	S	A	0100	BMW	2003	-	3	A	22350	-	M	G								
2	DRVR	42	F	H	HNBD		STOPPED	S	A	0100	TOYOT	2014	-	3	N		-	M	G								
3	DRVR	49	M	H	HNBD		STOPPED	S	A	0100	HONDA	2016	-	3	N		-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft)	300	Direction	N	Secondary Rd NORTHGATE		NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	00N	Type	0	CalTrans		Badge	152	Collision Date	20160707	Time	1039	Day THU								
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END	Severity	INJURY		#Killed	0	#Injured	1	Tow Away?	Y	Process Date 20161025									
Weather1	CLEAR	Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND	Rdwy Cond2			Spec Cond		0													
Hit and Run		Motor Vehicle Involved WithOTHER MV				Lighting		DAYLIGHT	Ped Action			Cntrl Dev		FNCTNG	Loc Type	Ramp/Int											
Party Info													Victim Info														
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected		
1F	DRVR	65	F	W	HNBD		SLOWING	S	A	0000	NISSA	2003	-	-	F		-	G	-	DRVR	OTH VIS	65	-	1	0	L	-
2	DRVR	61	M	W	HNBD		STOPPED	S	A	0000	CADIL	2016	-	-	N		-	G	-								

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		SEAL BEACH BL		Distance (ft) 325		Direction N		Secondary Rd		NORTHGATE BL		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20160120		Time 1242		Day WED									
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20160317											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party Info														Victim Info																	
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected						
1F	DRVR	39	F	W	HNBD		PROC ST	-	A	0100	HONDA 2009	-	3	N	-	M	G														
2	DRVR	54	F	W	HNBD		STOPPED	-	A	0700	CHEVR 2004	-	3	N	-	M	G														
Primary Rd		SEAL BEACH BL		Distance (ft) 122		Direction S		Secondary Rd		NORTHGATE RD		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 362		Collision Date		20160107		Time 0651		Day THU									
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20160324											
Weather1 CLOUDY		Weather2		Rdwy Surface WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		PKD MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party Info														Victim Info																	
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected						
1F	DRVR	29	M	H	HNBD		LFT TURN	-	A	0100	NISSA 2008	-	3	N	-	M	G	PASS		19	M	3	0	M	G						
														PASS		19	M	5	0	M	G										
														PASS		25	M	6	0	M	G										
2	PRKD	998	-	HNBD		PARKED	S	I	2000	OTHER 2007	-	3	N	-	-	-	-														
Primary Rd		SEAL BEACH BL		Distance (ft) 462		Direction N		Secondary Rd		NORTHGATE RD		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 007		Type 0		CalTrans		Badge 430		Collision Date		20160116		Time 1533		Day SAT									
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date		20160323											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		NON-CLSN		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party Info														Victim Info																	
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected						
1F	DRVR	28	M	W	HNBD		PROC ST	S	C	0200	KAWA 2011	-	3	N	-	P	W	DRVR	OTH VIS	28	M	1	1	P	W						
2	DRVR	57	M	H	HNBD		STOPPED	S	D	2200	CHEVR 1997	-	3	N	-	M	G	PASS		30	M	3	0	M	G						
Primary Rd		SEAL BEACH BL		Distance (ft) 45		Direction N		Secondary Rd		OLD RANCH PKWY		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 191		Collision Date		20160118		Time 1428		Day MON									
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date		20160317											
Weather1 CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party Info														Victim Info																	
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected						
1F	DRVR	58	M	O	HNBD		PROC ST	S	A	0000	TOYOT 2000	-	-	-	-	-	-														
2	DRVR	90	F	W	HNBD		STOPPED	S	A	0000	DODGE 2014	-	-	-	-	-	-														
Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		OLD RANCH PKWY		NCIC 3020		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy									
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat ROVER		Type 0		CalTrans		Badge 178		Collision Date		20161012		Time 2228		Day WED									
Primary Collision Factor		R-O-W AUTO		Violation 21453C		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date		20161208											
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party Info														Victim Info																	
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected						
1F	DRVR	22	F	W	HNBD		LFT TURN	S	A	0000	HONDA 2016	-	-	N	-	G	-														
2	DRVR	23	F	W	HNBD		LFT TURN	W	A	0000	NISSA 2006	-	-	N	-	-	G														

Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		OLD RANCH PKY		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 365		Collision Date		20160123		Time 0234		Day SAT	
Primary Collision Factor				STOP SGN SIG		Violation 21453A		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date 20160322					
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run		Motor Vehicle Involved With								OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int			
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	29	M	W	HNBD		PROC ST	N	A	0000	MERCE 2016	-	-	A	14601	F	G	-	DRVR	COMP PN 27	M	1	0	G	-
2	DRVR	54	M	W	HNBD		PROC ST	E	A	0000	TOYOT 2014	-	-	N	-	G	-	DRVR	COMP PN 54	M	1	0	G	-	

Primary Rd		SEAL BEACH BL		Distance (ft) 82		Direction		Secondary Rd		OLD RANCH PKY		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 431		Collision Date		20160509		Time 0624		Day MON	
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? N		Process Date 20160719					
Weather1		CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run		Motor Vehicle Involved With								OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int			
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	21	F	H	HNBD		PROC ST	S	A	0000	CHRY S 2005	-	-	N	-	G	-	DRVR	OTH VIS 21	F	1	0	G	-	
2	DRVR	32	M	A	HNBD		STOPPED	S	A	0000	HONDA 2013	-	-	N	-	G	-								

Primary Rd		SEAL BEACH BL		Distance (ft) 220		Direction		Secondary Rd		OLD RANCH PKY		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 246		Collision Date		20160824		Time 0833		Day WED	
Primary Collision Factor				UNSAFE SPEED		Violation 22350		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20161010					
Weather1		CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run		Motor Vehicle Involved With								OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int			
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F	W	HNBD		PROC ST	S	A	0100	TOYOT 2016	-	3	N	-	L	G	DRVR	COMP PN 33	F	1	0	L	C	
2	DRVR	42	F	O	HNBD		STOPPED	N	A	0700	KIA 2011	-	3	N	-	M	G								

Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		OLD RANCH RD		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist NA		Beat 0NA		Type 0		CalTrans		Badge 317		Collision Date		20160630		Time 2311		Day THU	
Primary Collision Factor				UNKNOWN		Violation 21435A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160816					
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run		Motor Vehicle Involved With								OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int			
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	30	F	W	HNBD		PROC ST	N	A	0000	MAZDA 2012	-	-	F	-	-	-								
2	DRVR	22	M	W	HNBD		LFT TURN	E	A	0000	TOYOT 2013	-	-	N	-	-	-	PASS		22	M	3	0	G	-

Primary Rd		SEAL BEACH BL		Distance (ft) 379		Direction		Secondary Rd		PACIFIC COAST		NCIC 3020		State Hwy?		N Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 300		Collision Date		20160918		Time 1523		Day SUN	
Primary Collision Factor				IMPROP TURN		Violation 22107		Collision Type		HEAD-ON		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161108					
Weather1		CLEAR		Weather2		Rdwy Surface		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run		Motor Vehicle Involved With								FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int			
Party Info																		Victim Info							
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	M	O	HBD-UI		PROC ST	N	A	0000	HONDA 2015	-	-	A	23152	-	G	-							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL		Distance (ft) 245		Direction S		Secondary Rd PLYMOUTH		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat 00N	Type	0	CalTrans	Badge	191	Collision Date	20160912	Time	1147	Day	MON							
Primary Collision Factor			UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161007						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run			Motor Vehicle Involved With				OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	33	F		HNBD		PROC ST	N	A	0000	VOLKS 2005	-	-	A	21703	-	B	-							
2	DRVR	76	M		HNBD		PROC ST	N	A	0000	TOYOT 2005	-	-	-		-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 12		Direction N		Secondary Rd PLYMOUTH DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat NORTH	Type	0	CalTrans	Badge	178	Collision Date	20160518	Time	1702	Day	WED							
Primary Collision Factor			IMPROP TURN		Violation	22107	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date 20160719						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run			Motor Vehicle Involved With				OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	32	F	W	HNBD		PROC ST	N	A	0000	HONDA 2010	-	-	N		-	G	-							
2	DRVR	33	F	W	HNBD		RGT TURN	N	A	0000	KIA 2015	-	-	N		-	G	-							

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd PLYMOUTH DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat NORTH	Type	0	CalTrans	Badge	246	Collision Date	20161123	Time	0923	Day	WED							
Primary Collision Factor			UNKNOWN		Violation	22107	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161207						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run			Motor Vehicle Involved With				OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	87	F		HNBD		PROC ST	N	A	0100	PONTI 1992	-	3	N		-	M	G							
2	DRVR	46	F	W	HNBD		LFT TURN	E	A	0700	SUBAR 2016	-	3	N		-	M	G							

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd PLYMOUTH DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat NORTH	Type	0	CalTrans	Badge	246	Collision Date	20161129	Time	1427	Day	TUE							
Primary Collision Factor			STOP SGN SIG		Violation	21453A	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20161207						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run			Motor Vehicle Involved With				OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	85	M	W	HNBD		PROC ST	N	A	0700	BUICK 2011	-	3	N		-	L	G							
2	DRVR	82	M	A	HNBD		PROC ST	W	A	0700	LEXUS 2000	-	3	N		-	M	G							

Primary Rd SEAL BEACH BL		Distance (ft) 30		Direction N		Secondary Rd RD C		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat ROVER	Type	0	CalTrans	Badge	178	Collision Date	20160703	Time	1845	Day	SUN							
Primary Collision Factor			IMPROP TURN		Violation	22107	Collision Type		BROADSIDE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date 20160816						
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0											
Hit and Run			Motor Vehicle Involved With				OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info													Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	F	B	HNBD		RGT TURN	S	A	0000	MERCE 2000	-	-	N		-	G	-							
2	DRVR	53	F	W	HNBD		PROC ST	S	A	0000	MERCE 2008	-	-	N		-	G	-							

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd SEAL BEACH BL		Distance (ft) 450		Direction S		Secondary Rd ROAD C		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 00S		Type 0		CalTrans		Badge 191		Collision Date 20160912		Time 1703 Day MON							
Primary Collision Factor		UNSAFE SPEED		Violation 22350		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161007							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	22	F		HNBD		PROC ST	N	A	0000	HYUND 2014	-	-	A	21658	-	G	-							
2	DRVR	60	M		HNBD		PROC ST	N	A	0000	HONDA 2012	-	-	-	-	G	-								

Primary Rd SEAL BEACH BL		Distance (ft) 350		Direction N		Secondary Rd RT 1		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 00S		Type 0		CalTrans		Badge 152		Collision Date 20160614		Time 1412 Day TUE							
Primary Collision Factor		NOT DRIVER		Violation		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 3		Tow Away? Y		Process Date 20160829							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	76	M	W	HNBD		PROC ST	S	A	0000	CHEVR 2002	-	-	N	-	G	-	DRVR	OTH VIS	77	M	1	0	G	-
2	DRVR	26	F	W	HNBD		STOPPED	S	A	0000	FORD 2008	-	-	N	-	G	-	DRVR	COMP PN 26	F	1	0	G	-	
																		PASS	COMP PN 998	-	3	0	G	-	
3	DRVR	38	F	W	HNBD		STOPPED	S	A	0000	MAZDA 2010	-	-	N	-	G	-								
4	DRVR	60	F	W	HNBD		STOPPED	S	A	0000	DODGE 2006	-	-	N	-	G	-								

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd RT 405		NCIC 3020		State Hwy? Y		Route 405		Postmile Prefix -		Postmile 22.558		Side of Hwy N							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 006		Type 0		CalTrans 12		Badge 368		Collision Date 20160424		Time 2121 Day SUN							
Primary Collision Factor		UNKNOWN		Violation		Collision Type		OVERTURNED		Severity FATAL		#Killed 1		#Injured 0		Tow Away? Y		Process Date 20160729							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		NON-CLSN		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type R		Ramp/Int 4									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	62	M	W	IMP UNK	IMP UNK	PROC ST	N	C	0200	HARLE 2012	-	-	L	-	P	W	DRVR	KILLED	62	M	1	1	P	W

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd RT 405		NCIC 3020		State Hwy? Y		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 191		Collision Date 20160731		Time 1245 Day SUN							
Primary Collision Factor		STOP SGN SIG		Violation 21453A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20161010							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		MSDMNR		Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int							
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	998	-		IMP UNK	IMP UNK	LFT TURN	-	A	0000	-	-	-	A	20002	-	-	-							
2	DRVR	21	F	W	HNBD		PROC ST	N	A	0000	TOYOT 2012	-	-	-	-	G	-								

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd RT 405		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy							
City	Seal Beach	County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 368		Collision Date 20160922		Time 0357 Day THU							
Primary Collision Factor		UNKNOWN		Violation		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date 20161007							
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0													
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int									
Party Info												Victim Info													
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1	DRVR	55	M	W	HNBD		PROC ST	N	A	0100	NISSA 2008	-	3	-	-	L	G	DRVR	COMP PN 55	M	1	0	L	G	
2	DRVR	52	M	W	HNBD		LFT TURN	W	A	0100	FORD 2016	-	3	-	-	L	G	DRVR	COMP PN 52	M	1	0	L	G	

Include State Highways cases

Report Run On: 12/12/2016

Primary Rd		SEAL BEACH BL		Distance (ft) 207		Direction S		Secondary Rd		SAINT ANDREWS		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat ROVER		Type 0		CalTrans		Badge 178		Collision Date		20160322		Time 2002 Day TUE			
Primary Collision Factor				OTHER EQPMNT		Violation 24002A		Collision Type		OTHER		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160413					
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With				OTHER OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	50	M	W	HNBD		PROC ST	S	A	0000	CHEVR	2001	-	-	N	-	G	-							
2	DRVR	58	M	W	HNBD		PROC ST	S	D	0000	NISSA	2015	-	-	N	-	G	-							

Primary Rd		SEAL BEACH BL		Distance (ft) 342		Direction N		Secondary Rd		TOWN CENTER DR		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat 00N		Type 0		CalTrans		Badge 152		Collision Date		20160921		Time 1241 Day WED				
Primary Collision Factor				IMPROP TURN		Violation 22107		Collision Type		BROADSIDE		Severity INJURY		#Killed 0		#Injured 2		Tow Away? Y		Process Date 20161007						
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	90	M	W	HNBD		LFT TURN	S	-	0000	ACURA	2007	A	-	F	-	L	-	DRVR	OTH VIS	90	-	1	0	L	-
2	DRVR	90	M	W	HNBD		PROC ST	S	-	0000	VOLKS	1996	A	-	N	-	L	-	DRVR	OTH VIS	90	-	1	0	L	-

Primary Rd		SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		TOWNE CENTER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy			
City		Seal Beach		County Orange		Population 4		Rpt Dist		Beat		Type 0		CalTrans		Badge 257		Collision Date		20160409		Time 2024 Day SAT			
Primary Collision Factor				IMPROP TURN		Violation 22107		Collision Type		SIDESWIPE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160531					
Weather1		CLOUDY		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0											
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting DARK - NO		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int					
Party Info																Victim Info									
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	92	M	W	HBD-NUI		LFT TURN	W	A	0100	HONDA	2008	-	3	A	21461	-	M	B						
2	DRVR	35	F	O	HNBD		LFT TURN	W	D	2200	FORD	2014	-	3	N	-	M	G							

Primary Rd		SEAL BEACH BL		Distance (ft) 145		Direction S		Secondary Rd		TOWNE CENTER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy				
City		Seal Beach		County Orange		Population 4		Rpt Dist 19		Beat 006		Type 0		CalTrans		Badge 174		Collision Date		20161104		Time 1942 Day FRI				
Primary Collision Factor				DRVR ALC[DRG		Violation 23152A		Collision Type		REAR END		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20161208						
Weather1		CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0												
Hit and Run				Motor Vehicle Involved With				OTHER MV		Lighting DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int						
Party Info																Victim Info										
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	52	M	W	HBD-UI		PROC ST	S	A	0000	SUBAR	2014	-	-	F	-	L	-								
2	DRVR	39	M	W	HNBD		STOPPED	S	A	0000	TOYOT	2006	-	-	N	-	G	-	PASS		11	F	9	0	G	-
3	DRVR	48	F	W	HNBD		STOPPED	S	A	0000	TOYOT	2014	-	-	N	-	G	-	DRVR	COMP PN	48	F	1	0	G	-
																			PASS		82	F	3	0	G	-
																			PASS		14	F	4	0	G	-
																			PASS		93	F	6	0	G	-
																			PASS		14	M	7	0	G	-
4	DRVR	45	F	W	HNBD		STOPPED	S	A	0000	INFIN	2013	-	-	N	-	G	-	PASS		9	M	4	0	G	-

Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		TOWNE CENTER		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 246		Collision Date		20160310		Time 1545		Day THU				
Primary Collision Factor UNKNOWN				Violation		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? Y		Process Date 20160413								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1	DRVR	86	F	W		PHYS	PROC ST	S	A	0100	TOYOT	2001	-	3	N	-	M	G								
2	DRVR	42	F	W	HNBD		PROC ST	E	A	0700	CHEVR	2007	-	3	N	-	M	G	PASS		8	F	4	0	P	Q
																		PASS		6	F	0	0	P	Q	
Primary Rd SEAL BEACH BL		Distance (ft) 86		Direction S		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 365		Collision Date		20160304		Time 2110		Day FRI				
Primary Collision Factor UNSAFE SPEED				Violation 22350		Collision Type		HIT OBJECT		Severity INJURY		#Killed 0		#Injured 1		Tow Away? Y		Process Date 20160317								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	52	F	W	HNBD		PROC ST	N	A	0000	MAZDA	2007	-	-	N	-	-	G	DRVR	COMP PN	52	F	1	0	-	G
Primary Rd SEAL BEACH BL		Distance (ft) 235		Direction S		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat SOUTH		Type 0		CalTrans		Badge 246		Collision Date		20160305		Time 1340		Day SAT				
Primary Collision Factor UNSAFE SPEED				Violation 22350		Collision Type		HIT OBJECT		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160315								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With		FIXED OBJ		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	71	M	W	HNBD		PROC ST	S	A	0100	TOYOT	1995	-	3	N	-	M	G								
Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat 001		Type 0		CalTrans		Badge 362		Collision Date		20160725		Time 1340		Day MON				
Primary Collision Factor DRVR ALC DRG				Violation 23152A		Collision Type		REAR END		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20160822								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	65	F	W		DRUG	PROC ST	E	A	0700	HONDA	2003	-	3	A	22350	-	M	G							
2	DRVR	43	F	W	HNBD		STOPPED	-	A	0100	TOYOT	2014	-	3	N	-	M	G								
3	DRVR	61	M	W	HNBD		STOPPED	-	D	2200	CHEVR	2004	-	3	N	-	M	G	PASS		25	M	3	0	M	G
Primary Rd SEAL BEACH BL		Distance (ft) 0		Direction		Secondary Rd		WESTMINSTER AV		NCIC 3020		State Hwy? N		Route		Postmile Prefix		Postmile		Side of Hwy						
City Seal Beach		County Orange		Population 4		Rpt Dist		Beat NORTH		Type 0		CalTrans		Badge 246		Collision Date		20160829		Time 0827		Day MON				
Primary Collision Factor STOP SGN SIG				Violation 21453A		Collision Type		BROADSIDE		Severity PDO		#Killed 0		#Injured 0		Tow Away? N		Process Date 20161012								
Weather1 CLEAR		Weather2		Rdwy Surface DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond 0														
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info														Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	18	F	A	HNBD		PROC ST	W	A	0100	TOYOT	2003	-	3	N	-	M	G								
2	DRVR	28	M	W	HNBD		PROC ST	S	I	1100	FORD	2010	-	3	N	-	M	G								

Primary Rd		SEAL BEACH BL		Distance (ft)		158	Direction		S	Secondary Rd		WESTMINSTER AV NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy				
City	Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		SOUTH	Type	0	CalTrans		Badge	246	Collision Date		20161121	Time		0832	Day	MON
Primary Collision Factor			UNSAFE SPEED			Violation		22350		Collision Type		SIDESWIPE		Severity		PDO	#Killed		0	#Injured		0	Tow Away?		Y	Process Date 20161208		
Weather1		CLOUDY		Weather2		Rdwy Surface		WET		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info																Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	33	M	H	HNBD		PROC ST	S	D	2200	TOYOT	1994	-	3	N	-	P	G										
2	DRVR	22	F	W	HNBD		PROC ST	S	A	0100	SUBAR	2014	-	3	N	-	M	G										

Primary Rd		WESTMINSTER		Distance (ft)		388	Direction		W	Secondary Rd		SEAL BEACH BL NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy				
City	Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		NORTH	Type	0	CalTrans		Badge	429	Collision Date		20160117	Time		1755	Day	SUN
Primary Collision Factor			IMPROP TURN			Violation		22107		Collision Type		SIDESWIPE		Severity		PDO	#Killed		0	#Injured		0	Tow Away?		Y	Process Date 20160317		
Weather1		CLOUDY		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DARK - ST		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info																Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	74	F	H	HNBD		LFT TURN	E	A	0100	HONDA	2006	-	3	N	-	L	G										
2	DRVR	21	M	W	HBD-NUI		PROC ST	W	A	0100	MAZDA	2012	-	3	N	-	L	G	PASS		22	M	6	0	P	G		
																		PASS		22	M	4	0	P	G			
																		PASS		25	M	3	0	L	G			

Primary Rd		WESTMINSTER AV		Distance (ft)		4593	Direction		W	Secondary Rd		BOLSA CHICA RD NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy				
City	Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		106	Type	0	CalTrans		Badge	251	Collision Date		20160519	Time		1147	Day	THU
Primary Collision Factor			NOT DRIVER			Violation				Collision Type		OTHER		Severity		INJURY	#Killed		0	#Injured		1	Tow Away?		Y	Process Date 20160719		
Weather1		CLOUDY		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		NON-CLSN		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info																Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1	DRVR	56	M	W	HNBD		PROC ST	E	C	0000	OTHER	1999	-	-	-	-	W	-	DRVR	OTH VIS	56	M	1	1	W	-		

Primary Rd		WESTMINSTER AV		Distance (ft)		1285	Direction		W	Secondary Rd		BOLSA CHICA RD NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy				
City	Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		ROVER	Type	0	CalTrans		Badge	178	Collision Date		20160616	Time		1816	Day	THU
Primary Collision Factor			UNSAFE SPEED			Violation		22350		Collision Type		REAR END		Severity		PDO	#Killed		0	#Injured		0	Tow Away?		Y	Process Date 20160720		
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0										
Hit and Run				Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info																Victim Info												
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected			
1F	DRVR	22	F	H	HNBD		PROC ST	E	-	0000	TOYOT	2000	-	-	N	-	L	-	PASS		20	F	3	0	G	-		
2	DRVR	38	M	H	HNBD		STOPPED	E	-	0000	NISSA	2006	-	-	N	-	G	-	PASS		4	F	4	0	Q	-		
																		PASS		7	F	5	0	G	-			
																		PASS		1	F	6	0	Q	-			
3	DRVR	26	M	W	HNBD		STOPPED	E	-	0000	TOYOT	2016	-	-	N	-	G	-										
4	DRVR	35	M	W	HNBD		PROC ST	E	-	0000	MERCE	2005	-	-	N	-	G	-										

Primary Rd		WESTMINSTER AV		Distance (ft)	2289	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans	Badge	304	Collision Date		20160721	Time	1510	Day	THU			
Primary Collision Factor		IMPROP TURN		Violation	22107	Collision Type		SIDESWIPE		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20161010						
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	58	F	W	HNBD		CHANG LN	E	A	0000	SMART	2010	-	-	-	-	M	-								
2	DRVR	37	M	W	HNBD		PROC ST	E	A	0000	HONDA	2004	-	-	A	22350	-	M	-							
Primary Rd		WESTMINSTER AV		Distance (ft)	203	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat		Type	0	CalTrans	Badge	361	Collision Date		20160820	Time	1113	Day	SAT			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		HEAD-ON		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20161129						
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		FIXED OBJ		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCTR		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	34	M	W	IMP UNK	IMP UNK	RAN OFF RD	E	A	0000	JEEP	1997	-	-	-	-	G	-								
2	DRVR	49	M	H		null		E	-	0000	GMC	2015	-	-	-	-	G	-								
Primary Rd		WESTMINSTER AV		Distance (ft)	3615	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat	007	Type	0	CalTrans	Badge	174	Collision Date		20160820	Time	1738	Day	SAT			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date		20161010						
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DUSK/DAWN		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	19	M	H	HNBD		SLOWING	E	A	0000	TOYOT	2005	-	-	N	-	G	-								
2	DRVR	69	M	W	HNBD		SLOWING	E	A	0000	CHRY	2016	-	-	N	-	G	-	PASS		35	F	6	0	G	-
																		PASS		31	M	3	0	G	-	
																		PASS		55	F	4	0	G	-	
Primary Rd		WESTMINSTER AV		Distance (ft)	580	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat	SOUTH	Type	0	CalTrans	Badge	246	Collision Date		20161003	Time	0801	Day	MON			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	Y	Process Date		20161207						
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	50	F	B	HNBD		SLOWING	E	A	0700	LEXUS	1999	-	3	N	-	M	G								
2	DRVR	55	F	W	HNBD		STOPPED	E	A	0700	BMW	2011	-	3	N	-	M	G	DRVR	COMP PN	55	F	1	0	M	G
Primary Rd		WESTMINSTER AV		Distance (ft)	1014	Direction	W	Secondary Rd		BOLSA CHICA RD		NCIC	3020	State Hwy?	N	Route	Postmile Prefix		Postmile	Side of Hwy						
City		Seal Beach		County	Orange	Population	4	Rpt Dist		Beat	NORTH	Type	0	CalTrans	Badge	432	Collision Date		20161012	Time	0725	Day	WED			
Primary Collision Factor		UNSAFE SPEED		Violation	22350	Collision Type		REAR END		Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date		20161208						
Weather1		CLOUDY		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0								
Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int								
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	28	M	W	HNBD		PROC ST	W	A	0700	JEEP	2004	-	3	N	-	M	G								
2	DRVR	58	F	W	HNBD		PROC ST	W	A	0100	SUBAR	2011	-	3	N	-	M	G								

Primary Rd		WESTMINSTER AV		Distance (ft) 222		Direction		W	Secondary Rd		KITTS		NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy														
City		Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		PATRO Type		0	CalTrans		Badge		314	Collision Date		20160524		Time 1817 Day TUE												
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed		0	#Injured		2	Tow Away?		Y	Process Date		20160719												
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected													
1F		DRVR	21	M	O	HNBD		PROC ST	W	A	0000	FORD	2002	-	-	N	-	G	-	DRVR	COMP PN 21	M	1	0	G	-													
2		DRVR	33	M	O	HNBD		STOPPED	W	A	0000	HONDA	2006	-	-	N	-	G	-	DRVR	COMP PN 33	M	1	0	G	-													
3		DRVR	26	M	O	HNBD		STOPPED	W	A	0000	HONDA	2015	-	-	N	-	G	-																				
Primary Rd		WESTMINSTER AV		Distance (ft) 233		Direction		W	Secondary Rd		KITTS HWY		NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy														
City		Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		SOUTH Type		0	CalTrans		Badge		313	Collision Date		20160502		Time 1159 Day MON												
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed		0	#Injured		1	Tow Away?		Y	Process Date		20160719												
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected													
1F		DRVR	90	M	W	HNBD		PROC ST	E	A	0000	LINCO	2012	-	-	F	-	G	-	DRVR	OTH VIS	90	M	1	0	G	-												
2		DRVR	22	M	H	HNBD		STOPPED	E	A	0000	TOYOT	2003	-	-	N	-	G	-																				
Primary Rd		WESTMINSTER AV		Distance (ft) 0		Direction			Secondary Rd		KITTS RD		NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy														
City		Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		141 Type		0	CalTrans		Badge		251	Collision Date		20160713		Time 1619 Day WED												
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		PDO		#Killed		0	#Injured		0	Tow Away?		N	Process Date		20160816												
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected													
1F		DRVR	19	M	W	HNBD		PROC ST	W	A	0000	FORD	2001	-	-	G	-	G	-																				
2		DRVR	43	M	O	HNBD		STOPPED	W	A	0000	VOLKS	2015	-	-	-	-	G	-																				
3		DRVR	38	F	W	HNBD		STOPPED	W	A	0000	FORD	2016	-	-	-	-	G	-																				
Primary Rd		WESTMINSTER AV		Distance (ft) 108		Direction		W	Secondary Rd		KITTS RD		NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy														
City		Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		SOUTH Type		0	CalTrans		Badge		246	Collision Date		20160714		Time 1416 Day THU												
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed		0	#Injured		2	Tow Away?		Y	Process Date		20160816												
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		FNCTNG		Loc Type		Ramp/Int	
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected													
1F		DRVR	20	M	O	HNBD		PROC ST	E	A	0000	TOYOT	2005	-	-	N	-	L	-																				
2		DRVR	82	M	W	HNBD		SLOWING	E	A	0000	HYUND	2016	-	-	N	-	M	-	DRVR	COMP PN 82	M	1	0	M	-													
																			PASS	COMP PN 66	F	3	0	M	-														
Primary Rd		WESTMINSTER AV		Distance (ft) 70		Direction		W	Secondary Rd		KITTS RD		NCIC		3020	State Hwy?		N	Route		Postmile Prefix		Postmile		Side of Hwy														
City		Seal Beach		County		Orange		Population		4	Rpt Dist		Beat		Type		0	CalTrans		Badge		361	Collision Date		20160910		Time 1708 Day SAT												
Primary Collision Factor		UNSAFE SPEED		Violation		22350		Collision Type		REAR END		Severity		INJURY		#Killed		0	#Injured		2	Tow Away?		N	Process Date		20161007												
Weather1		CLEAR		Weather2		Rdwy Surface		DRY		Rdwy Cond1		NO UNUSL CND		Rdwy Cond2		Spec Cond		0		Hit and Run		Motor Vehicle Involved With		OTHER MV		Lighting		DAYLIGHT		Ped Action		Cntrl Dev		NT PRS/FCR		Loc Type		Ramp/Int	
Party		Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected													
1F		DRVR	63	F	W	HNBD		PROC ST	E	-	0000	TOYOT	2011	A	-	-	-	G	-																				
2		DRVR	23	M	W	HNBD		STOPPED	E	-	0000	FORD	2002	A	-	-	-	G	-	DRVR	COMP PN 24	M	1	0	G	-													

Include State Highways cases

Report Run On: 12/12/2016

3	DRVR	26	M	W	HNBD	STOPPED	W	-	0000	NISSA 2006	A	-	-	-	G	-	PASS	COMP PN 14	M	3	0	G	-		
Primary Rd WESTMINSTER AV Distance (ft) 25 Direction W Secondary Rd KITTS RD NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 00S Type 0 CalTrans Badge 152 Collision Date 20160921 Time 0957 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20161007 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved WithOTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	45	M	W	HNBD		PROC ST	E	-	0000	TOYOT 2008	A	-	A	23123	-	L	-							
2	DRVR	43	M	W	HNBD		STOPPED	E	-	0000	TOYOT 2014	A	-	F	-	G	-	DRVR	COMP PN 43	-	1	0	G	-	
Primary Rd WESTMINSTER AV Distance (ft) 700 Direction E Secondary Rd ROAD B NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat ROVER Type 0 CalTrans Badge 178 Collision Date 20160308 Time 1810 Day TUE Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160412 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved WithOTHER MV Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	86	M	W	HNBD		LFT TURN	N	A	0000	HONDA 2008	-	-	N	-	-	L								
2	DRVR	50	F	A	HNBD		PROC ST	E	A	0000	SATUR 2004	-	-	N	-	-	L	DRVR	COMP PN 50	F	1	0	-	G	
Primary Rd WESTMINSTER AV Distance (ft) 368 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist 11 Beat ROVER Type 0 CalTrans Badge 368 Collision Date 20160226 Time 1758 Day FRI Primary Collision Factor R-O-W AUTO Violation 21801A Collision Type BROADSIDE Severity INJURY #Killed 0 #Injured 2 Tow Away? N Process Date 20160315 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved WithOTHER OBJ Lighting DARK - ST Ped Action Cntrl Dev NT PRS/FCTR Loc Type Ramp/Int																									
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	92	M	W	HNBD		LFT TURN	E	M	9500	OTHER 2015	-	3	-	-	M	B	DRVR	OTH VIS	92	M	1	0	M	B
2	DRVR	41	M	W	HNBD		PROC ST	W	A	0100	CHEVR 2006	-	3	-	-	M	G	PASS	OTH VIS	63	F	3	0	M	B
Primary Rd WESTMINSTER AV Distance (ft) 776 Direction W Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat 001 Type 0 CalTrans Badge 362 Collision Date 20160301 Time 1537 Day TUE Primary Collision Factor STRTNG BCKNG Violation 22106 Collision Type HIT OBJECT Severity INJURY #Killed 0 #Injured 1 Tow Away? Y Process Date 20160323 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved WithOTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	67	M	W	HBD-NUI		PARKING	N	D	2200	CHEVR 2003	-	3	N	-	M	G	DRVR	OTH VIS	67	M	1	0	M	G
2	PRKD	998	-		HNBD		PARKED	N	A	0800	TOYOT 2004	-	3	N	-	-	-								
3	DRVR	33	M	W	HNBD		PROC ST	-	A	0100	NISSA 2001	-	3	N	-	L	G								
Primary Rd WESTMINSTER AV Distance (ft) 500 Direction E Secondary Rd SEAL BEACH BL NCIC 3020 State Hwy? N Route Postmile Prefix Postmile Side of Hwy City Seal Beach County Orange Population 4 Rpt Dist Beat Type 0 CalTrans Badge 317 Collision Date 20160406 Time 0655 Day WED Primary Collision Factor UNSAFE SPEED Violation 22350 Collision Type REAR END Severity PDO #Killed 0 #Injured 0 Tow Away? Y Process Date 20160531 Weather1 CLEAR Weather2 Rdwy Surface DRY Rdwy Cond1 NO UNUSL CND Rdwy Cond2 Spec Cond 0 Hit and Run Motor Vehicle Involved WithOTHER MV Lighting DAYLIGHT Ped Action Cntrl Dev FNCTNG Loc Type Ramp/Int																									
Party Info																	Victim Info								
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected
1F	DRVR	23	F	W	HNBD		PROC ST	W	A	0000	HYUND 2004	-	-	N	-	G	-								
2	DRVR	40	F	W	HNBD		STOPPED	W	A	0000	AUDI 2015	-	-	N	-	G	-	PASS		8	M	3	0	G	-

Include State Highways cases

Report Run On: 12/12/2016

															PASS	14	F	9	3	-	-					
Primary Rd	WESTMINSTER AV	Distance (ft)	43	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	431	Collision Date	20160706	Time	1607	Day	WED							
Primary Collision Factor	UNSAFE SPEED			Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20160816									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0															
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FNCTNG	Loc Type		Ramp/Int														
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	33	F	H	HNBD		STOPPED	E	D	0000	CHEVR	2001	-	-	N	-	G	-								
2	DRVR	49	F	A	HNBD		STOPPED	E	A	0000	AUDI	2003	-	-	N	-	G	-	DRVR	COMP PN	49	F	1	0	G	-
Primary Rd	WESTMINSTER AV	Distance (ft)	353	Direction	E	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	SOUTH	Type	0	CalTrans	Badge	246	Collision Date	20160727	Time	1555	Day	WED							
Primary Collision Factor	UNSAFE SPEED			Violation	22350	Collision Type	REAR END	Severity	INJURY	#Killed	0	#Injured	1	Tow Away?	N	Process Date	20160819									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0															
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FNCTNG	Loc Type		Ramp/Int														
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	23	M	W	HNBD		PROC ST	W	A	0800	NISSA	2015	-	3	N	-	M	G								
2	DRVR	70	M	W	HNBD		STOPPED	W	A	0100	MERCE	2001	-	3	N	-	M	G	DRVR	COMP PN	70	M	1	0	M	G
3	DRVR	32	F	H	HNBD		STOPPED	W	D	2200	FORD	1997	-	3	N	-	M	G	PASS		37	F	3	0	M	G
Primary Rd	WESTMINSTER AV	Distance (ft)	956	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat		Type	0	CalTrans	Badge	361	Collision Date	20160826	Time	1005	Day	FRI							
Primary Collision Factor	IMPROP TURN			Violation	22107	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	N	Process Date	20161013									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0															
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	NT PRS/FCTR	Loc Type		Ramp/Int														
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	83	F	A	HNBD		RGT TURN	S	A	0000	FORD	1998	-	-	-	-	G	-								
2	DRVR	45	M	W	HNBD		PROC ST	E	A	0000	HONDA	1997	-	-	-	-	G	-								
Primary Rd	WESTMINSTER AV	Distance (ft)	255	Direction	W	Secondary Rd	SEAL BEACH BL	NCIC	3020	State Hwy?	N	Route		Postmile Prefix		Postmile		Side of Hwy								
City	Seal Beach	County	Orange	Population	4	Rpt Dist	Beat	NORTH	Type	0	CalTrans	Badge	246	Collision Date	20160926	Time	0713	Day	MON							
Primary Collision Factor	R-O-W AUTO			Violation	21804A	Collision Type	BROADSIDE	Severity	PDO	#Killed	0	#Injured	0	Tow Away?	Y	Process Date	20161011									
Weather1	CLEAR	Weather2		Rdwy Surface	DRY	Rdwy Cond1	NO UNUSL CND	Rdwy Cond2		Spec Cond	0															
Hit and Run		Motor Vehicle Involved With	OTHER MV	Lighting	DAYLIGHT	Ped Action		Cntrl Dev	FNCTNG	Loc Type		Ramp/Int														
Party Info															Victim Info											
Party	Type	Age	Sex	Race	Sobriety1	Sobriety2	Move Pre	Dir	SW Veh	CHP Veh	Make	Year	SP Info	OAF1	Viol	OAF2	Safety Equip	ROLE	Ext Of Inj	AGE	Sex	Seat Pos	Safety	EQUIP	Ejected	
1F	DRVR	29	F	W	HNBD		RGT TURN	N	A	0700	JEEP	2015	-	3	N	-	M	G								
2	DRVR	56	M	W	HNBD		PROC ST	E	I	1100	FORD	2013	-	3	N	-	M	G								

APPENDIX E

**SIMTRAFFIC QUEUING AND ARTERIAL PERFORMANCE
WORKSHEETS**

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	141	108	55	77	133	145	115	132	9	60	198	223
Average Queue (ft)	61	37	12	25	51	32	34	34	0	22	58	68
95th Queue (ft)	113	78	37	54	103	93	88	94	5	54	141	167
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					7	0		3			1	
Queuing Penalty (veh)					40	0		1			0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	258	79
Average Queue (ft)	81	10
95th Queue (ft)	186	50
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	13	0
Queuing Penalty (veh)	9	0

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	342	125	135	43	224	236	281	254	66	185	212	267
Average Queue (ft)	191	56	61	15	111	92	113	121	14	80	98	128
95th Queue (ft)	299	102	115	42	192	194	222	227	43	156	184	233
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			14	0						0		
Queuing Penalty (veh)			3	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	44	105	111	55	114	90	47
Average Queue (ft)	19	51	52	29	53	37	17
95th Queue (ft)	45	84	88	41	89	67	34
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	48	53	31
Average Queue (ft)	31	32	14
95th Queue (ft)	43	45	39
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	58	64	104	67	72
Average Queue (ft)	34	30	53	29	33
95th Queue (ft)	51	51	89	53	60
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	237	119	43	30	174	440	442	435	116	145	394	432
Average Queue (ft)	125	42	11	9	113	142	117	106	10	38	113	135
95th Queue (ft)	213	81	34	27	190	341	317	308	76	95	256	288
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	0											
Queuing Penalty (veh)	1											
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					22	11		17		0	6	
Queuing Penalty (veh)					114	17		4		1	2	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	460	250
Average Queue (ft)	153	52
95th Queue (ft)	311	160
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	30	4
Queuing Penalty (veh)	57	22

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	250	121	108	32	208	182	181	209	60	236	281	328
Average Queue (ft)	115	52	44	8	97	46	54	58	18	69	104	141
95th Queue (ft)	194	95	90	31	176	122	133	145	47	166	204	256
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			6							1		
Queuing Penalty (veh)			1							0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	36	100	58	52	77	62	41
Average Queue (ft)	14	53	30	26	36	31	14
95th Queue (ft)	39	87	53	43	57	51	32
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	54	65	45
Average Queue (ft)	33	35	21
95th Queue (ft)	44	51	47
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	45	54	199	125	75
Average Queue (ft)	28	28	97	58	41
95th Queue (ft)	48	50	165	92	65
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Queuing and Blocking Report
Existing + Full Occupancy Saturday Peak Hour

Health Club within The Shops at Rossmoor TIA

02/21/2017

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	200	111	59	39	174	270	201	123	27	108	230	253
Average Queue (ft)	113	45	14	10	98	87	65	53	2	25	86	99
95th Queue (ft)	185	87	42	31	168	197	140	111	12	67	174	199
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	0											
Queuing Penalty (veh)	0											
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					18	3		8			1	
Queuing Penalty (veh)					85	5		1			0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	266	202
Average Queue (ft)	112	44
95th Queue (ft)	213	116
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	22	5
Queuing Penalty (veh)	50	21

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	206	107	124	40	125	188	182	196	51	160	196	262
Average Queue (ft)	109	47	51	10	72	70	84	89	19	77	108	152
95th Queue (ft)	183	86	98	34	119	146	162	171	45	144	181	243
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			7	0						0		
Queuing Penalty (veh)			1	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	35	82	56	45	58	52	34
Average Queue (ft)	15	42	30	22	30	27	10
95th Queue (ft)	41	69	53	41	46	44	29
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	53	54	54
Average Queue (ft)	31	34	25
95th Queue (ft)	46	47	49
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	72	59	180	119	93
Average Queue (ft)	33	31	97	68	51
95th Queue (ft)	56	52	156	103	81
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	147	112	59	70	136	148	109	111	17	59	224	262
Average Queue (ft)	67	39	15	27	53	40	39	35	1	18	76	86
95th Queue (ft)	128	82	43	58	107	102	90	88	10	50	178	206
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					7	1		4			1	
Queuing Penalty (veh)					36	1		1			0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	263	204
Average Queue (ft)	97	16
95th Queue (ft)	222	84
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	14	0
Queuing Penalty (veh)	12	0

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	397	138	151	48	233	206	244	252	60	168	197	259
Average Queue (ft)	203	50	64	15	106	95	114	122	13	74	99	131
95th Queue (ft)	339	97	125	42	190	194	225	229	41	142	183	236
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			13	0						0		
Queuing Penalty (veh)			3	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	35	115	99	70	116	67	43
Average Queue (ft)	20	53	47	32	55	36	17
95th Queue (ft)	45	94	79	52	91	59	37
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	44	63	36
Average Queue (ft)	30	34	14
95th Queue (ft)	43	50	39
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	56	55	117	50	61
Average Queue (ft)	33	31	57	30	34
95th Queue (ft)	50	49	96	47	54
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	244	123	47	38	174	471	451	440	117	160	410	420
Average Queue (ft)	152	51	10	9	124	159	129	109	10	40	128	156
95th Queue (ft)	240	96	34	29	198	373	329	308	68	104	275	310
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	2											
Queuing Penalty (veh)	4											
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					27	12		19		0	7	
Queuing Penalty (veh)					138	23		5		0	3	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	451	250
Average Queue (ft)	163	77
95th Queue (ft)	317	195
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	36	8
Queuing Penalty (veh)	81	44

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	234	128	106	49	244	157	195	194	55	285	346	379
Average Queue (ft)	124	49	40	10	103	45	56	63	17	71	111	154
95th Queue (ft)	203	95	83	37	192	121	142	157	45	178	229	290
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			5	0						1		
Queuing Penalty (veh)			1	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	39	132	73	50	72	65	49
Average Queue (ft)	14	56	33	26	36	31	16
95th Queue (ft)	40	98	56	42	57	53	37
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	58	64	53
Average Queue (ft)	33	36	26
95th Queue (ft)	48	52	49
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	62	61	222	116	99
Average Queue (ft)	35	33	121	59	44
95th Queue (ft)	56	53	200	93	75
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			1		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	227	141	52	38	174	311	233	140	33	111	217	252
Average Queue (ft)	122	56	14	10	103	92	59	50	3	26	91	106
95th Queue (ft)	200	103	41	28	176	226	138	108	18	72	184	213
Link Distance (ft)	231	231	160	160		827	827	827			1070	1070
Upstream Blk Time (%)	0	0										
Queuing Penalty (veh)	1	0										
Storage Bay Dist (ft)					80				50	150		
Storage Blk Time (%)					23	3		8	0		2	
Queuing Penalty (veh)					110	6		1	0		0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	294	224
Average Queue (ft)	119	47
95th Queue (ft)	228	124
Link Distance (ft)	1070	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	23	4
Queuing Penalty (veh)	57	19

Intersection: 7: Seal Beach Boulevard & Bradbury Road

Movement	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	T	TR	L	T	T	TR
Maximum Queue (ft)	228	96	120	44	161	181	202	230	62	173	234	305
Average Queue (ft)	106	48	47	10	75	59	74	82	15	73	105	160
95th Queue (ft)	184	88	96	35	133	140	159	174	46	145	196	257
Link Distance (ft)	1217	1217	476			1070	1070	1070		2901	2901	2901
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)				60	360				205			
Storage Blk Time (%)			6	0						0		
Queuing Penalty (veh)			1	0						0		

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	36	77	58	32	55	60	24
Average Queue (ft)	17	43	33	23	30	26	10
95th Queue (ft)	43	67	55	39	43	43	26
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	61	62	63
Average Queue (ft)	31	34	27
95th Queue (ft)	49	49	51
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	60	72	206	149	95
Average Queue (ft)	33	36	109	69	49
95th Queue (ft)	53	59	172	113	81
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		0
Queuing Penalty (veh)			0		0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	146	74	42	80	150	100	107	113	15	80	248	300
Average Queue (ft)	64	29	11	24	56	29	35	34	1	18	74	88
95th Queue (ft)	121	58	34	57	115	77	90	88	9	52	187	220
Link Distance (ft)	231		160	160		822	822	822			1063	1063
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)		150			250				50	150		
Storage Blk Time (%)	0							4		0	2	
Queuing Penalty (veh)	0							1		0	0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	325	170
Average Queue (ft)	98	21
95th Queue (ft)	237	107
Link Distance (ft)	1063	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	14	0
Queuing Penalty (veh)	12	1

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	LTR	LTR
Maximum Queue (ft)	64	92	64	56	71
Average Queue (ft)	38	45	29	30	26
95th Queue (ft)	58	77	55	53	50
Link Distance (ft)	210	231	231	286	152
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	LTR	LTR
Maximum Queue (ft)	89	215	68	144	73
Average Queue (ft)	43	99	34	62	35
95th Queue (ft)	73	180	58	106	64
Link Distance (ft)	210	231	231	286	152
Upstream Blk Time (%)		0			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	239	195	50	27	281	288	267	241	74	140	238	244
Average Queue (ft)	134	75	10	8	127	69	68	64	4	35	113	135
95th Queue (ft)	231	168	33	26	224	187	181	172	42	89	205	222
Link Distance (ft)	231		160	160		822	822	822			1063	1063
Upstream Blk Time (%)	2											
Queuing Penalty (veh)	7											
Storage Bay Dist (ft)		150			250				50	150		
Storage Blk Time (%)	12	0			1	1		13		0	5	
Queuing Penalty (veh)	19	1			3	3		3		0	2	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	323	245
Average Queue (ft)	147	51
95th Queue (ft)	251	140
Link Distance (ft)	1063	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	33	4
Queuing Penalty (veh)	74	21

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	EB	EB	WB	WB	NB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	TR	L	T	T	T	R	L	T	T
Maximum Queue (ft)	240	195	57	26	252	169	124	124	24	92	213	233
Average Queue (ft)	129	77	14	9	116	56	53	50	3	21	93	107
95th Queue (ft)	223	168	43	26	210	120	105	103	15	60	190	214
Link Distance (ft)	231		160	160		822	822	822			1063	1063
Upstream Blk Time (%)	1											
Queuing Penalty (veh)	6											
Storage Bay Dist (ft)		150			250				50	150		
Storage Blk Time (%)	6	0			0	0		9			2	
Queuing Penalty (veh)	10	0			1	0		1			0	

Intersection: 6: Seal Beach Boulevard & Rossmoor Center Way/Plymouth Drive

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	238	210
Average Queue (ft)	121	44
95th Queue (ft)	223	112
Link Distance (ft)	1063	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)	26	3
Queuing Penalty (veh)	65	14

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	LTR	LTR
Maximum Queue (ft)	93	169	85	148	112
Average Queue (ft)	50	89	38	74	44
95th Queue (ft)	80	145	64	120	83
Link Distance (ft)	210	231	231	286	152
Upstream Blk Time (%)		0			0
Queuing Penalty (veh)		0			0
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	50	135	114	70	111	71	47
Average Queue (ft)	23	55	54	32	53	34	17
95th Queue (ft)	50	101	92	52	85	58	38
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	55	66	31
Average Queue (ft)	33	32	13
95th Queue (ft)	42	51	38
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	63	60	105	60	60
Average Queue (ft)	32	31	51	28	34
95th Queue (ft)	50	50	85	54	56
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	43	101	68	38	64	56	49
Average Queue (ft)	17	52	33	25	36	30	17
95th Queue (ft)	43	84	57	39	55	51	40
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	54	68	62
Average Queue (ft)	33	38	26
95th Queue (ft)	45	57	51
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	57	55	202	122	96
Average Queue (ft)	33	33	116	55	43
95th Queue (ft)	50	50	189	90	73
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)			0		
Queuing Penalty (veh)			0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: Montecito Road & Bradbury Road

Movement	EB	WB	WB	NB	NB	SB	SB
Directions Served	LTR	LT	R	LT	TR	LT	TR
Maximum Queue (ft)	44	80	63	36	55	57	46
Average Queue (ft)	16	45	32	23	31	26	13
95th Queue (ft)	43	71	57	39	45	43	33
Link Distance (ft)	701	1217	1217	1020	1020	664	664
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 12: West Road & Rossmoor Center Way

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	67	66	60
Average Queue (ft)	32	34	27
95th Queue (ft)	49	51	52
Link Distance (ft)	324	259	236
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Internal Driveway & Rossmoor Center Way

Movement	EB	EB	WB	NB	SB
Directions Served	LT	TR	LTR	LTR	LTR
Maximum Queue (ft)	62	66	172	133	107
Average Queue (ft)	36	36	103	66	50
95th Queue (ft)	55	56	164	107	85
Link Distance (ft)	210	210	231	274	166
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Arterial Level of Service: NB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	16.6	47.9	0.32	23.8	C
Towne Center Drive	II	45	11.8	1.2	13.0	0.11	30.1	B
Plymouth Drive	II	45	18.7	1.9	20.6	0.17	30.1	B
Bradbury Road	II	45	23.5	10.6	34.1	0.22	22.8	C
Orangewood Avenue	II	40	51.0	24.3	75.3	0.57	27.1	C
Farquhar Avenue	II	35	29.8	3.6	33.4	0.25	27.0	C
Katella Avenue	II	35	29.7	32.5	62.2	0.25	14.4	E
Total	II		195.8	90.7	286.5	1.88	23.6	C

Arterial Level of Service: SB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	60.4	95.5	0.33	12.3	F
Farquhar Avenue	II	35	29.7	4.5	34.2	0.25	26.3	C
Orangewood Avenue	II	35	29.8	6.1	35.9	0.25	25.1	C
Bradbury Road	II	45	45.3	9.5	54.8	0.57	37.2	A
Rossmoor Center Way	II	45	23.5	4.8	28.3	0.22	27.5	C
Towne Center Drive	II	45	18.7	0.8	19.5	0.17	31.7	B
Saint Cloud Drive	II	45	11.8	17.1	28.9	0.11	13.5	E
Total	II		193.9	103.2	297.1	1.89	22.9	C

Arterial Level of Service: NB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	17.0	48.3	0.32	23.6	C
Towne Center Drive	II	45	11.8	4.7	16.5	0.11	23.7	C
Plymouth Drive	II	45	18.7	7.1	25.8	0.17	24.0	C
Bradbury Road	II	45	23.5	2.4	25.9	0.22	30.0	B
Orangewood Avenue	II	40	51.0	4.6	55.6	0.57	36.7	A
Farquhar Avenue	II	35	29.8	8.3	38.1	0.25	23.7	C
Katella Avenue	II	35	29.7	29.6	59.3	0.25	15.1	E
Total	II		195.8	73.7	269.5	1.88	25.1	C

Arterial Level of Service: SB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	75.7	110.8	0.33	10.6	F
Farquhar Avenue	II	35	29.7	3.4	33.1	0.25	27.1	C
Orangewood Avenue	II	35	29.8	3.6	33.4	0.25	27.0	C
Bradbury Road	II	45	45.3	6.8	52.1	0.57	39.1	A
Rossmoor Center Way	II	45	23.5	7.8	31.3	0.22	24.8	C
Towne Center Drive	II	45	18.7	6.1	24.8	0.17	25.0	C
Saint Cloud Drive	II	45	11.8	27.0	38.8	0.11	10.1	F
Total	II		193.9	130.4	324.3	1.89	21.0	D

Arterial Level of Service: NB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	22.9	54.2	0.32	21.0	D
Towne Center Drive	II	45	11.8	12.7	24.5	0.11	16.0	E
Plymouth Drive	II	45	18.7	4.2	22.9	0.17	27.0	C
Bradbury Road	II	45	23.5	5.8	29.3	0.22	26.5	C
Orangewood Avenue	II	40	51.0	1.3	52.3	0.57	39.0	A
Farquhar Avenue	II	35	29.8	4.7	34.5	0.25	26.1	C
Katella Avenue	II	35	29.7	23.0	52.7	0.25	17.0	D
Total	II		195.8	74.6	270.4	1.88	25.0	C

Arterial Level of Service: SB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	34.7	69.8	0.33	16.8	E
Farquhar Avenue	II	35	29.7	4.4	34.1	0.25	26.3	C
Orangewood Avenue	II	35	29.8	2.3	32.1	0.25	28.1	B
Bradbury Road	II	45	45.3	4.3	49.6	0.57	41.1	A
Rossmoor Center Way	II	45	23.5	7.3	30.8	0.22	25.2	C
Towne Center Drive	II	45	18.7	12.3	31.0	0.17	20.0	D
Saint Cloud Drive	II	45	11.8	34.0	45.8	0.11	8.5	F
Total	II		193.9	99.3	293.2	1.89	23.2	C

Arterial Level of Service: NB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	16.7	48.0	0.32	23.7	C
Towne Center Drive	II	45	11.8	1.2	13.0	0.11	30.1	B
Plymouth Drive	II	45	18.7	2.0	20.7	0.17	29.9	B
Bradbury Road	II	45	23.5	12.2	35.7	0.22	21.8	D
Orangewood Avenue	II	40	51.0	23.1	74.1	0.57	27.5	C
Farquhar Avenue	II	35	29.8	3.6	33.4	0.25	27.0	C
Katella Avenue	II	35	29.7	33.0	62.7	0.25	14.3	E
Total	II		195.8	91.8	287.6	1.88	23.5	C

Arterial Level of Service: SB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	62.1	97.2	0.33	12.0	F
Farquhar Avenue	II	35	29.7	4.5	34.2	0.25	26.3	C
Orangewood Avenue	II	35	29.8	6.1	35.9	0.25	25.1	C
Bradbury Road	II	45	45.3	10.7	56.0	0.57	36.4	A
Rossmoor Center Way	II	45	23.5	4.9	28.4	0.22	27.4	C
Towne Center Drive	II	45	18.7	0.9	19.6	0.17	31.6	B
Saint Cloud Drive	II	45	11.8	16.0	27.8	0.11	14.1	E
Total	II		193.9	105.2	299.1	1.89	22.7	C

Arterial Level of Service: NB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	17.2	48.5	0.32	23.5	C
Towne Center Drive	II	45	11.8	4.6	16.4	0.11	23.9	C
Plymouth Drive	II	45	18.7	7.1	25.8	0.17	24.0	C
Bradbury Road	II	45	23.5	2.6	26.1	0.22	29.8	B
Orangewood Avenue	II	40	51.0	4.2	55.2	0.57	36.9	A
Farquhar Avenue	II	35	29.8	8.6	38.4	0.25	23.5	C
Katella Avenue	II	35	29.7	29.9	59.6	0.25	15.1	E
Total	II		195.8	74.2	270.0	1.88	25.1	C

Arterial Level of Service: SB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	83.3	118.4	0.33	9.9	F
Farquhar Avenue	II	35	29.7	3.5	33.2	0.25	27.0	C
Orangewood Avenue	II	35	29.8	3.5	33.3	0.25	27.1	C
Bradbury Road	II	45	45.3	6.7	52.0	0.57	39.2	A
Rossmoor Center Way	II	45	23.5	9.2	32.7	0.22	23.8	C
Towne Center Drive	II	45	18.7	6.1	24.8	0.17	25.0	C
Saint Cloud Drive	II	45	11.8	27.7	39.5	0.11	9.9	F
Total	II		193.9	140.0	333.9	1.89	20.4	D

Arterial Level of Service: NB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Saint Cloud Drive	II	45	31.3	23.2	54.5	0.32	20.9	D
Towne Center Drive	II	45	11.8	12.8	24.6	0.11	15.9	E
Plymouth Drive	II	45	18.7	4.5	23.2	0.17	26.7	C
Bradbury Road	II	45	23.5	6.6	30.1	0.22	25.8	C
Orangewood Avenue	II	40	51.0	1.4	52.4	0.57	38.9	A
Farquhar Avenue	II	35	29.8	5.0	34.8	0.25	25.9	C
Katella Avenue	II	35	29.7	23.1	52.8	0.25	17.0	D
Total	II		195.8	76.6	272.4	1.88	24.8	C

Arterial Level of Service: SB Seal Beach Boulevard

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Katella Avenue	II	35	35.1	35.0	70.1	0.33	16.7	E
Farquhar Avenue	II	35	29.7	4.4	34.1	0.25	26.3	C
Orangewood Avenue	II	35	29.8	2.4	32.2	0.25	28.0	C
Bradbury Road	II	45	45.3	4.5	49.8	0.57	40.9	A
Rossmoor Center Way	II	45	23.5	8.4	31.9	0.22	24.4	C
Towne Center Drive	II	45	18.7	13.0	31.7	0.17	19.5	D
Saint Cloud Drive	II	45	11.8	37.5	49.3	0.11	7.9	F
Total	II		193.9	105.2	299.1	1.89	22.7	C