

Appendix D

Traffic and Circulation Supporting Information

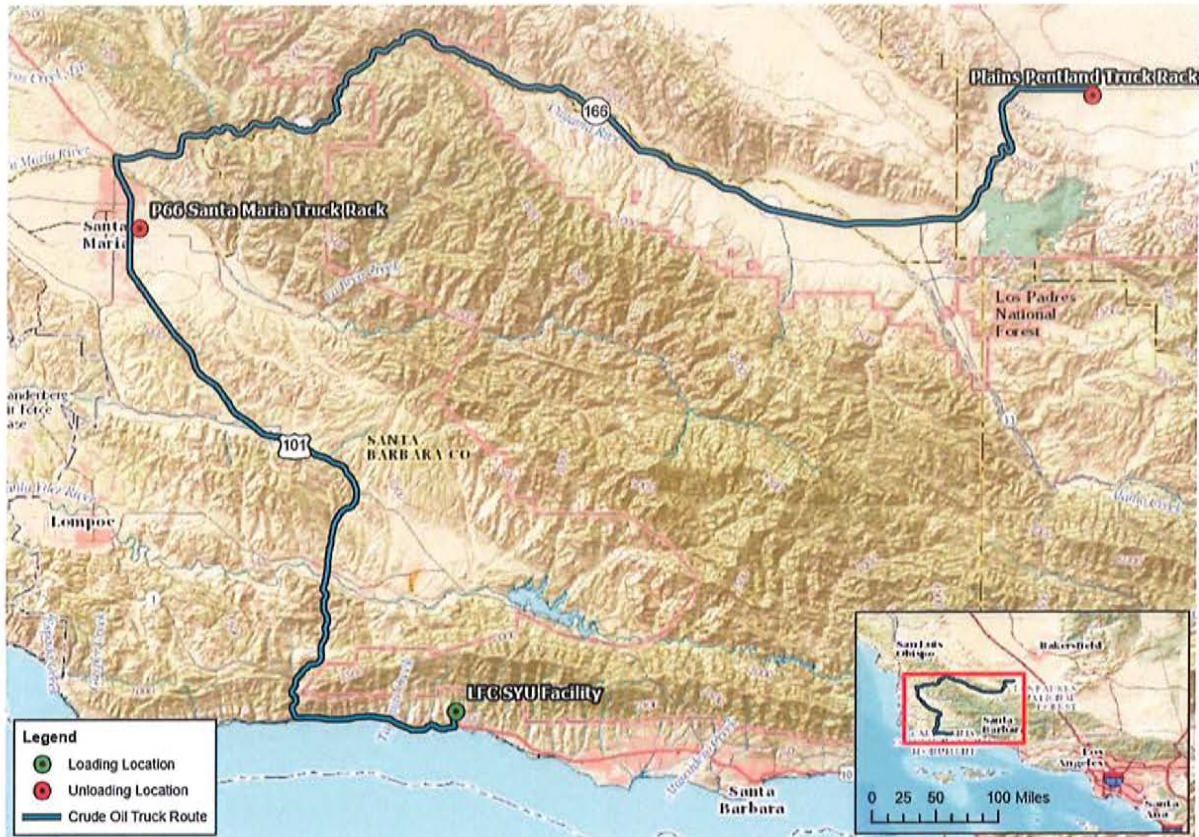
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Final Traffic and Circulation Study

EXXONMOBIL INTERIM TRUCKING PERMIT PROJECT SANTA BARBARA COUNTY, CALIFORNIA

FINAL TRAFFIC AND CIRCULATION STUDY



February 19, 2019

ATE #17092

Prepared for:

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FINAL TRAFFIC AND CIRCULATION STUDY FOR THE EXXONMOBIL INTERIM TRUCKING PERMIT PROJECT, COUNTY OF SANTA BARBARA

Associated Transportation Engineers (ATE) prepared a traffic and circulation study in January 2018 for the ExxonMobil Interim Trucking Permit Project. That study was reviewed and commented upon by County and Caltrans staffs as part of the processing for the Administrative Draft EIR and that report was revised accordingly.

The following study includes revisions to address the County/Caltrans comments. It is understood that this traffic study will be incorporated into the Public Draft EIR being prepared for the project.

Associated Transportation Engineers

Scott A. Schell, AICP, PTP
Principal Transportation Planner

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INTRODUCTION

The following study contains an analysis of potential traffic and circulation impacts associated with the ExxonMobil Interim Trucking Permit (the "Project"). The report provides information relative to Baseline traffic conditions (Year 2018) within the Project study area and evaluates potential traffic impacts associated with the Project using Santa Barbara County, Caltrans, and Kern County impact criteria.

PROJECT DESCRIPTION

ExxonMobil is requesting an Interim Trucking Permit to truck processed crude from the Santa Ynez Unit (SYU) facility located in Las Flores Canyon (LFC) to markets until a transport pipeline becomes available. Because of the Plains 901 pipeline incident in May 2015, the pipeline was shut down and eliminated the only transportation option for transport of processed crude from the SYU facility to markets. The interim trucking program would cease once a pipeline is available for crude transportation from the LFC site to markets.

The interim trucking permit is proposed to allow transport of crude product via trucks from the LFC site located adjacent to US 101 about 12 miles west of the City of Goleta to: 1) the Phillips 66 Santa Maria Terminal near Santa Maria in Santa Barbara County or 2) to the Plains Pentland Terminal in Kern County. Figure 1 illustrates the locations of the LFC site, the Phillips 66 site, and the Plains Pentland Terminal site. Figure 1 also shows the proposed truck routes.

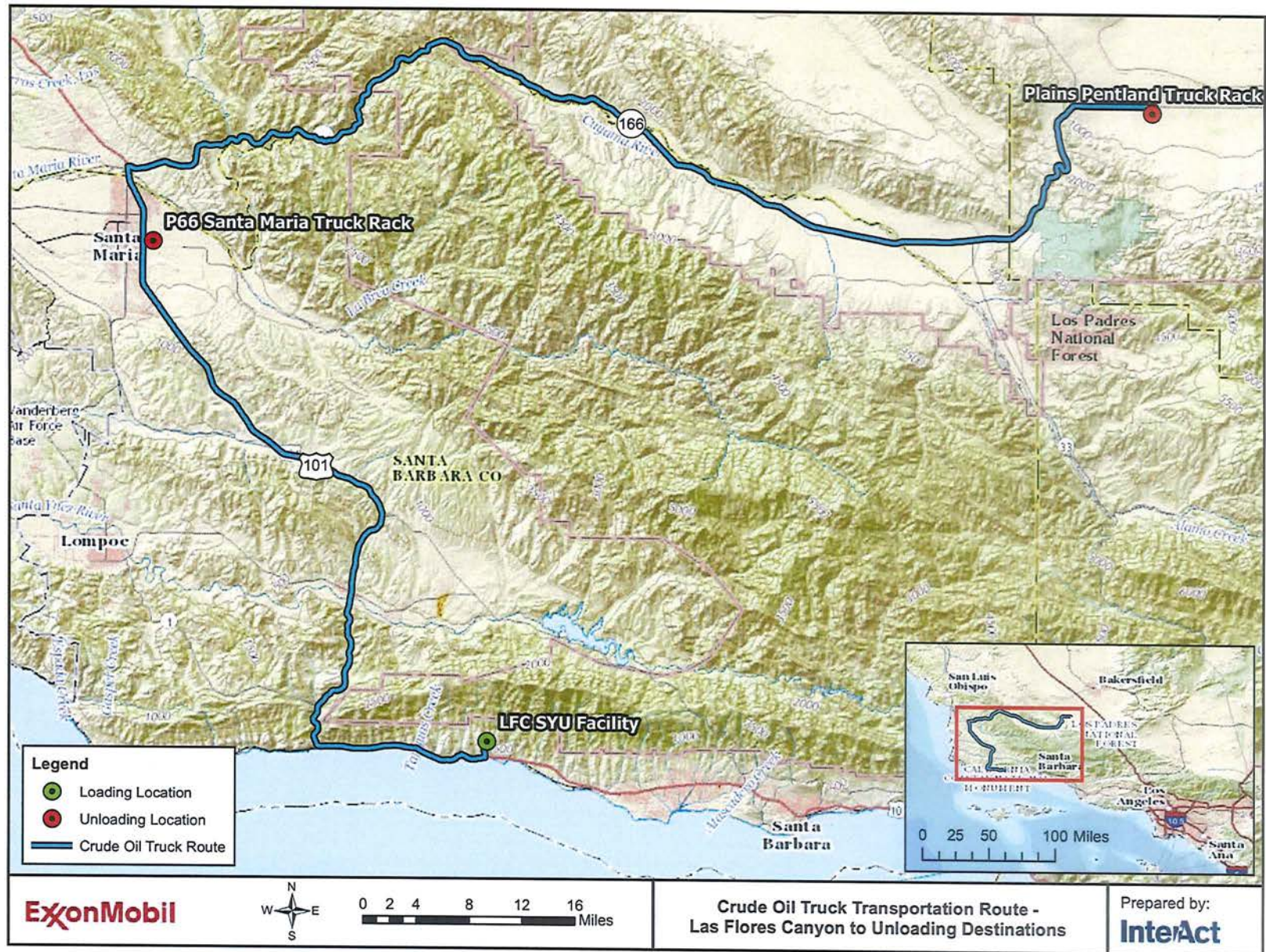
The maximum number of loaded trucks would be limited to 70 per day. Truck transportation would occur seven days a week and 24-hours per day. All trucks entering and leaving the LFC facility would use the Refugio Road ramps at US 101. Trucks traveling to the Phillips 66 Terminal would exit US 101 at the Betteravia Road Interchange (I/C) and use Betteravia Road, Rosemary Road, and Battles Road to access the Phillips 66 Terminal. Trucks traveling to the Plains Pentland Terminal would exit US 101 at the SR 166 I/C and use SR 166 to Basic School Road to access the Plains Pentland Terminal.

TRAFFIC STUDY METHODOLOGIES

The following section reviews the key elements and methodologies used in the traffic and circulation study.

Traffic Scenarios

The traffic study assesses potential impacts generated by the Project for two options. Each option generates the same level of traffic on a daily basis (maximum number of trucks would be limited to 70 per day). Option 1 evaluates potential impacts assuming transport of crude product to the Phillips 66 Terminal in Santa Maria (see Figure 1). Option 2 evaluates potential impacts assuming transport of crude to the Plains Pentland Terminal in Kern County (see Figure 1).



PROJECT SITE LOCATIONS / PROPOSED TRUCK ROUTES

FIGURE 1

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Study Facilities

The traffic study assesses potential impacts for the key roadway segments and intersections along the two truck routes. Table 1 lists the key roadway segments and intersections evaluated in the traffic study.

Table 1
Key Roadways and Intersections

Roadway Segments	Intersections
<u>Option 1 – Truck to Phillips 66 Terminal</u> Calle Real – east of Refugio Rd I/C US 101 – Refugio Rd I/C to Betteravia Rd I/C Betteravia Rd – east of US 101 I/C Rosemary Rd – north of Betteravia Rd Battles Rd – east of Rosemary Rd	US 101 NB Ramps/Refugio Rd US 101 SB Ramps/Refugio Rd US 101 NB Ramps/Betteravia Rd US 101 SB Ramps/Betteravia Rd
<u>Option 2 – Truck to Plains Pentland Terminal</u> Calle Real – east of Refugio Rd I/C US 101 – Refugio Rd I/C to SR 166 I/C SR 166 – US 101 I/C to Basic School Rd Basic School Rd – north of Plains Site	US 101 NB Ramps/Refugio Road US 101 SB Ramps/Refugio Road US 101 NB Ramps/SR 166 US 101 SB Ramps/SR 166 SR 166/Basic School Road

Level of Service Definitions and Evaluation Methods

Levels of Service (LOS) A through F are used to rate traffic operations, with LOS A indicating free flow operations and LOS F indicating congested operations (more detailed descriptions are included in the Technical Appendix for reference). Levels of service for Santa Barbara County and Kern County roads were evaluated using standard engineering roadway design capacities. Levels of service for the US 101 and SR 166 highway segments, as well as the intersections along the routes, were evaluated using the Caltrans recommended methods outlined in the Highway Capacity Manual.¹

Baseline Traffic Volumes

The January 2018 traffic study used traffic counts for US 101 and SR 166 that were published by Caltrans in 2015 and 2016 (which are the most current data published by Caltrans). Upon review of the January 2018 study, Caltrans made the comment that counts that are more than 2 years old should be updated. The 2015/2016 counts used in the January 2018 traffic study were therefore increased to represent Year 2018 baseline conditions for assessing potential traffic impacts.

¹ Highway Capacity Manual, Transportation Research Board, 2016.

For US 101, Caltrans historical count data shows that volumes on US 101 between the US 101/Refugio Road I/C and US 101/SR 166 I/C have grown at a rate of about 0.7% per year over the past 10 years. To be conservative, the 2015/2016 volumes were factored up to 2018 baseline conditions using a 1% per year growth factor.

For SR 166, Caltrans historical count data shows that volumes on SR 166 between the US 101/SR 166 I/C and Basic School Road have grown at a rate of about 7% per year over the past 10 years. The 2015/2016 volumes were factor up to 2018 baseline conditions using a 7% per year growth factor.

The traffic counts for most of the surfaces streets and intersections used in the January 2018 study were collected in November 2017 and are therefore representative of baseline conditions for assessing potential impacts to those facilities – with one exception. The traffic counts for the US 101/Betteravia Road I/C were collected in August 2016 and are about two years old. Further, there has been a significant amount of development within the Enos Ranchos Specific Plan area since the time of those counts. The Enos Ranchos Specific Plan area is a large area located just west of the US 101/Betteravia Road I/C. About 50% of the Specific Plan area has been developed since 2016 and development of the area continues. To be conservative, the Year 2018 baseline traffic volumes used in the following impact analysis assume 100% development of the Enos Ranchos Specific Plan.

Finally, the applicant indicated that there were about 100 employees working on the site prior to the pipeline shutdown. Staffing levels have been reduced to 60 employees working on the site during the shutdown period. Traffic generated by the 40 additional employees prior to shutdown (80 ADT, 9 AM peak hour trips and 18 PM peak hour trips) were therefore included in the baseline traffic since the baseline for the Project represents operations prior to the pipeline shutdown.

THRESHOLDS OF SIGNIFICANCE

Santa Barbara County

Most of the roadway segments along the Option 1 and Option 2 truck routes are within Santa Barbara County. Santa Barbara County considers LOS C as the minimum acceptable operating standard for the roadways and intersections. The County's thresholds of significance for traffic impacts were used to assess the Project's potential to generate traffic impacts to County facilities. The Santa Barbara County thresholds are listed below.

- A. The addition of project traffic to an intersection increases the volume-to-capacity (V/C) ratio by the value provide below or sends at least 5, 10 or 15 trips to an intersection operating at LOS F, E, or D.

Intersection Level of Service (Including Project)	Increase in V/C or Trips Greater Than
LOS A	0.20
LOS B	0.15
LOS C	0.10
LOS D	15 Trips
LOS E	10 Trips
LOS F	5 Trips

- B. Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal.
- C. Project adds traffic to a roadway that has design features (e.g., narrow width, road-side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational uses, etc.) that would become potential safety problems with the addition of project traffic or cumulative traffic. Exceedance of the roadways designated Circulation Element Capacity may indicate the potential for the occurrence of the above impacts.

The roadway impact threshold defines a significant roadway impact if a project would increase traffic volumes by more than 1.0 percent (either project-specific or project contribution to cumulative impacts) on a roadway that currently exceeds its Acceptable Capacity or is forecast to exceed its Acceptable Capacity under cumulative conditions.

- D. Project traffic would utilize a substantial portion of an intersection's capacity where the intersection is currently operating at an acceptable level of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85, and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and a change of 0.01 for intersections operating at anything lower.

Kern County

Basic School Road is located in Kern County. According to the Kern County Circulation Element of the General Plan, "All roads shall maintain Level of Service D or better as required by the County General Plan. If traffic resulting from a project exceeds current volume-to-capacity projections, mitigation is required if development causes roadways to fall below LOS D."

Caltrans

US 101 and SR 166 are State facilities that fall under the jurisdiction of Caltrans. The Caltrans minimum standard for traffic operations is the cusp of LOS C/LOS D (LOS C or better is considered acceptable), with mitigation required for operations at LOS D, E and F.

PROJECT IMPACTS – OPTION 1 – TRUCK TO PHILLIPS 66 TERMINAL

Existing Street Network

The street network that serves Option 1 includes State highways and County roads. The following text provides a brief description of the street network for Option 1.

US 101 is a north-south freeway that traverses Santa Barbara County and beyond. US 101 contains 2 lanes in each direction between the Refugio Road I/C near the LFC site and the Santa Maria Way I/C in Santa Maria. US 101 contains 3 lanes in each direction between the Santa Maria Way I/C and the Betteravia Road I/C in Santa Maria.

Betteravia Road is a 4-lane arterial road between US 101 and Nicholson Avenue just east of US 101; and is a 2-lane arterial road between Nicholson Avenue and Rosemary Road. The 4-lane segment east of US 101 serves a truck stop and service stations. The 2-lane segment to the east serves mostly agricultural uses.

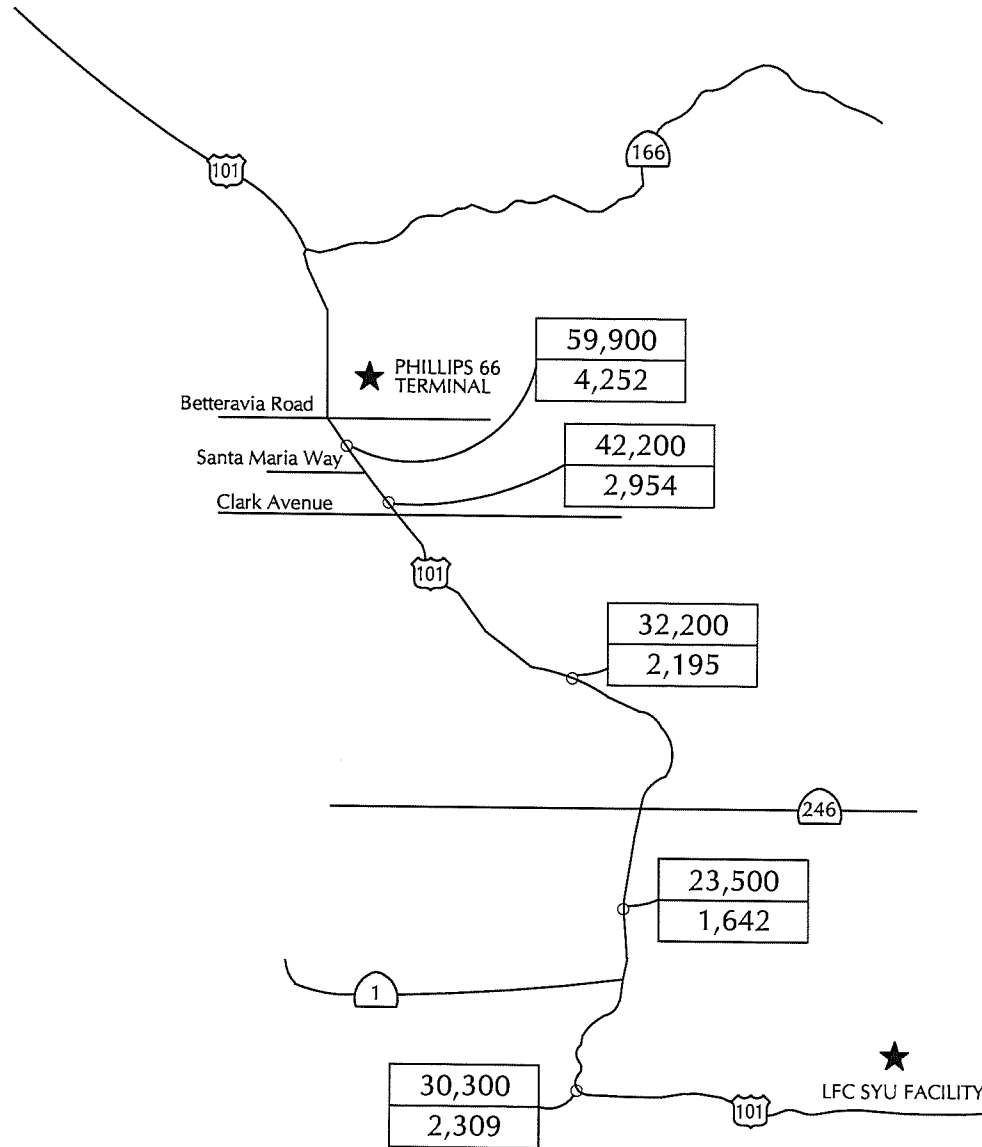
Rosemary Road is a 2-lane collector road that extends north of Betteravia Road that serves mostly agricultural uses.

Battles Road is a 2-lane collector road that extends west of Rosemary Road that serves mostly agricultural uses. The Phillips 66 Terminal is located on Battles Road.

Baseline Traffic Operations

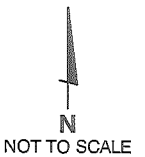
Figures 2a and 2b present the Baseline traffic volumes for the key roadway segments and intersections along the Option 1 truck route. Baseline traffic volumes and levels of service for the key roadways and intersections along the Option 1 trucking route are presented below.

US 101. Table 2 lists the Baseline (2018) traffic volumes and levels of service for the US 101 segments along the Option 1 truck route. Levels of service were calculated for the peak hour period using the operations methods outlined in the Highway Capacity Manual. As shown in Table 2, the US 101 segments along the Option 1 truck route currently operate at LOS A or LOS B, which meet the Caltrans and County LOS C standard.



LEGEND

AADT
Peak Hour



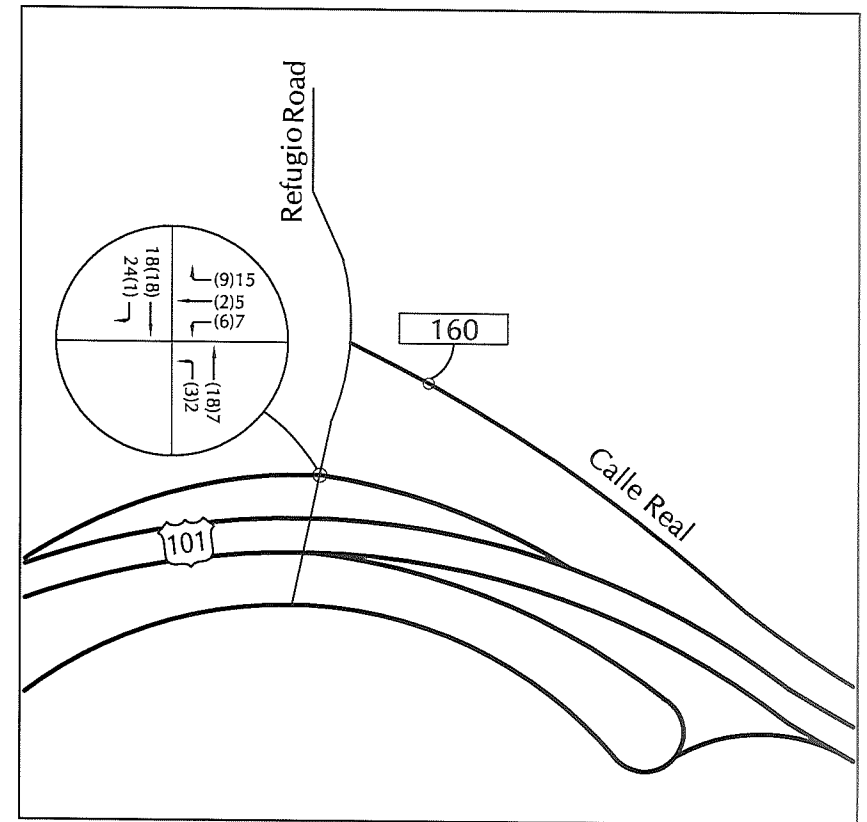
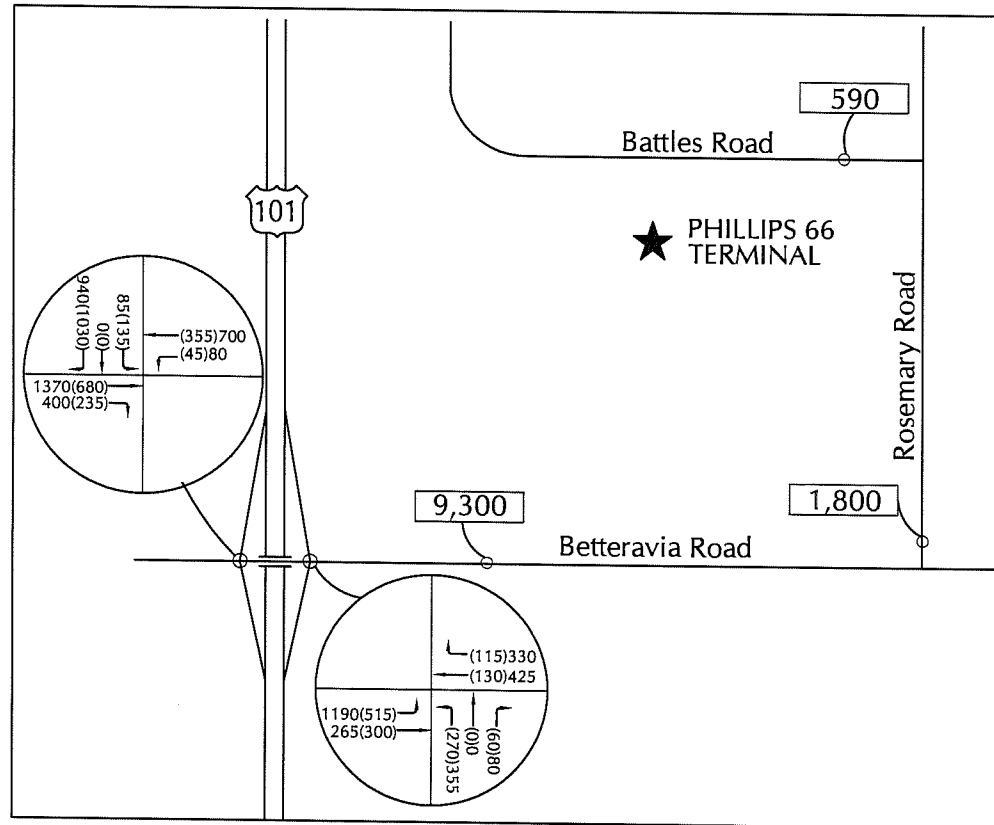
BASELINE TRAFFIC VOLUMES - TRUCK ROUTE OPTION 1

FIGURE 2a

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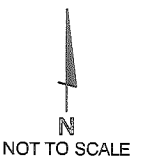
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LEGEND

└(XX)XX - (AM)PM Peak Hour Volume

└X - Average Daily Traffic Volume



BASELINE TRAFFIC VOLUMES - TRUCK ROUTE OPTION 1

FIGURE **2b**

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Table 2
Baseline Operations – US 101 – Option 1

US 101 Segment	Traffic Volumes			Highway Characteristics			Density / LOS(c)	
	AADT(a)	Peak Hour(b)		# Lanes	Terrain	Area	Northbound	Southbound
Refugio Road I/C to SR 1 I/C	30,300	1,560	749	4	Rolling	Rural	14.1/LOS B	6.7/LOS A
SR 1 I/C to SR 246 I/C	23,500	987	655	4	Rolling	Rural	9.5/LOS A	6.3/LOS A
SR 246 I/C to Clark Avenue I/C	32,200	1,208	987	4	Rolling	Rural	11.1/LOS B	9.1/LOS A
Clark Avenue I/C to Santa Maria Way I/C	42,200	1,591	1,363	4	Flat	Urban	13.2/LOS B	11.3 LOS B
Santa Maria Way I/C to Betteravia Road I/C	59,900	2,295	1,957	6	Flat	Urban	13.6/LOS B	11.6/LOS B

(a) AADT = Average Annual Daily Traffic volume.

(b) Peak Hour = Highest 1-hour period during the 24-hour period.

(c) LOS based on density. Density = passenger cars per mile per lane.

County Roadways. Table 3 lists the roadway classifications, capacities, average daily traffic volumes, and levels of service for the County roadways along the Option 1 truck route. As shown, the County roadway segments along the Option 1 truck route currently operate at LOS A, which indicate very good operations and meet the County's LOS C standard.

Table 3
Baseline Operations – County Roadways – Option 1

County Roadway Segment	Classification	Average Daily Traffic		LOS
		Capacity	Volume	
Calle Real – east of Refugio Rd I/C	2-Lane Collector	11,800	160	LOS A
Betteravia Rd – east of US 101 I/C	4-Lane Arterial	39,900	9,300	LOS A
Rosemary Rd – north of Betteravia Rd	2-Lane Collector	11,800	1,800	LOS A
Battles Rd – east of Rosemary Rd	2-Lane Collector	11,800	590	LOS A

LOS based on standard engineering roadway design capacities.

Intersections. Table 4 presents the Baseline AM and PM peak hour levels of service for the key intersections along the Option 1 truck route. Levels of service were calculated using the operations method outlined in the Highway Capacity Manual. As shown, most of the key intersections along the Option 1 truck route currently operate at LOS C or better during the AM and PM peak hours, which meet the Caltrans and County LOS C standard. The US 101 SB Ramps/Betteravia Road intersection currently operates at LOS D during the AM peak hour and LOS F during the PM peak hour, which exceed the LOS C standard. It is noted that Caltrans, in cooperation with the City of Santa Maria, is studying an operational improvement project to address this existing deficiency (see Mitigation Measures for more details).

Table 4
Baseline Operations – Intersections – Option 1

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS(a)	Delay	LOS(a)
US 101 NB/Refugio Road	1-Way Stop				
NB Left Turn		7.3 Sec.	LOS A	7.4 Sec.	LOS A
WB Left + Thru + Right		8.7 Sec.	LOS A	8.9 Sec.	LOS A
Intersection Average:		8.5 Sec.	LOS A	8.8 Sec.	LOS A
US 101 SB/Refugio Road	Free Flow	0.0 Sec.	LOS A	0.0 Sec.	LOS A
US 101 NB/Betteravia Road(b)	Signal	17.1 Sec.	LOS B	16.9 Sec.	LOS B
US 101 SB/Betteravia Road(b)	Signal	48.5 Sec.	LOS D	> 80.0 Sec.	LOS F

(a) LOS based on average delay per vehicle in seconds.

(b) LOS assumes 100% development of Enos Ranchos Specific Plan.

Bolded values exceed LOS C standards.

Project Trip Generation

Trip generation estimates were calculated for the Project based on operational information provided by the applicant. The applicant has indicated that 70 trucks per day will occur as a result of the interim trucking permit, which equates to about 3 trucks per hour (70 trucks per day / 24 hours = 3 trucks per hour). Table 5 shows the trip generation forecasts for the Project.

Table 5
Project Trip Generation

Component	Number Per Day	Trip Generation				
		ADT	AM Peak		PM Peak	
			In	Out	In	Out
Trucks(a)	70	140	3	3	3	3

(a) ADT assumes 1 inbound + 1 outbound trip per truck. AM and PM peak hour trip generation assumes an average of 3 trucks inbound and 3 trucks outbound per hour.

As shown in Table 5, the Project is forecast to generate 140 average daily trips, with 6 trips occurring during the AM peak hour (3 inbound + 3 outbound) and 6 trips occurring during the PM peak hour (3 inbound + 3 outbound).

As required by County and Caltrans policies, the following impact analysis focuses on potential impacts during weekday AM and PM peak commuter periods since traffic volumes are highest during these periods. Trucks are larger and accelerate more slowly than passenger cars and thus have a greater effect on traffic flow than passenger cars. As recommended in the Highway Capacity Manual, each truck trip was converted to "Passenger Car Equivalents" (PCEs) for the impact analysis. Pursuant to the Highway Capacity Manual, each truck trip was converted to 2 PCEs for areas with flat terrain and 3 PCEs for areas with rolling terrain.

Baseline + Project Impacts – US 101

Table 6 lists the Baseline (2018) levels of service for the US 101 segments along the Option 1 truck route, the number of truck trips added to each segment (in PCEs), and the significance of Project-added traffic based on the County and Caltrans LOS C standard. As shown, the minor amount of Project traffic (6 to 9 northbound PCEs per hour + 6 to 9 southbound PCEs per hour) would not significantly impact the segments of US 101 between the LFC site and the Phillips 66 terminal.

Table 6
Baseline + Project Impacts – US 101 – Option 1

US 101 Segment	Baseline LOS		Project Added PCEs(a)		Significant Impact?
	Northbound	Southbound	Northbound	Southbound	
Refugio Road I/C to SR 1 I/C(b)	LOS B	LOS A	9	9	NO
SR 1 I/C to SR 246 I/C(b)	LOS A	LOS A	9	9	NO
SR 246 I/C to Clark Avenue I/C(b)	LOS B	LOS A	9	9	NO
Clark Avenue I/C to Santa Maria Way I/C(c)	LOS B	LOS B	6	6	NO
Santa Maria Way I/C to Betteravia Road I/C(c)	LOS B	LOS B	6	6	NO

(a) Project Added PCEs: 2 PCEs per truck for flat terrain; 3 PCEs per truck for rolling terrain.

(b) Rolling terrain.

(c) Flat terrain.

Baseline + Project Impacts – County Roadways

Table 7 lists the Baseline traffic volumes and levels of service for the County roadway segments along the Option 1 truck route, the number of trips added to each segment by the Project, and the significance of Project-added traffic based on the County's LOS C standard. As shown in Table 7, traffic generated by the Project would not significantly impact the County roadway segments between the LFC site and the Phillips 66 terminal.

Table 7
Baseline + Project Impacts – County Roadways – Option 1

County Roadway Segment	Baseline ADT/LOS	Project Added PCEs(a)	Baseline + Project ADT/LOS	Significant Impact?
Calle Real – east of Refugio Rd I/C	160/LOS A	280	440/LOS A	NO
Betteravia Rd – east of US 101 I/C	9,300/LOS A	280	9,580/LOS A	NO
Rosemary Rd – north of Betteravia Rd	1,800/LOS A	280	2,080/LOS A	NO
Battles Rd – east of Rosemary Rd	590/LOS A	280	870/LOS A	NO

(a) Project Added PCEs: 2 PCEs per truck trip (flat terrain).

Baseline + Project Impacts – Intersections

Tables 8 and 9 compare the Baseline and Baseline + Project levels of service for the key intersections along the Option 1 truck route; along with the number of trips (PCEs) added to each intersection by the Project and the significance of Project-added traffic based on the LOS C standard.

Table 8
Baseline + Project Impacts – Intersections – AM Peak Hour – Option 1

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?
US 101 NB/Refugio Road				
NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	12	NO
WB Left + Thru + Right	8.7 Sec./LOS A	8.8 Sec./LOS A		
<i>Intersection Average</i>	<i>8.5 Sec./LOS A</i>	<i>8.6 Sec./LOS A</i>		
US 101 SB/Refugio Road	0.0 Sec./LOS A	0.0 Sec./LOS A	6	NO
US 101 NB/Betteravia Road	18.1 Sec./LOS B	18.2 Sec./LOS B	12	NO
US 101 SB/Betteravia Road	53.1 Sec./LOS D	53.2 Sec./LOS D	6	NO

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

Bolded values exceed LOS C standards.

As shown in Table 8, Project traffic would not significantly impact the key intersections between the LFC site and the Phillips 66 terminal during the AM peak hour period. The US 101 SB Ramps/Betteravia Road intersection currently operates at LOS D during the AM peak hour and would operate at LOS D with Project traffic, which exceed the LOS C standard. The Project would add 6 trips to the intersection (3 trucks = 6 PCEs) during the AM peak hour, which is less than the County's significant impact threshold (impact threshold = 15 or more trips for intersections forecast to operate at LOS D).

Table 9
Baseline + Project Impacts – Intersections – PM Peak Hour – Option 1

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?
<u>US 101 NB/Refugio Road</u>				
NB Left Turn	7.4 Sec./LOS A	7.4 Sec./LOS A	12	NO
WB Left+ Thru + Right	8.9 Sec./LOS A	8.9 Sec./LOS A		
<i>Intersection Average</i>	<i>8.8 Sec./LOS A</i>	<i>8.8 Sec./LOS A</i>		
US 101 SB/Refugio Road	0.0 Sec./LOS A	0.0 Sec./LOS A	6	NO
US 101 NB/Betteravia Road	16.9 Sec./LOS B	17.0 Sec./LOS B	12	NO
US 101 SB/Betteravia Road	> 80 Sec./LOS F	> 80 Sec./LOS F	6	YES

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

Bolded values exceed LOS C standards.

As shown in Table 9, Project traffic would not significantly impact most of the key intersections between the LFC site and the Phillips 66 terminal during the PM peak hour period. The US 101 SB Ramps/Betteravia Road intersection currently operates at LOS F during the PM peak hour and would operate at LOS F with Project traffic, which exceeds the LOS C standard. The Project would add 6 trips to the intersection (3 trucks = 6 PCEs) during the PM peak hour, which exceeds the County's significant impact threshold (impact threshold = more than 5 trips for intersections forecast to operate at LOS F). The Mitigation Measures section of this report outlines measures required to mitigate this potential impact.

Phillips 66 Terminal Capacity

The Phillips 66 station operates 24 hours/day, 7 days/week, including holidays and weekends. Peak hours at the station are from 7 AM to 4 PM daily and there is lighting for truck unloading at night. Phillips 66 has indicated that the station handled about 100 trucks per day before the pipeline shutdown and the station currently handles about 130 trucks per day. The facility is not limited by permits to a specific number of trucks it can receive. The single storage tank is limited to 21,859 barrels/day (approximately 145 truckloads/day) of oil throughput by the Santa Barbara County Air Pollution District (APCD) permit to operate. If the current 130 truck/day throughput is sustained, an additional 15 trucks/day could be accommodated under the existing APCD permit. Because the station is limited to a certain throughput (with or without the proposed Project), the Project would not change the potential traffic volumes to/from the station.

There are 5 truck unloading lanes within the Phillips 66 station, which typically accommodate inbound truck traffic throughout the day. However, queueing of trucks sometimes occurs on Battles Road for short periods when there are surges of inbound trucks adjacent to the station's entry point. Since the station is limited to a certain throughput (with or without the proposed Project), the Project would not change the potential for trucks queueing along Battles Road adjacent to the

station's entry. Although unrelated to the Project, Phillips 66 is requesting a permit to add an additional lane to receive trucks to increase the on-site truck capacity and reduce the potential for queueing on Battle Road.

Battles Road is about 24 feet wide and paved between Rosemary Road and the Phillips 66 station; and a dirt road west of the Phillips 66 station. The segment between Rosemary Road and the Phillips 66 station is mostly used by traffic to/from the Phillips 66 station, with some minor use of the road for access to the adjacent agricultural lands. Traffic volumes between Rosemary Road and the Phillips 66 station are low – about 590 vehicles per day. The road is flat and straight, which provides good sight distances for road users. Given the existing conditions, trucks queued on Battles Road waiting to enter the station are safely passed by vehicles that maneuver around truck queues.

Accident Analysis

Accident histories were evaluated to determine the relative safety of the highway facilities along the proposed haul routes. Accident data was obtained from Caltrans for the most currently available three-year period, which is from January 1, 2015 through December 31, 2017 (see Caltrans accident data in the Technical Appendix).

It is important to note that Caltrans uses accident data as a screening tool to identify potential safety problems. The rate of accidents was calculated for each facility and then compared to California statewide averages for similar facilities to identify potential safety issues. By nature, accident rates experienced on a facility are often higher than the statewide average rate for similar facilities since the statewide averages are comprised of lower-than-average rates + higher-than-average rates (lower + higher = average). If the accident rate experienced on a facility is higher than the statewide average, the Caltrans significance test is performed to determine if the number of accidents that occurred on the facility is statistically significant. If the number of accidents experienced is statistically significant, more detailed safety investigations are performed by Caltrans to determine if there are accident patterns that can be corrected by changing design features of the facility (e.g. widen traffic lanes, widen roadway shoulders, change roadway curvatures, add signs, install traffic signals, etc.).

The following tables list the accident rates for the State facilities along the Option 1 truck route. The text following each table discusses the rate of accidents for each facility and the need for detailed safety investigations to identify correctable accident patterns.

Table 10
Accident Rates
US 101 – Refugio Rd I/C to Betteravia I/C

US 101 Segment	Accident Rate(a)	Statewide Average Rate(b)
Refugio Rd I/C to SR 246 I/C	0.67 per mvm	0.53 per mvm
SR 246 I/C to Clark Ave I/C	0.29 per mvm	0.51 per mvm
Clark Ave I/C to Betteravia Rd I/C	0.36 per mvm	0.43 per mvm

(a) Actual rate of accidents per million vehicle miles.

(b) California statewide average rate for similar facilities.

As shown in Table 10, the rate of accidents on US 101 between the Refugio Road I/C and the SR 246 I/C in Buellton is slightly higher than the California statewide average for similar facilities (Accident Rate = 0.67; Statewide Avenue Rate = 0.53). This segment of US 101 currently carries about 2,242 vehicles per hour during the peak hour period. The Project would add 6 trucks per hour to this segment during the peak hour period (3 northbound + 3 southbound). This traffic addition equates to an increase of about 3/10th of 1%, which is considered an insignificant impact.

The Caltrans significance test was performed to determine if the number of accidents that occurred on US 101 between the Refugio Road I/C and the SR 246 I/C in Buellton is significant (a worksheet showing the Caltrans formula and the significance test is included in the Technical Appendix). The results show that the number of accidents required to be statistically significant is 361 accidents within the 3-year period. The number of accidents that occurred during the 3-year period was 395, which is statistically significant. Further investigation of the accident history by Caltrans is warranted since the number of accidents that occurred is more than the Caltrans criteria for significance (see Mitigation Measures).

Table 11
Accident Rates
US 101/Refugio Road I/C

Ramp	Accident Rate(a)	Statewide Average Rate(b)
US 101 NB On-Ramp	3.85 per mv	0.50 per mv
US 101 NB Off-Ramp	0.00 per mv	0.98 per mv
US 101 SB On-Ramp	0.00 per mv	0.43 per mv
US 101 SB Off-Ramp	0.00 per mv	1.48 per mv

(a) Actual rate of accidents per million vehicles.

(b) California statewide average rate for similar facilities.

As shown in Table 11, the US 101 northbound on-ramp at the Refugio Road I/C has an accident rate of 3.85 accidents per million vehicles and the statewide average is 0.50 accidents per million vehicles. There was 1 accident on this ramp during the 3-year period. The Caltrans significance test shows that the number of accidents required to be statistically significant is 2 accidents within the 3-year period. Thus, the number of accidents that occurred is not statistically significant.

Table 12
Accident Rates
US 101/Betteravia Road I/C

Ramp	Accident Rate(a)	Statewide Average Rate(b)
US 101 NB On-Ramp	0.55 per mv	0.60 per mv
US 101 NB Off-Ramp	0.76 per mv	0.92 per mv
US 101 SB On-Ramp	0.42 per mv	0.60 per mv
US 101 SB Off-Ramp	2.55 per mv	0.92 per mv

(a) Actual rate of accidents per million vehicles.

(b) California statewide average rate for similar facilities.

As shown in Table 12, the rate of accidents on the US 101 ramps at the Betteravia Road I/C are lower than the California statewide averages for similar facilities – except for the US 101 southbound off-ramp. The Project would not add traffic to the US 101 southbound off-ramp.

The US 101 southbound off-ramp has an accident rate of 2.55 accidents per million vehicles and the statewide average is 0.92 accidents per million vehicles. The number of accidents required to be statistically significant is 21 accidents within the 3-year period. The number of accidents that occurred during the 3-year period was 28, which is statistically significant. Further investigation by Caltrans is warranted since the number of accidents that occurred is more than the Caltrans criteria for significance.

PROJECT IMPACTS – OPTION 2 – TRUCK TO PLAINS PENTLAND TERMINAL

Existing Street Network

The street network that serves Option 2 includes State highways and County roads. The following text provides a brief description of the street network for Option 2.

US 101 is a north-south freeway that traverses Santa Barbara County and beyond. US 101 contains 2 lanes in each direction between the Refugio Road I/C near the LFC site and the Santa Maria Way I/C in Santa Maria. US 101 contains 3 lanes in each direction between the Santa Maria Way I/C and the SR 166 I/C in San Luis Obispo County.

SR 166 is a 2-lane highway that extends between US 101 in San Luis Obispo County and I5 in Kern County.

Basic School Road is a 2-lane collector road that extends north and south of SR 166 in Kern County. The Plains Pentland Terminal is located on Basic School Road just south of SR 166.

Baseline Traffic Operations

Figures 3a and 3b present the Baseline traffic volumes for the key roadway segments and intersections along the Option 2 truck route. Baseline traffic volumes and levels of service for the key roadways and intersections along the Option 2 trucking route are presented below.

US 101. Table 13 lists the Baseline (2018) traffic volumes and levels of service for the US 101 segments along the Option 2 truck route. As shown, the US 101 segments along the Option 2 truck route currently operate at LOS A or LOS B, which meet the County and Caltrans LOS C standard.

Table 13
Baseline Operations – US 101 – Option 2

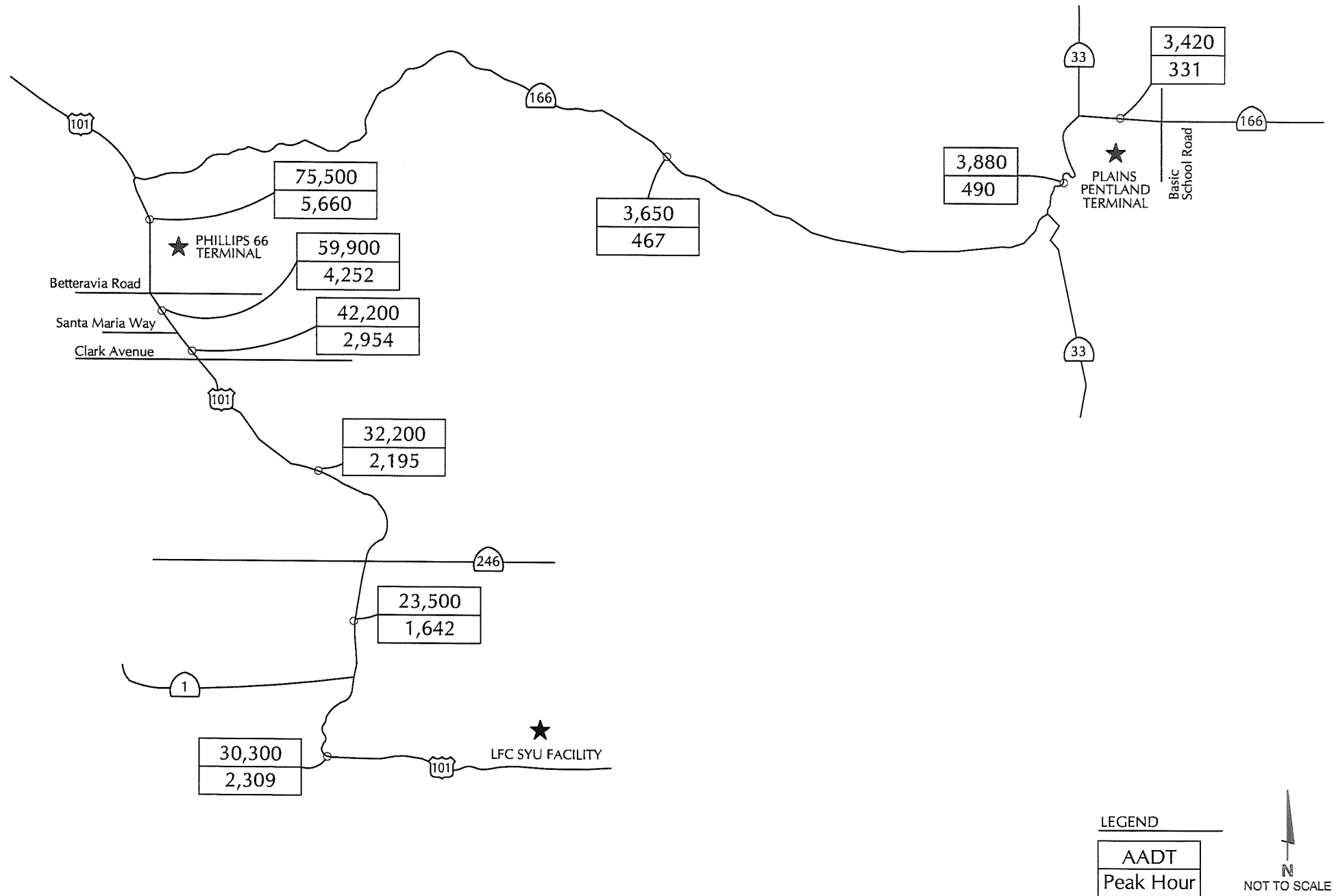
US 101 Segment	Traffic Volumes			Highway Characteristics			Density / LOS(c)	
	AADT(a)	Peak Hour(b) Northbound	Southbound	# Lanes	Terrain	Area	Northbound	Southbound
Refugio Road I/C to SR 1 I/C	30,300	1,560	749	4	Rolling	Rural	14.1/LOS B	6.7/LOS A
SR 1 I/C to SR 246 I/C	23,500	987	655	4	Rolling	Rural	9.5/LOS A	6.3/LOS A
SR 246 I/C to Clark Avenue I/C	32,200	1,208	987	4	Rolling	Rural	11.1/LOS B	9.1/LOS A
Clark Avenue I/C to Santa Maria Way I/C	42,200	1,591	1,363	4	Flat	Urban	13.2/LOS B	11.3 LOS B
Santa Maria Way I/C to Betteravia Road I/C	59,900	2,295	1,957	6	Flat	Urban	13.6/LOS B	11.6/LOS B
Betteravia Road I/C to SR 166 I/C	75,500	2,892	2,768	6	Flat	Urban	16.8/LOS B	16.1/LOS B

(a) AADT = Average Annual Daily Traffic volume.

(b) Peak Hour = Highest 1-hour period during the 24-hour period.

(c) LOS based on density. Density = passenger cars per mile per lane.

SR 166. Table 14 lists the Baseline traffic volumes and levels of service for the SR 166 segments along the Option 2 truck route. SR 166 is a two-lane highway between US 101 and Basic School Road. Levels of service were calculated for SR 166 using the two-lane highway operations methods outlined in the Highway Capacity Manual. Levels of service for two-lane highways are based on average travel speed and percent-time-spent-following (ability to pass). As shown in Table 14, the SR 166 segments along the Option 2 truck route currently operate at LOS B or LOS C, which meet the Caltrans LOS C standard.

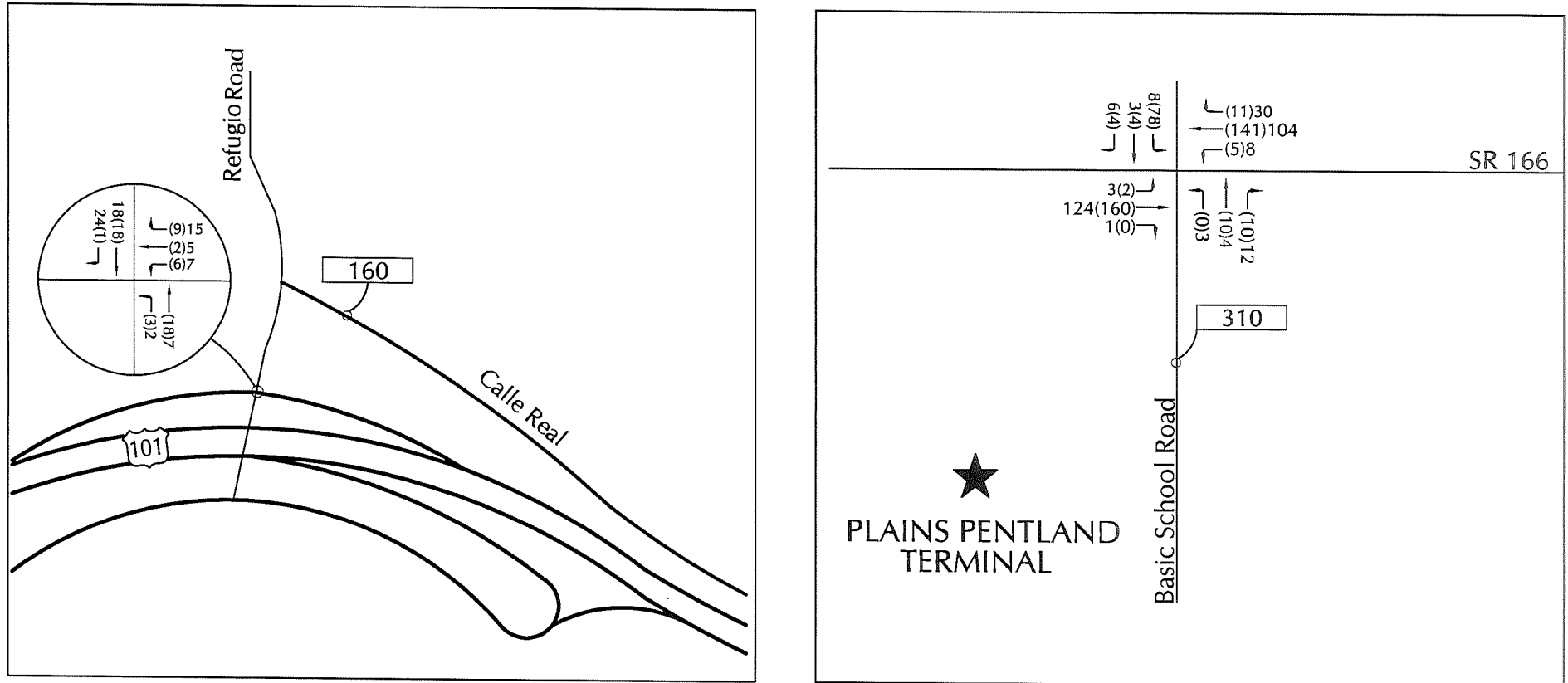


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BASELINE TRAFFIC VOLUMES - TRUCK ROUTE OPTION 2

FIGURE 3a

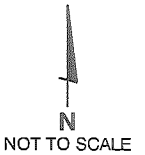
EKM - ATE#17092



LEGEND

└(XX)XX - (A.M.)P.M. Peak Hour Volume

X - Average Daily Traffic Volume



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BASELINE TRAFFIC VOLUMES - TRUCK ROUTE OPTION 2

FIGURE 3b

EKM - ATE#17092

Table 14
Baseline Operations – SR 166 – Option 2

Highway Segment	Traffic Volumes		Highway Characteristics		LOS(a)		
	AADT	Peak Hour	# Lanes	Terrain	ATS	PTSF	LOS
US 101 I/C to SR 33 South Junction	3,650	467	2	Rolling	47.6 MPH	59.1%	LOS C
SR 33 South Junction to SR 33 North Junction	3,880	490	2	Rolling	47.4 MPH	60.6%	LOS C
SR 33 North Junction to Basic School Road	3,420	331	2	Flat	50.6 MPH	45.4%	LOS B

(a) LOS based on ATS (average travel speed) and PTSF (percent-time-spent-following).

County Roadways. Table 15 lists the roadway classifications, capacities, daily traffic volumes, and levels of service for the County roadways along the Option 2 truck route. As shown, the County roadway segments along the Option 2 truck route currently operate at LOS A, which indicates very good operations and meet the LOS C standard.

Table 15
Baseline Operations – County Roadways – Option 2

County Roadway Segment	Classification	Average Daily Traffic		LOS
		Capacity	Volume	
Calle Real – east of Refugio Rd I/C	2-Lane Collector	11,800	160	LOS A
Basic School Rd – south of SR 166	2-Lane Collector	11,800	310	LOS A

LOS based on standard engineering roadway design capacities.

Intersections. Table 16 presents the Baseline AM and PM peak hour levels of service for the key intersections along the Option 2 truck route. As shown, all of the key intersections along the Option 2 truck route currently operate at LOS C or better during the AM and PM peak hours which meet the County and Caltrans LOS C standard.

Table 16
Baseline Operations – Intersections – Option 2

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
<u>US 101 NB/Refugio Road</u>	1-Way Stop				
NB Left Turn		7.3 Sec.	LOS A	7.4 Sec.	LOS A
WB Left + Thru + Right		8.7 Sec.	LOS A	8.9 Sec.	LOS A
Intersection Average:		8.5 Sec.	LOS A	8.8 Sec.	LOS A
<u>US 101 SB/Refugio Road</u>	Free Flow	0.0 Sec.	LOS A	0.0 Sec.	LOS A
<u>US 101 NB/SR 166</u>	All-Way Stop	11.3 Sec.	LOS B	23.6 Sec.	LOS C
<u>US 101 SB/SR 166</u>	1-Way Stop				
WB Left Turn		9.5 Sec.	LOS A	9.4 Sec.	LOS A
SB Left + Thru + Right		17.4 Sec.	LOS C	26.1 Sec.	LOS D
Intersection Average:		7.9 Sec.	LOS A	13.9 Sec.	LOS B
<u>SR 166/Basic School Road</u>	2-Way Stop				
EB Left Turn		7.5 Sec.	LOS A	7.7 Sec.	LOS A
WB Left Turn		7.7 Sec.	LOS A	7.6 Sec.	LOS A
NB Left + Thru + Right		10.5 Sec.	LOS B	10.1 Sec.	LOS B
SB Left + Thru + Right		12.5 Sec.	LOS B	10.9 Sec.	LOS B
Intersection Average:		11.9 Sec.	LOS B	9.8 Sec.	LOS A

LOS based on average delay per vehicle in seconds.

Project Trip Generation

The trip generation estimates for Option 1 and 2 are identical (see Table 5). The Project is forecast to generate 140 average daily trips, with 6 trips occurring during the AM peak hour (3 inbound + 3 outbound) and 6 trips occurring during the PM peak hour (3 inbound + 3 outbound).

Baseline + Project Impacts – US 101

Table 17 lists the Baseline levels of service for the US 101 segments along the Option 2 truck route, the number of truck trips added to each segment (in PCEs), and the significance of project-added traffic based on the County and Caltrans LOS C standards. As shown, the minor amount of Project traffic (6 to 9 northbound PCEs per hour + 6 to 9 southbound PCEs per hour) would not significantly impact the segments of US 101 between the LFC site in Santa Barbara County and the US 101/SR 166 I/C in San Luis Obispo County.

Table 17
Baseline + Project Impacts – US 101 – Option 2

US 101 Segment	Baseline LOS		Project Added PCEs(a)		Significant Impact?
	Northbound	Southbound	Northbound	Southbound	
Refugio Road I/C to SR 1 I/C(b)	LOS B	LOS A	9	9	NO
SR 1 I/C to SR 246 I/C(b)	LOS A	LOS A	9	9	NO
SR 246 I/C to Clark Avenue I/C(b)	LOS B	LOS A	9	9	NO
Clark Avenue I/C to Santa Maria Way I/C(c)	LOS B	LOS B	6	6	NO
Santa Maria Way I/C to Betteravia Road I/C(c)	LOS B	LOS B	6	6	NO
Betteravia Road I/C to SR 166 I/C(c)	LOS B	LOS B	6	6	NO

(a) Project Added PCEs: 2 PCEs per truck for flat terrain; 3 PCEs per truck for rolling terrain.

(b) Rolling terrain.

(c) Flat terrain.

Baseline + Project Impacts – SR 166

Table 18 lists the Baseline levels of service for the SR 166 segments along the Option 2 truck route, the number of truck trips added to each segment (in PCEs), and the significance of project-added traffic based on the LOS C standard.

Table 18
Baseline + Project Impacts – SR 166 – Option 2

Highway Segment	Baseline LOS	Project Added PCEs	Significant Impact?
US 101 I/C to SR 33 South Junction(b)	LOS C	18	NO
SR 33 South Junction to SR 33 North Junction(b)	LOS C	18	NO
SR 33 North Junction to Basic School Road(c)	LOS B	12	NO

(a) Project Added PCEs: 2 PCEs per truck for flat terrain; 3 PCEs per truck for rolling terrain.

(b) Rolling terrain.

(c) Flat terrain.

As shown, the minor amount of Project traffic (12 to 18 PCEs) would not significantly impact the segments of SR 166 between the US 101/SR 166 I/C in San Luis Obispo County and Basic School Road in Kern County.

Baseline + Project Impacts – County Roadways

Table 19 lists the Baseline traffic volumes and levels of service for the County roadway segments along the Option 2 truck route, the number of trips added to each segment by the Project, and the significance of project-added traffic based on County LOS C standards. As shown, traffic generated by the Project would not significantly impact the County roadway segments between the LFC site and the Plains Pentland terminal.

Table 19
Baseline + Project Impacts – County Roadways – Option 2

County Roadway Segment	Baseline ADT/LOS	Project Added PCEs(a)	Baseline + Project ADT/LOS	Significant Impact?
Calle Real – east of Refugio Rd I/C	160/LOS A	280	440/LOS A	NO
Basic School Rd – south of SR 166	310/LOS A	280	590/LOS A	NO

(a) Project Added PCEs: 2 PCEs per truck trip (flat terrain).

Baseline + Project Impacts – Intersections

Tables 20 and 21 present the Baseline and Baseline + Project levels of service for the key intersections along the Option 2 truck route, the number of trips added to each intersection by the Project, and the significance of project-added traffic based on the Caltrans and County LOS C standard. As shown, the minor amount of peak hour traffic generated by the Project would not significantly impact the key intersections between the LFC site and the Plains Pentland terminal.

Table 20
Baseline + Project Impacts – Intersections – AM Peak Hour – Option 2

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?
<u>US 101 NB/Refugio Road</u>				
NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	12	NO
WB Left + Thru + Right	8.7 Sec./LOS A	8.8 Sec./LOS A		
<i>Intersection Average:</i>	8.5 Sec./LOS A	8.6 Sec./LOS A		
US 101 SB/Refugio Road	0.0 Sec./LOS A	0.0 Sec./LOS A	6	NO
US 101 NB/SR 166	11.3 Sec./LOS B	11.4 Sec./LOS B	12	NO
<u>US 101 SB/SR 166</u>				
WB Left Turn	9.5 Sec./LOS A	9.6 Sec./LOS A	6	NO
SB Left + Thru + Right	17.4 Sec./LOS C	17.7 Sec./LOS C		
<i>Intersection Average:</i>	7.9 Sec./LOS A	8.0 Sec./LOS A		
<u>SR 166/Basic School Road</u>				
EB Left Turn	7.5 Sec./LOS A	7.5 Sec./LOS A	12	NO
WB Left Turn	7.7 Sec./LOS A	7.7 Sec./LOS A		
NB Left + Thru + Right	10.5 Sec./LOS B	10.8 Sec./LOS B		
SB Left + Thru + Right	12.5 Sec./LOS B	12.6 Sec./LOS B		
<i>Intersection Average:</i>	11.9 Sec./LOS B	11.9 Sec./LOS B		

(a) Project Added PCEs assumes 2 PCEs per trucks (flat terrain).

Table 21
Baseline + Project Impacts – Intersections – PM Peak Hour – Option 2

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?
<u>US 101 NB/Refugio Road</u>				
NB Left Turn	7.4 Sec./LOS A	7.4 Sec./LOS A	12	NO
WB Left + Thru + Right	8.9 Sec./LOS A	8.9 Sec./LOS A		
Intersection Average:	8.8 Sec./LOS A	8.8 Sec./LOS A		
US 101 SB/Refugio Road	0.0 Sec./LOS A	0.0 Sec./LOS A	6	NO
US 101 NB/SR 166	23.6 Sec./LOS C	23.8 Sec./LOS C	12	NO
<u>US 101 SB/SR 166</u>				
WB Left Turn	9.4 Sec./LOS A	9.5 Sec./LOS A	6	NO
SB Left + Thru + Right	26.1 Sec./LOS D	26.6 Sec./LOS D		
Intersection Average:	13.9 Sec./LOS B	14.0 Sec./LOS B		
<u>SR 166/Basic School Road</u>				
EB Left Turn	7.7 Sec./LOS A	7.7 Sec./LOS A	12	NO
WB Left Turn	7.6 Sec./LOS A	7.6 Sec./LOS A		
NB Left + Thru + Right	10.1 Sec./LOS B	10.6 Sec./LOS B		
SB Left + Thru + Right	10.9 Sec./LOS B	10.9 Sec./LOS B		
Intersection Average:	9.8 Sec./LOS A	10.0 Sec./LOS A		

(a) Project Added PCEs assumes 2 PCEs per trucks (flat terrain).

Plains Pentland Terminal Capacity

The Plains Pentland station operates 24 hours/day, 7 days/week, including holidays and weekends. Peak hours at the station are from 7 AM to 4 PM daily and there is lighting for truck unloading at night. The facility currently handles approximately 100 trucks/day and is permitted to handle up to 210 trucks/day. Thus, the Plains Pentland station has the capacity to accommodate the 70 trucks per day from the LFC site.

Accident Analysis

The following tables list the accident rates for the State facilities along the Option 2 truck route for the three-year period from January 1, 2015 through December 31, 2017. The text following each table discuss the rate of accidents for each facility and the need for detailed safety investigations to identify correctable accident patterns.

Table 22
Accident Rates
US 101 – Refugio Rd I/C to SR 166 I/C

US 101 Segment	Accident Rate(a)	Statewide Average Rate(b)
Refugio Rd I/C to SR 246 I/C	0.67 per mvm	0.53 per mvm
SR 246 I/C to Clark Ave I/C	0.29 per mvm	0.51 per mvm
Clark Ave I/C to Betteravia Rd I/C	0.36 per mvm	0.43 per mvm
Betteravia Rd I/C to SB/SLO County Line(c)	0.71 per mvm	0.55 per mvm
SB/SLO County Line to SR 166 I/C(c)	0.83 per mvm	0.51 per mvm

(a) Actual rate of accidents per million vehicle miles.

(b) California statewide average rate for similar facilities.

(c) Caltrans accident data is segregated by county. Thus, two segments listed for US 101 between Betteravia Road I/C and SR 166 I/C.

As shown in Table 22, the rate of accidents on US 101 between the Refugio Road I/C and the SR 246 I/C in Buellton is slightly higher than the California statewide average for similar facilities (Accident Rate = 0.67; Statewide Avenue Rate = 0.53). This segment currently carries about 2,242 vehicles per hour during the peak hour period. The Project would add 6 trucks per hour to this segment during the peak hour period (3 northbound + 3 southbound). This traffic addition equates to an increase of about 3/10th of 1%, which is considered an insignificant impact. The Caltrans significance test shows that the number of accidents required to be statistically significant is 361 accidents within the 3-year period and the number that occurred was 395, which is statistically significant and will require further investigation by Caltrans.

Table 22 also shows that the rate of accidents on the US 101 segments between the Betteravia Road I/C and the SR 166 I/C are also higher than the California statewide average for similar facilities (see Table 22). This segment currently carries about 5,660 vehicles per hour during the peak hour period. The Project would add 6 trucks per hour to this segment during the peak hour period (3 northbound + 3 southbound). This traffic addition equates to an increase of about 1/10th of 1%, which is considered an insignificant impact. The Caltrans significance test shows that the number of accidents on the segment between the Betteravia Road I/C and the Santa Barbara County-San Luis Obispo County line is statistically significant (222 accidents occurred and 208 accidents or more meet significance test) and the number of accidents on the short segment between the Santa Barbara County-San Luis Obispo County line and SR 166 I/C (0.8 miles) is statistically significant (53 accidents occurred and 48 accidents or more meet significance test). Thus, further investigation by Caltrans will occur (see Mitigation Measures).

Table 23
Accident Rates
SR 166-SR 33 – US 101 I/C to Basic School Road

SR 166-SR 33 Segment(a)	Accident Rate(b)	Statewide Average Rate(c)
SR 166 - US 101 I/C to SR 33 South Junction	0.82 per mvm	0.70 per mvm
SR 33 – SR 166 South Junction to SLO/Kern County Line	1.07 per mvm	0.68 per mvm
SR 33 - SLO/Kern County Line to SR 166 North Junction	0.83 per mvm	0.98 per mvm
SR 166 – SR 33 North Junction to Basic School Road	0.80 per mvm	0.76 per mvm

(a) Caltrans accident data is segregated by county and route number. Thus, four segments listed for SR 166 between US 101 I/C and Basic School Road.

(b) Actual rate of accidents per million vehicle miles.

(c) California statewide average rate for similar facilities.

As shown in Table 23, the rate of accidents on SR 166 between the US 101 I/C and the SR 33 South Junction is slightly higher than the California statewide average for similar facilities (Accident Rate = 0.82; Statewide Avenue Rate = 0.70). The Caltrans significance test shows that the number of accidents required to be statistically significant is 175 accidents within the 3-year period and the number that occurred was 167 accidents, which is statistically insignificant.

Table 23 also shows that the rate of accidents on SR 33 between the SR 166 South Junction and the SLO Kern County line is higher than the California statewide average for similar facilities (Accident Rate = 1.07; Statewide Avenue Rate = 0.68). The Caltrans significance test shows that the number of accidents required to be statistically significant is 14 accidents within the 3-year period and the number that occurred was 10 accidents, which is statistically insignificant.

Table 23 also shows that the rate of accidents on SR 166 between the SR 33 North Junction and Basic School Road is slightly higher than the California statewide average for similar facilities (Accident Rate = 0.80; Statewide Avenue Rate = 0.76). The Caltrans significance test shows that the number of accidents required to be statistically significant is 23 accidents within the 3-year period and the number that occurred was 13 accidents, which is statistically insignificant.

Table 24
Accident Rates
US 101/Refugio Road I/C

Ramp	Accident Rate(a)	Statewide Average Rate(b)
US 101 NB On-Ramp	3.85 per mv	0.50 per mv
US 101 NB Off-Ramp	0.00 per mv	0.98 per mv
US 101 SB On-Ramp	0.00 per mv	0.43 per mv
US 101 SB Off-Ramp	0.00 per mv	1.48 per mv

(a) Actual rate of accidents per million vehicles.

(b) California statewide average rate for similar facilities.

As shown in Table 24, the rate of accidents on the US 101 northbound on-ramp at the US 101/Refugio Road I/C is higher than the California statewide average for similar facilities (Accident Rate = 3.85; Statewide Avenue Rate = 0.50). The Caltrans significance test shows that the number of accidents required to be statistically significant is 2 accidents within the 3-year period and the number that occurred was 1 accidents, which is statistically insignificant.

Table 25
Accident Rates
US 101/SR 166 I/C

Ramp	Accident Rate(a)	Statewide Average Rate(b)
US 101 NB On-Ramp	0.00 per mv	0.47 per mv
US 101 NB Off-Ramp	0.00 per mv	0.68 per mv
US 101 SB On-Ramp	0.67 per mv	0.60 per mv
US 101 SB Off-Ramp	0.88 per mv	0.92 per mv

(a) Actual rate of accidents per million vehicles.

(b) California statewide average rate for similar facilities.

As shown in Table 25, the accident rate on the US 101 southbound on-ramp at the US 101/SR 166 I/C is slightly higher than the California statewide average for similar facilities (Accident Rate = 0.67; Statewide Avenue Rate = 0.60). The Caltrans significance test shows that the number of accidents required to be statistically significant is 11 accidents within the 3-year period and the number that occurred was 5 accidents, which is statistically insignificant.

Table 26
Accident Rates
SR 166/Basic School Road Intersection

Intersection	Accident Rate(a)	Statewide Average Rate(b)
SR 166/Basis School Road	0.53 per mv	0.16 per mv

(a) Actual rate of accidents per million vehicles.

(b) California statewide average rate for similar facilities.

As shown in Table 26, the rate of accidents at the SR 166/Basic School Road intersection is higher than the California statewide average for similar intersections (Accident Rate = 0.53; Statewide Avenue Rate = 0.16). The Caltrans significance test shows that the number of accidents required to be statistically significant is 4 accidents within the 3-year period and the number that occurred was 2 accidents, which is statistically insignificant.

POTENTIAL CONSTRUCTION IMPACTS

The applicant has indicated that 6 to 7 weeks of construction activity would be required on the LFC site prior to commencement of the trucking operation. The construction workforce estimate includes up to 30 workers during the construction period and up to 12 deliveries per day. Table 27 shows the trip generation estimates for the construction period assuming the peak number of workers and deliveries.

Table 27
Project Construction – Trip Generation Forecasts – Peak Day

Component	Number Per Day	Shift	Trip Generation				
			ADT	AM Peak		PM Peak	
				In	Out	In	Out
Employee Trips(a)	30	6:00 AM-4:00 PM	60	0	0	0	30
Deliveries & Miscellaneous Trips(b)	12	NA	24	1	1	1	1
Totals			84	1	1	1	31

(a) ADT assumes 2 ADT per employee vehicle. Peak hour trips based on employee shifts (6:00 AM to 4:00 PM)

(b) Deliveries & Miscellaneous Trips assumes one inbound + one outbound trip per delivery. AM and PM peak hour trip generation assumes 10% of trips during each peak hour.

As shown in Table 27, peak construction traffic is forecast at 84 ADT, with 2 trips occurring during the AM peak hour (1 inbound + 1 outbound) and 32 trips occurring during the PM peak hour (1 inbound + 31 outbound). As shown in Table 2, US 101 currently operates at LOS A-B adjacent to the US 101/Refugio Road I/C during the peak hour periods. Construction traffic added to US 101 (2 AM trips and 32 PM trips) would not degrade levels of service and therefore not impact operations on US 101. Similarly, the US 101/Refugio Road I/C currently operates at LOS A during peak hours (see Table 4). Construction traffic added to US 101/Refugio Road I/C during the AM and PM peak hours would not degrade levels of service and therefore not impact operations at the interchange.

CUMULATIVE ANALYSIS

Full Restart Preparations for Pipeline Readiness

The applicant has indicated that there will be some preparation work on the Project site for the restart of the pipeline operation and that the preparation work would overlap with the interim trucking operation. The preparation work will require 15 additional employees during the peak phase of the work effort. Table 28 shows the trip generation estimates for the workers and deliveries required during the peak phase of the site preparation work for the pipeline restart.

Table 28
Trip Generation – Full Restart Preparations for Pipeline Readiness

Component	Number Per Day	Shift	Trip Generation				
			ADT	AM Peak		PM Peak	
				In	Out	In	Out
Employees(a)							
Dayshift	9	6:00 AM-6:00 PM	18	0	0	0	0
Dayshift	4	7:30 AM-4:30 PM	8	4	0	0	4
Nightshift	2	6:00 PM-6:00 AM	4	0	0	2	0
Subtotals	15		30	4	0	2	4
Trucks(b)	4	NA	8	1	0	0	1
Totals			38	5	0	2	5

(a) ADT = 1 inbound + 1 outbound trip per employee. AM and PM peak hour trips based on employee arrivals/departures during the 7-9 AM and 4-6 PM peak commuter periods.

(b) ADT assumes 1 inbound + 1 outbound trip per truck. AM and PM peak hour trip generation assumes 10% of average daily trips during each peak hour.

As shown, the site preparation work would generate 38 ADT, with 5 trips occurring during the AM peak hour and 7 trips occurring during the PM peak hour.

This traffic would use the segment of Calle Real adjacent to the site as well as the US 101/Refugio Road I/C. The analysis prepared for the Project (both Options) found that the segment of Calle Real adjacent to the site would carry low volumes (440 ADT) and operate at LOS A with Baseline + Project traffic. The cumulative traffic volumes (Baseline + Project + Full Restart Preparations for Pipeline Readiness) are forecast at 478 ADT and the roadway is forecast to operate at LOS A, which meets the County's LOS C standard.

Similarly, the analysis prepared for the Project (both Options) found that the US 101/Refugio Road I/C is forecast to operate at LOS A during the AM and PM peak hour periods with Baseline + Project traffic. The US 101/Refugio Road I/C would also operate at LOS A during the AM and PM peak hour periods with the minor amount of additional traffic generated by the site preparation work (5 AM trips and 7 PM trips), which meets the adopted LOS C standard.

US 101/Betteravia Road I/C

As noted, the baseline traffic forecasts for the US 101/Betteravia Road I/C includes the future traffic that will be generated by full development of the Enos Ranchos Specific Plan, which encompasses a large area located just west of the US 101/Betteravia Road I/C. The following analysis evaluates potential cumulative impacts at the US 101/Betteravia Road I/C assuming development of all of the approved and pending projects located in the Santa Maria area. The approved and pending projects were incorporated into the Santa Maria Traffic Model to forecast cumulative conditions. Project traffic was then added to the cumulative traffic forecasts to evaluate potential cumulative impacts. Table 29 present the Cumulative and Cumulative + Project levels of service, the V/C increases attributed to the Project (Option 1), and the significance of Project traffic based on the County's cumulative impact thresholds.

Table 29
Cumulative Impacts – US 101/Betteravia Road I/C – Option 1

Intersection	Delay / LOS		Project Added	
	Cumulative	Cumulative + Project	V/C(a)	Significant Impact?
AM PEAK HOUR				
US 101 NB/Betteravia Road	16.6 Sec./LOS B	15.2 Sec./LOS B	0.00	NO
US 101 SB/Betteravia Road	50.9 Sec./LOS D	52.2 Sec./LOS D	0.00	NO
PM PEAK HOUR				
US 101 NB/Betteravia Road	19.8 Sec./LOS B	19.9 Sec./LOS B	0.00	NO
US 101 SB/Betteravia Road	> 80 Sec./LOS F	> 80 Sec./LOS F	0.00	NO

(a) Project Added V/C increase based on 2 PCEs per truck (flat terrain).

Bolded values exceed LOS C standards.

As shown in Table 29, the US 101 SB/Betteravia Road intersection is forecast to operate at LOS D during the AM peak hour with Cumulative and Cumulative + Project traffic. The Project (Option 1) would increase the V/C ratio by 0.00, which is less than the County's cumulative impact threshold (threshold = 0.03 for intersections that are forecast at LOS D with cumulative traffic). Similarly, the US 101 SB/Betteravia Road intersection is forecast to operate at LOS F during the PM peak hour with Cumulative and Cumulative + Project traffic. The Project (Option 1) would increase the V/C ratio by 0.00, which is less than the County's cumulative impact threshold (threshold = 0.01 for intersections that are forecast at LOS F with cumulative traffic). The analysis shows that the Project (Option 1) would not significantly impact at the interchange under cumulative conditions.

MITIGATION MEASURES

Option 1 – Truck to Phillips 66 Terminal

The impact analysis found that the Option 1 truck route has the potential to significantly impact the US 101 SB Ramps/Betteravia Road intersection during the PM peak hour period. The intersection currently operates at LOS F during the PM peak hour and the Project would add 6 trips to the intersection during the PM peak hour (3 trucks = 6 PCEs), which exceeds the County's 5-trip threshold for intersections operating at LOS F. The following measure would mitigate this potential impact.

Limit Trucks During PM Peak Hour. Limiting trucks to/from the Phillips 66 site to 2 trucks per hour (2 trucks = 4 PCEs) during the PM peak commuter period (4-6 PM) would mitigate this impact by reducing the Project's traffic additions to less than 5 trips during the PM peak hour (2 trucks = 4 PCEs), which is below the County's 5-trip threshold for intersections that operate at LOS F. This limitation would be required during the period prior to implementation of improvements that are planned by Caltrans and the City of Santa Maria, as described below.

Caltrans, in cooperation with the City of Santa Maria, is currently studying an operational improvement project to address the existing deficiency at the US 101/Betteravia Road I/C. The operational improvements include widening the US 101 SB Off-Ramp to provide a second right-turn lane and installing two new eastbound thru lanes on Betteravia Road at the US 101 SB Ramps/Betteravia Road intersection. The traffic analysis prepared for the operational improvement project shows that the US 101 SB Ramps/Betteravia Road intersection is forecast to operate at LOS B during the PM peak hour with the improvements, which would mitigate the Project's potential impact during the PM peak period. City of Santa Maria staff indicated that the improvement project is currently out to bid and the improvement will be completed in 2019.

Option 2 – Truck to Plains Pentland Terminal

The impact analysis found that the Option 2 truck route would not generate significant impacts based on adopted thresholds. Mitigation measures are therefore not required.

Advisory Mitigation Measure – Option 1 & Option 2

The following facilities have accident rates that are above the statewide average during the 3-year period analyzed in the traffic study (January 1, 2015-December 31, 2017) and the number of accidents that occurred during the 3-year period is statistically significant.

- US 101 – Refugio Road I/C to SR 246 I/C
- US 101 – Betteravia Road I/C to SR 166 I/C
- US 101 SB Off-Ramp @ US 101/Betteravia Road I/C

The impact analysis found that the minor amount of Project traffic would not significantly impact these facilities. Nonetheless, it is recommended that Caltrans be notified of these locations where the accident rates are above the statewide average and the number of accidents is statistically significant. Caltrans continually monitors accidents and accident rates on the State Highway system to identify accident patterns that can be corrected by changing design features of the facility (e.g. widen traffic lanes, widen roadway shoulders, change roadway curvatures, add signs, install traffic signals, etc.). It is recommended that the County provide the enclosed accident analyses to Caltrans to assist with their accident monitoring and analyses.

PROJECT ALTERNATIVE

The preceding analysis is based on a maximum of 70 truck trips per day with 3 trucks per hour during the AM and PM peak commuter periods (AM peak commuter period = 7-9 AM; PM peak commuter period = 4-6 PM). The applicant has indicated that production may fluctuate and the number of trucks per hour may also fluctuate. Although the 70 truck trips per day is the maximum per day anticipated for the program, the applicant has indicated a desire to occasionally generate up to 7 trucks per hour due to fluctuations in production.

For the Option 1 truck route, 7 trucks per hour (14 PCEs in flat terrain and 21 PCEs in rolling terrain) would not significantly impact most of the roadways and intersections along the route since most of those facilities are forecast to operate at LOS C or better.

The US 101 SB Ramps/Betteravia Road intersection is forecast to operate at LOS D during the AM peak period and LOS F during the PM peak period. The 14 PCEs added to the intersection during the AM peak period would be considered an insignificant impact since it is less than the County's 15-trip threshold for intersections operating at LOS D. The 14 PCEs added to the intersection during the PM peak period would be considered a potentially significant impact since it would exceed the County's 5-trip threshold for intersections operating at LOS F. The mitigation listed for Option 1 would be required to mitigate this potential impact (limit trucks to 2 per hour during the 4-6 PM peak commuter period prior to implementation of the Caltrans/City of Santa Maria improvements that are planned for construction in 2019).

For the Option 2 truck route, generating 7 trucks per hour (14 PCEs in flat terrain and 21 PCEs in rolling terrain) would not significantly impact any of the roadways and intersections along the route since all of the facilities are forecast to operate at LOS C or better.

• • •

STUDY PARTICIPANTS AND REFERENCES

Associated Transportation Engineers

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Erica Monson, Transportation Planner I

References

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Guide for the Preparation of Traffic Impact Studies, Caltrans, December 2002.

Highway Capacity Manual, Transportation Research Board, 2016.

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TECHNICAL APPENDIX

CONTENTS:

LEVEL OF SERVICE DEFINITIONS

STANDARD ENGINEERING ROADWAY DESIGN CAPACITIES

TRAFFIC COUNT DATA

LEVEL OF SERVICE CALCULATION WORKSHEETS

ACCIDENT DATA

LEVEL OF SERVICE DEFINITIONS

The ability of a roadway system to carry traffic is most often expressed in terms of "Levels of Service" (LOS). LOS A through F are used, with LOS A indicating very good operations and LOS F indicating poor operations. More complete level of service definitions for intersections are listed Table A.

Table A
Level of Service Definitions

LOS	Delay Range(a)		Definition
	Signalized Intersections	Unsignalized Intersections	
A	0.0 – 10.0	0.0 – 10.0	Conditions of free unobstructed flow, no delays and all signal phases sufficient in duration to clear all approaching vehicles.
B	10.1 – 20.0	10.1 – 15.0	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	20.1 – 35.0	15.1 – 25.0	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	35.1 – 55.0	25.1 – 35.0	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	55.0 – 80.0	35.0 – 50.0	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.
F	> 80.0	> 50.0	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal.
(a) Average delay per vehicle in seconds. Source: Highway Capacity Manual.			

STANDARD ENGINEERING ROADWAY DESIGN CAPACITIES

Roadway Type	# Lanes	LOS A		LOS B		LOS C		LOS D		LOS E	
		Low	High	Low	High	Low	High	Low	High	Low	High
Arterial	2 Lanes	8,100	12,000	9,400	14,000	10,800	16,000	12,100	18,000	13,500	20,000
Arterial	4 Lanes	16,100	23,900	18,900	27,900	21,600	31,900	24,300	35,900	27,000	39,900
Major	2 Lanes	6,500	9,600	7,500	11,200	8,600	12,800	9,700	14,400	10,800	16,000
Major	4 Lanes	12,900	19,200	15,100	22,300	17,200	25,500	19,400	28,700	21,600	31,900
Collector	2 Lanes	4,600	7,100	5,400	8,200	6,200	9,400	6,900	10,600	7,700	11,800

The roadway capacities listed above are "rule of thumb." Some factors which affect these capacities are intersections (numbers and configuration), degrees of access control, roadway grades, design geometries (horizontal and vertical alignment standards), sight distance, level of truck and bus traffic and level of pedestrian and bicycle traffic.

TRAFFIC COUNT DATA

US 101 TRAFFIC VOLUMES

Source: SBCAG (2014) & Caltrans (2015)

2014 SBCAG(a)

2014 SBCAG(a)														
2014														
<u>US 101 Segment</u>	<u>AADT</u>	<u>NB</u>	<u>SB</u>	<u>Total</u>	<u>Lanes</u>	<u>PHF</u>	<u>Terrain</u>	<u>% Trucks</u>	<u>% Bus</u>	<u>%RV</u>	<u>Base FFS</u>	<u>Lane Width</u>	<u>Shoulder Width</u>	<u>Int Density</u>
El Cap-SR 1	29,500	1,520	730	2,250	4	0.88	Rolling	9%	1%	1%	75 MPH	12 Feet	6 Feet	0.13
Santa Rosa-SR 246	22,600	950	630	1,580	4	0.88	Rolling	12%	1%	1%	75 MPH	12 Feet	6 Feet	0.50
SR 154-SR 135	30,700	1,150	940	2,090	4	0.88	Rolling	10%	1%	1%	75 MPH	12 Feet	6 Feet	0.24
Clark-SM Way	40,600	1,530	1,310	2,840	4	0.90	Flat	7%	1%	1%	75 MPH	12 Feet	6 Feet	1.00
SM Way-Betteravia	47,800	1,830	1,560	3,390	6	0.90	Flat	7%	1%	1%	70 MPH	12 Feet	6 Feet	1.00
Betteravia-SR 166	67,100	2,570	2,460	5,030	6	0.90	Flat	5%	1%	1%	70 MPH	12 Feet	6 Feet	1.00
2015 Caltrans(b)														
2015														

2015 Caltrans(b)

2015 Caltrans(b)												12 Feet	6 Feet	1.00
<u>US 101 Segment</u>	<u>AADT</u>	<u>NB</u>	<u>SB</u>	<u>Total</u>	<u>Lanes</u>	<u>PHF</u>	<u>Terrain</u>	<u>% Trucks</u>	<u>% Bus</u>	<u>%RV</u>	<u>Base FFS</u>	<u>Lane Width</u>	<u>Shoulder Width</u>	<u>Int Density</u>
El Cap-SR 1	29,400	1,515	727	2,242	4	0.88	Rolling	9%	1%	1%	75 MPH	12 Feet	6 Feet	0.13
SR 1-SR 246	22,800	958	636	1,594	4	0.88	Rolling	12%	1%	1%	75 MPH	12 Feet	6 Feet	0.50
SR 246-Clark	31,300	1,173	958	2,131	4	0.88	Rolling	10%	1%	1%	75 MPH	12 Feet	6 Feet	0.24
Clark-SM Way	41,000	1,545	1,323	2,868	4	0.90	Flat	7%	1%	1%	75 MPH	12 Feet	6 Feet	1.00
SM Way-Betteravia	58,200	2,228	1,900	4,128	6	0.90	Flat	7%	1%	1%	70 MPH	12 Feet	6 Feet	1.00
Betteravia-SR 166	73,300	2,808	2,687	5,495	6	0.90	Flat	5%	1%	1%	70 MPH	12 Feet	6 Feet	1.00

(a) 2014 PM peak hour data only.

(b) 2015 AADT data from Caltrans. Other flows/attributes taken from SBCAG model.


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Dist	Rte	CO	Post Mile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
05	101	SB	26.907	HOLLISTER AVENUE	3900	40000	35000	3900	37000	30800
05	101	SB	33.852	EL CAPITAN BEACH STATE PARK	3900	37000	30300	3900	32000	29400
05	101	SB	R 48.847	LAS CRUCES, JCT. RTE. 1 NORTHWEST	2800	32000	29200	2900	27000	23500
05	101	SB	R 56.463	SANTA ROSA ROAD	2900	27000	23500	2900	26000	22800
05	101	SB	R 57.117	BUELLTON, JCT. RTE. 246	2900	26000	22800	2600	25000	22000
05	101	SB	R 57.552	NORTH BUELLTON	2600	25000	22000	2700	28000	24600
05	101	SB	62.671	ZACA, JCT. RTE. 154 EAST	2700	28000	24600	3300	34000	31300
05	101	SB	70.921	LOS ALAMOS, JCT. RTE. 135 NORTHWEST	3300	34000	31300	3300	34000	29500
05	101	SB	82.183	SANTA MARIA, CLARK AVENUE	3300	34000	30400	4000	45000	41000
05	101	SB	84.336	SOUTH SANTA MARIA	5100	56000	52100	6100	66000	58200
05	101	SB	86.588	BETTERAVIA ROAD	6100	66000	58200	6800	76000	69100
05	101	SB	87.603	EAST STOWELL ROAD	6800	76000	69100	7300	80000	73300
05	101	SB	88.601	SANTA MARIA, JCT. RTE. 166 WEST	7300	80000	73300	6800	74000	68800
05	101	SB	89.693	SANTA MARIA, DONOVAN ROAD	6800	74000	68800	6400	69000	64400
05	101	SB	90.749	JCT. RTE. 135 SOUTH	6400	69000	64400	6700	76000	69400

<http://www.dot.ca.gov/trafficops/census/volumes2015/Route101.html>


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Dist	Rte	CO	Post Mile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
05	101	SB	87.603	EAST STOWELL ROAD	6800	76000	69100	7300	80000	73300
05	101	SB	88.601	SANTA MARIA, JCT. RTE. 166 WEST	7300	80000	73300	6800	74000	68800
05	101	SB	89.693	SANTA MARIA, DONOVAN ROAD	6800	74000	68800	6400	69000	64400
05	101	SB	90.749	JCT. RTE. 135 SOUTH	6400	69000	64400	6700	76000	69400
05	101	SB	90.988	SANTA BARBARA/SAN LUIS OBISPO COUNTY LINE	6700	76000	69400			
05	101	SLO	0	SANTA BARBARA/SAN LUIS OBISPO COUNTY LINE						
05	101	SLO	.813	JCT. RTE. 166 EAST	6500	76000	69400	6500	76000	69400
05	101	SLO	4.851	TEFFT STREET	5800	66000	58900	5800	66000	58900
05	101	SLO	7.851	LOS BERROS ROAD	6100	67000	61200	6100	66000	60800
05	101	SLO	12.521	ARROYO GRANDE, BRIDGE STREET	6100	66000	60500	5800	60000	54400
05	101	SLO	13.173	ARROYO GRANDE, JCT. RTE. 227 NORTH	6100	62000	57100	6500	65000	59600
05	101	SLO	13.747	ARROYO GRANDE, BRISCO ROAD	6500	65000	59600	7000	67000	62300
05	101	SLO	14.613	PISMO BEACH, OAK PARK ROAD	7100	67000	62300	7500	72000	65500
05	101	SLO	15.579	PISMO BEACH, PISMO OAKS	8200	72000	65500	10000	89000	80900
05	101	SLO	16.398	PISMO BEACH, SOUTH PISMO BEACH	9100	86000	78800	7000	67000	64400

<http://www.dot.ca.gov/trafficops/census/volumes2015/Route101.html>



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05	166	SB	0.321	SANTA MARIA, JCT. RTE. 101	2300	20000	23300	370	3400	2300
05	166	SLO	13.511	SUEY ROAD	350	2300	2150	380	4000	3800
05	166	SB	R 24.1	TEPESQUET ROAD	380	4700	4000	450	4100	3450
05	166	SLO	R 51.09	SAN LUIS OBISPO/SANTA BARBARA COUNTY LINE	390	3000	2550			
05	166	SB	R 51.09	SAN LUIS OBISPO/SANTA BARBARA COUNTY LINE				390	3000	2550
05	166	SB	64.3	PERKINS ROAD	350	3000	2550	480	3800	2950
05	166	SB	66.58	BELL ROAD	510	4000	3350	370	2200	1900
05	166	SB	R 70.141	SANTA BARBARA/SAN LUIS OBISPO COUNTY LINE	380	3700	3050			
05	166	SLO	R 70.141	SANTA BARBARA/SAN LUIS OBISPO COUNTY LINE				310	3600	3100
05	166	SLO	74.718	MARICOPA, JCT. RTE. 33	280	4600	3950			
05	166	SLO	74.719	BREAK IN ROUTE						
06	166	KER	.01	MARICOPA, JCT. RTE. 33				280	3250	2950
06	166	KER	2.96	PENTLAND ROAD	280	3250	2950	280	3100	2800
06	166	KER	14.86	OLD RIVER ROAD	1150	6900	5700	620	3900	3100
06	166	KER	22.797	JCT. RTE. 5	690	4500	3300	660	3850	2700

<http://www.dot.ca.gov/trafficops/census/volumes2015/Route164-178.html>

VOLUME

Calle Real E/O Refugio Rd

Day: Thursday
Date: 11/16/2017City: Goleta
Project #: CA17_8109_001

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	51	65	116

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			0	2	2
00:15			0	0	0	12:15			0	1	1
00:30			0	0	0	12:30			1	2	3
00:45			0	0	0	12:45			1	2	3
01:00			0	0	0	13:00			0	1	1
01:15			0	0	0	13:15			1	0	1
01:30			0	0	0	13:30			0	1	1
01:45			0	0	0	13:45			1	2	3
02:00			0	0	0	14:00			0	0	0
02:15			0	0	0	14:15			1	0	1
02:30			0	0	0	14:30			2	1	3
02:45			0	0	0	14:45			1	4	5
03:00			0	0	0	15:00			0	2	2
03:15			0	0	0	15:15			0	2	2
03:30			0	0	0	15:30			2	3	5
03:45			0	0	0	15:45			0	2	2
04:00			0	0	0	16:00			0	5	5
04:15			0	0	0	16:15			0	1	1
04:30			0	0	0	16:30			0	7	7
04:45			0	0	0	16:45			1	1	2
05:00			3	0	3	17:00			0	0	0
05:15			4	0	4	17:15			1	2	3
05:30			6	1	7	17:30			0	8	8
05:45			1	14	15	17:45			0	1	1
06:00			0	0	0	18:00			0	0	0
06:15			1	0	1	18:15			0	0	0
06:30			1	0	1	18:30			0	0	0
06:45			2	4	6	18:45			0	0	0
07:00			1	1	2	19:00			0	0	0
07:15			1	0	1	19:15			0	2	2
07:30			1	0	1	19:30			0	0	0
07:45			2	5	7	19:45			0	1	1
08:00			2	0	2	20:00			0	0	0
08:15			1	1	2	20:15			0	0	0
08:30			0	0	0	20:30			0	0	0
08:45			0	3	3	20:45			0	0	0
09:00			0	0	0	21:00			0	1	1
09:15			2	1	3	21:15			0	0	0
09:30			1	0	1	21:30			0	0	0
09:45			1	4	5	21:45			0	0	0
10:00			2	0	2	22:00			0	0	0
10:15			1	1	2	22:15			0	0	0
10:30			0	1	1	22:30			0	0	0
10:45			4	7	11	22:45			0	0	0
11:00			0	0	0	23:00			0	0	0
11:15			1	1	2	23:15			0	1	1
11:30			0	1	1	23:30			0	0	0
11:45			1	2	3	23:45			0	0	0
TOTALS			39	16	55	TOTALS			12	49	61
SPLIT %			70.9%	29.1%	47.4%	SPLIT %			19.7%	80.3%	52.6%

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	51	65	116

AM Peak Hour			05:00	11:45	05:00	PM Peak Hour			13:45	15:45	16:00
AM Pk Volume			14	6	15	PM Pk Volume			4	14	15
Pk Hr Factor			0.583	0.750	0.536	Pk Hr Factor			0.500	0.500	0.536
7 - 9 Volume	0	0	8	3	11	4 - 6 Volume	0	0	2	25	27
7 - 9 Peak Hour			07:15	08:00	07:30	4 - 6 Peak Hour			16:30	16:00	16:00
7 - 9 Pk Volume	0	0	6	2	7	4 - 6 Pk Volume	0	0	2	14	15
Pk Hr Factor	0.000	0.000	0.750	0.500	0.875	Pk Hr Factor	0.000	0.000	0.500	0.500	0.536

VOLUME

Rosemary Rd N/O Betteravia Rd

Day: Thursday
Date: 11/16/2017City: Santa Maria
Project #: CA17_8109_002

DAILY TOTALS					NB	SB	EB	WB	Total
					998	790	0	0	1,788

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	3			4	12:00	19	17			36
00:15	2	4			6	12:15	6	14			20
00:30	1	2			3	12:30	24	13			37
00:45	0	4	2	11	2 15	12:45	20	69	11	55	31 124
01:00	4	1			5	13:00	17	18			35
01:15	3	1			4	13:15	17	18			35
01:30	1	0			1	13:30	17	9			26
01:45	0	8	2	4	2 12	13:45	22	73	12	57	34 130
02:00	1	3			4	14:00	16	12			28
02:15	1	1			2	14:15	34	15			49
02:30	1	1			2	14:30	21	9			30
02:45	2	5	0	5	2 10	14:45	18	89	15	51	33 140
03:00	1	0			1	15:00	38	25			63
03:15	0	2			2	15:15	43	15			58
03:30	1	0			1	15:30	32	15			47
03:45	1	3	2	4	3 7	15:45	16	129	15	70	31 199
04:00	0	3			3	16:00	29	17			46
04:15	0	6			6	16:15	35	13			48
04:30	5	5			10	16:30	25	15			40
04:45	2	7	4	18	6 25	16:45	26	115	16	61	42 176
05:00	1	2			3	17:00	19	17			36
05:15	4	6			10	17:15	18	15			33
05:30	4	13			17	17:30	8	7			15
05:45	7	16	15	36	22 52	17:45	11	56	9	48	20 104
06:00	6	21			27	18:00	8	6			14
06:15	10	22			32	18:15	14	6			20
06:30	14	15			29	18:30	5	7			12
06:45	12	42	12	70	24 112	18:45	12	39	5	24	17 63
07:00	9	13			22	19:00	3	5			8
07:15	9	17			26	19:15	3	6			9
07:30	10	11			21	19:30	9	2			11
07:45	11	39	17	58	28 97	19:45	7	22	3	16	10 38
08:00	9	12			21	20:00	5	6			11
08:15	12	13			25	20:15	8	3			11
08:30	13	11			24	20:30	7	2			9
08:45	11	45	10	46	21 91	20:45	4	24	4	15	8 39
09:00	19	15			34	21:00	2	4			6
09:15	9	7			16	21:15	4	2			6
09:30	8	4			12	21:30	2	2			4
09:45	13	49	15	41	28 90	21:45	3	11	5	13	8 24
10:00	17	8			25	22:00	3	5			8
10:15	10	6			16	22:15	3	2			5
10:30	11	8			19	22:30	2	6			8
10:45	18	56	6	28	24 84	22:45	3	11	2	15	5 26
11:00	21	7			28	23:00	1	3			4
11:15	17	8			25	23:15	0	3			3
11:30	24	10			34	23:30	2	2			4
11:45	17	79	9	34	26 113	23:45	4	7	2	10	6 17
TOTALS	353	355			708	TOTALS	645	435			1080
SPLIT %	49.9%	50.1%			39.6%	SPLIT %	59.7%	40.3%			60.4%

DAILY TOTALS					NB	SB	EB	WB	Total
					998	790	0	0	1,788

AM Peak Hour	10:45	05:45			11:15	PM Peak Hour	14:45	14:45	14:45
AM Pk Volume	80	73			121	PM Pk Volume	131	70	201
Pk Hr Factor	0.833	0.830			0.840	Pk Hr Factor	0.762	0.700	0.798
7 - 9 Volume	84	104	0	0	188	4 - 6 Volume	171	109	0 0 280
7 - 9 Peak Hour	07:45	07:00			07:45	4 - 6 Peak Hour	16:00	16:30	16:00
7 - 9 Pk Volume	45	58	0	0	98	4 - 6 Pk Volume	115	63	0 0 176
Pk Hr Factor	0.865	0.853	0.000	0.000	0.875	Pk Hr Factor	0.821	0.926	0.000 0.000 0.917

VOLUME

Battles Rd W/O Rosemary Rd

Day: Thursday

Date: 11/16/2017

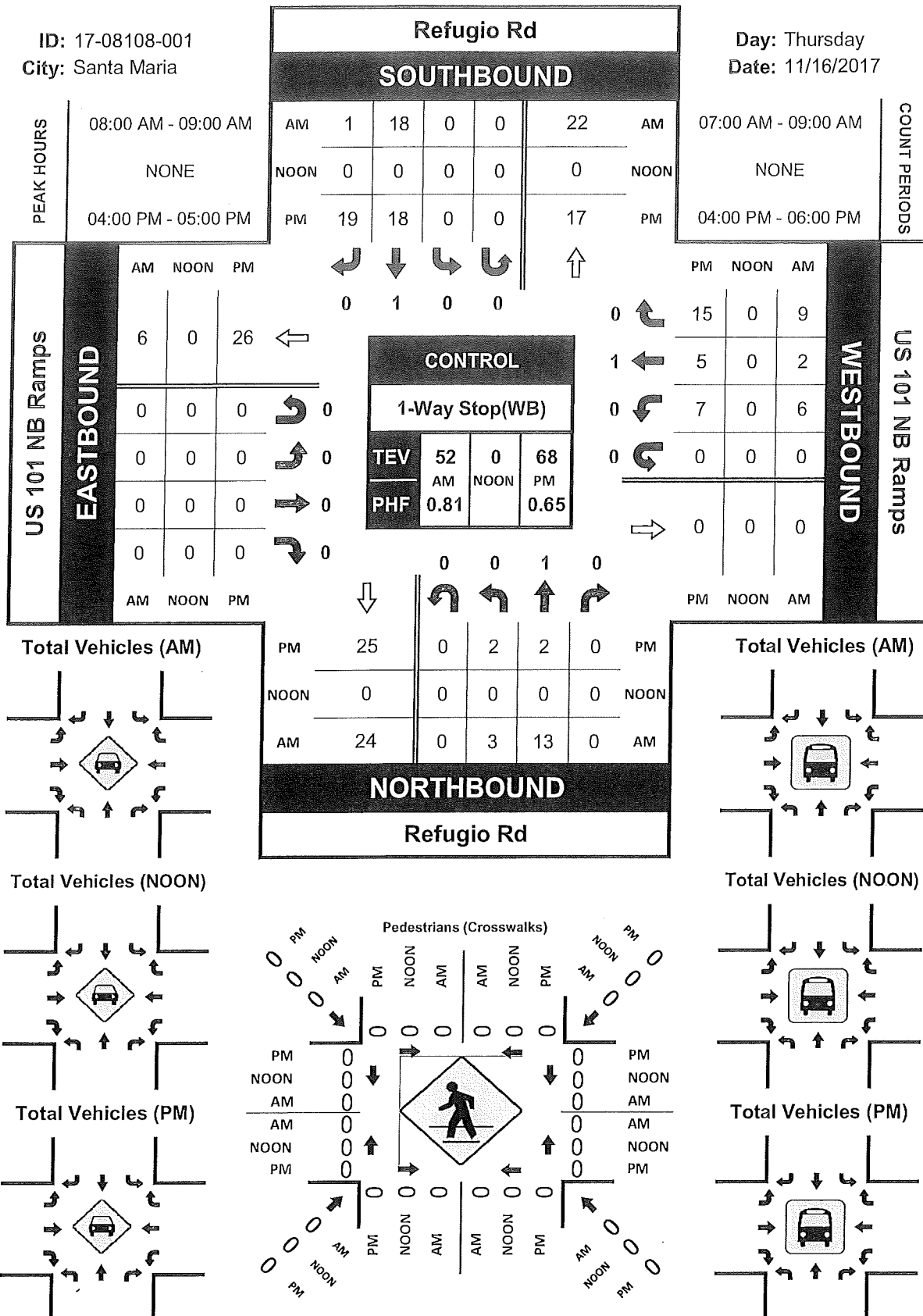
City: Santa Maria

Project #: CA17_8109_003

DAILY TOTALS					NB	SB						Total
					0	0	307	279	586			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			3	1	4	12:00			11	7	18	
00:15			1	2	3	12:15			2	5	7	
00:30			2	1	3	12:30			3	2	5	
00:45			4	10	14	12:45			4	20	24	
01:00			1	3	4	13:00			9	8	17	
01:15			2	1	3	13:15			6	7	13	
01:30			2	1	3	13:30			1	2	3	
01:45			1	6	7	13:45			4	20	24	
02:00			3	1	4	14:00			4	4	8	
02:15			1	1	2	14:15			6	7	13	
02:30			1	2	3	14:30			5	9	14	
02:45			0	5	5	14:45			7	22	29	
03:00			1	1	2	15:00			10	10	20	
03:15			1	1	2	15:15			3	4	7	
03:30			0	2	2	15:30			8	4	12	
03:45			3	5	8	15:45			10	31	41	
04:00			3	1	4	16:00			5	2	7	
04:15			2	0	2	16:15			4	9	13	
04:30			1	5	6	16:30			3	3	6	
04:45			3	9	12	16:45			2	14	16	
05:00			1	2	3	17:00			13	0	13	
05:15			2	2	4	17:15			11	2	13	
05:30			2	2	4	17:30			0	0	0	
05:45			3	8	11	17:45			4	28	32	
06:00			1	6	7	18:00			1	1	2	
06:15			2	6	8	18:15			2	1	3	
06:30			3	7	10	18:30			3	0	3	
06:45			2	8	10	18:45			2	8	10	
07:00			2	3	5	19:00			2	0	2	
07:15			2	3	5	19:15			3	0	3	
07:30			3	6	9	19:30			1	1	2	
07:45			8	15	23	19:45			1	7	8	
08:00			2	3	5	20:00			0	1	1	
08:15			4	4	8	20:15			2	6	8	
08:30			6	0	6	20:30			1	2	3	
08:45			3	15	18	20:45			0	3	3	
09:00			7	7	14	21:00			1	3	4	
09:15			1	2	3	21:15			2	0	2	
09:30			2	2	4	21:30			2	1	3	
09:45			4	14	18	21:45			0	5	5	
10:00			5	4	9	22:00			3	4	7	
10:15			3	4	7	22:15			3	2	5	
10:30			5	7	12	22:30			1	3	4	
10:45			5	18	23	22:45			1	8	9	
11:00			6	3	9	23:00			1	1	2	
11:15			10	3	13	23:15			2	0	2	
11:30			4	4	8	23:30			2	2	4	
11:45			2	22	24	23:45			1	6	7	
TOTALS			135	137	272	TOTALS			172	142	314	
SPLIT %			49.6%	50.4%	46.4%	SPLIT %			54.8%	45.2%	53.6%	

DAILY TOTALS			NB	SB				EB	WB	Total	
			0	0				307	279		
AM Peak Hour			11:15	06:00	10:30	PM Peak Hour			15:00	14:15	14:15
AM Pk Volume			27	24	44	PM Pk Volume			31	29	57
Pk Hr Factor			0.614	0.857	0.846	Pk Hr Factor			0.775	0.725	0.713
7 - 9 Volume	0	0	30	23	53	4 - 6 Volume	0	0	42	20	62
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			16:30	16:00	16:15
7 - 9 Pk Volume	0	0	20	15	32	4 - 6 Pk Volume	0	0	29	16	36
Pk Hr Factor	0.000	0.000	0.625	0.625	0.800	Pk Hr Factor	0.000	0.000	0.558	0.444	0.692

Day: Thursday
Date: 11/16/2017

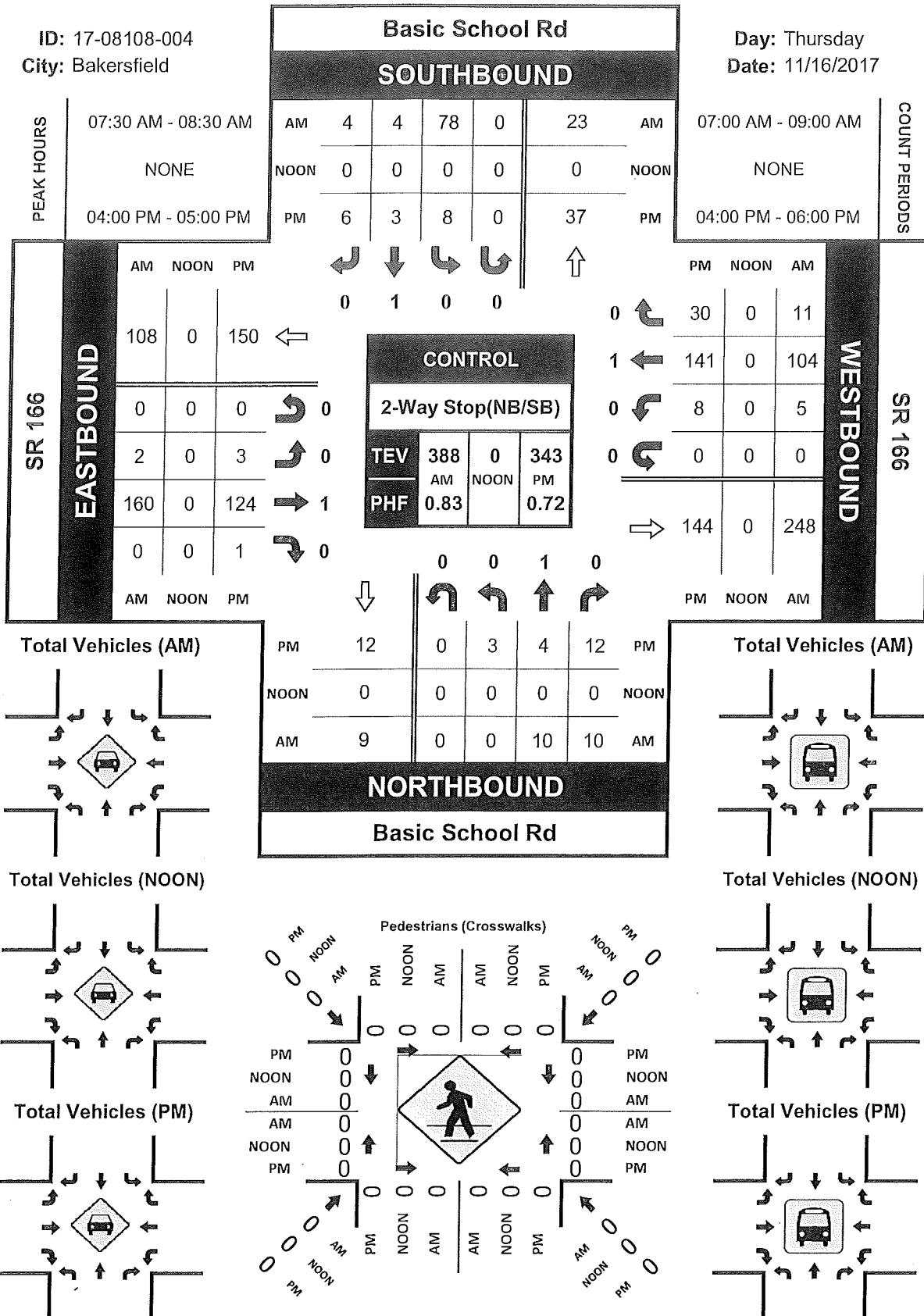


Basic School Rd & SR 166

Peak Hour Turning Movement Count

ID: 17-08108-004
City: Bakersfield

Day: Thursday
Date: 11/16/2017

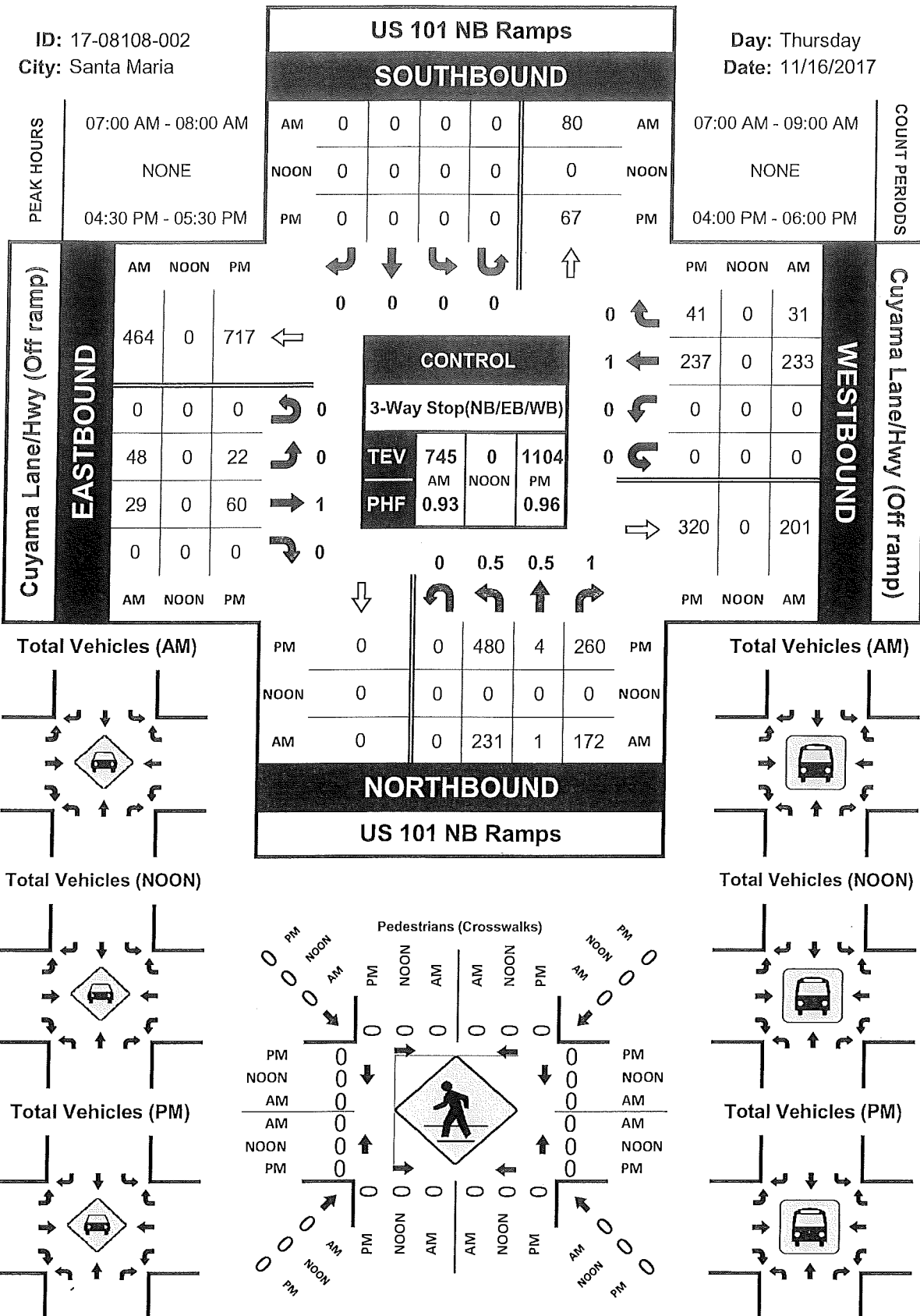


US 101 NB Ramps & Cuyama Lane/Hwy (Off ramp)

Peak Hour Turning Movement Count

ID: 17-08108-002
City: Santa Maria

Day: Thursday
Date: 11/16/2017

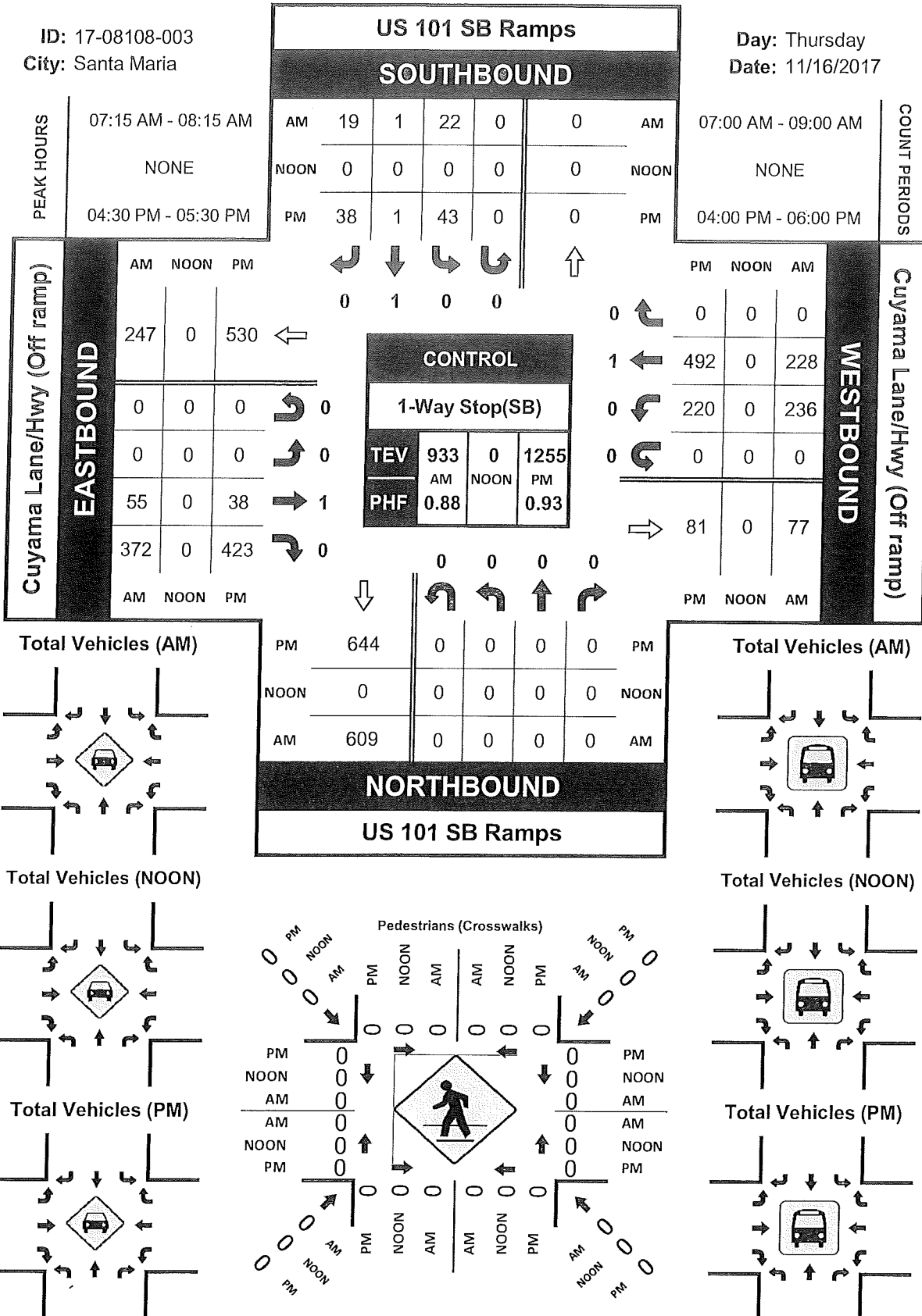


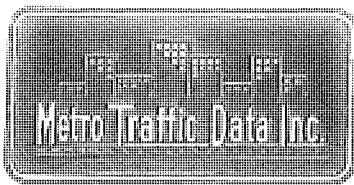
US 101 SB Ramps & Cuyama Lane/Hwy (Off ramp)

Peak Hour Turning Movement Count

ID: 17-08108-003

City: Santa Maria

Day: Thursday
Date: 11/16/2017



Metro Traffic Data Inc.
310 N. Irwin Street - Suite 20
Hanford, CA 93230
800-975-6938 Phone/Fax
www.metrotrafficdata.com

Turning Movement Report

Prepared For:

Associated Transportation Engineers
100 N. Hope Avenue, Suite 4
Santa Barbara, CA 93110

LOCATION Betteravia Rd @ US 101 SB Ramps

LATITUDE 34.923604°

COUNTY Santa Barbara

LONGITUDE -120.418975°

COLLECTION DATE Wednesday, August 17, 2016

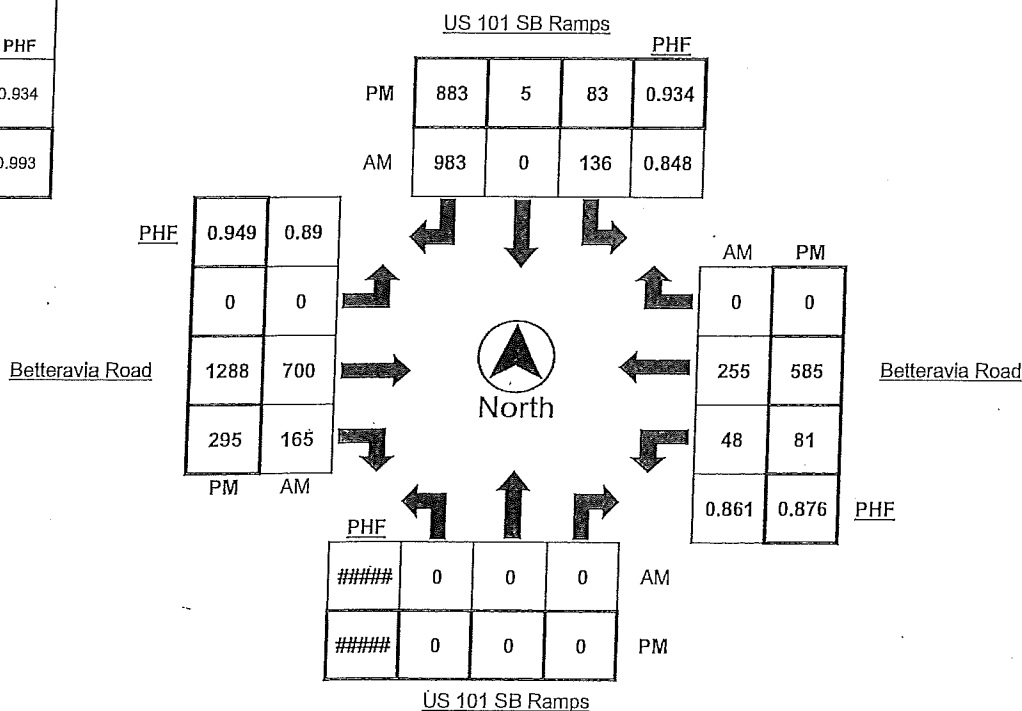
WEATHER Clear

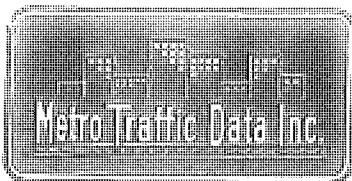
Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
7:00 AM - 7:15 AM	0	0	0	0	37	3	192	23	0	185	35	9	8	59	0	0
7:15 AM - 7:30 AM	0	0	0	0	30	0	242	25	0	160	43	7	8	61	0	0
7:30 AM - 7:45 AM	0	0	0	0	33	0	297	27	0	167	43	8	7	65	0	0
7:45 AM - 8:00 AM	0	0	0	0	40	0	252	28	0	173	36	5	18	70	0	0
8:00 AM - 8:15 AM	0	0	0	0	33	0	192	28	0	200	43	2	15	59	0	0
8:15 AM - 8:30 AM	0	0	0	0	37	0	194	35	0	152	51	5	14	72	0	0
8:30 AM - 8:45 AM	0	0	0	0	36	0	205	35	0	182	46	16	13	58	0	0
8:45 AM - 9:00 AM	0	0	0	0	39	0	138	38	0	174	37	5	7	59	0	0
TOTAL	0	0	0	0	285	3	1712	239	0	1393	334	57	90	503	0	0

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
4:00 PM - 4:15 PM	0	0	0	0	30	0	198	22	0	296	52	9	5	120	0	0
4:15 PM - 4:30 PM	0	0	0	0	20	0	221	25	0	288	59	13	14	126	0	0
4:30 PM - 4:45 PM	0	0	0	0	23	0	236	21	0	301	54	6	26	153	0	0
4:45 PM - 5:00 PM	0	0	0	0	24	2	222	31	0	322	80	19	23	135	0	0
5:00 PM - 5:15 PM	0	0	0	0	19	3	182	11	0	339	78	22	15	175	0	0
5:15 PM - 5:30 PM	0	0	0	0	17	0	243	26	0	326	83	15	17	122	0	0
5:30 PM - 5:45 PM	0	0	0	0	17	0	210	21	0	276	68	6	8	116	0	0
5:45 PM - 6:00 PM	0	0	0	0	19	0	205	22	0	252	58	9	9	80	0	0
TOTAL	0	0	0	0	169	5	1717	179	0	2400	532	99	117	1027	0	0

PEAK HOUR	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
7:15 AM - 8:15 AM	0	0	0	0	136	0	983	108	0	700	165	22	48	255	0	0
4:30 PM - 5:30 PM	0	0	0	0	83	5	883	89	0	1288	295	62	81	585	0	0

	PHF
AM	0.934
PM	0.993





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Turning Movement Report

Prepared For:
Associated Transportation Engineers
100 N. Hope Avenue, Suite 4
Santa Barbara, CA 93110

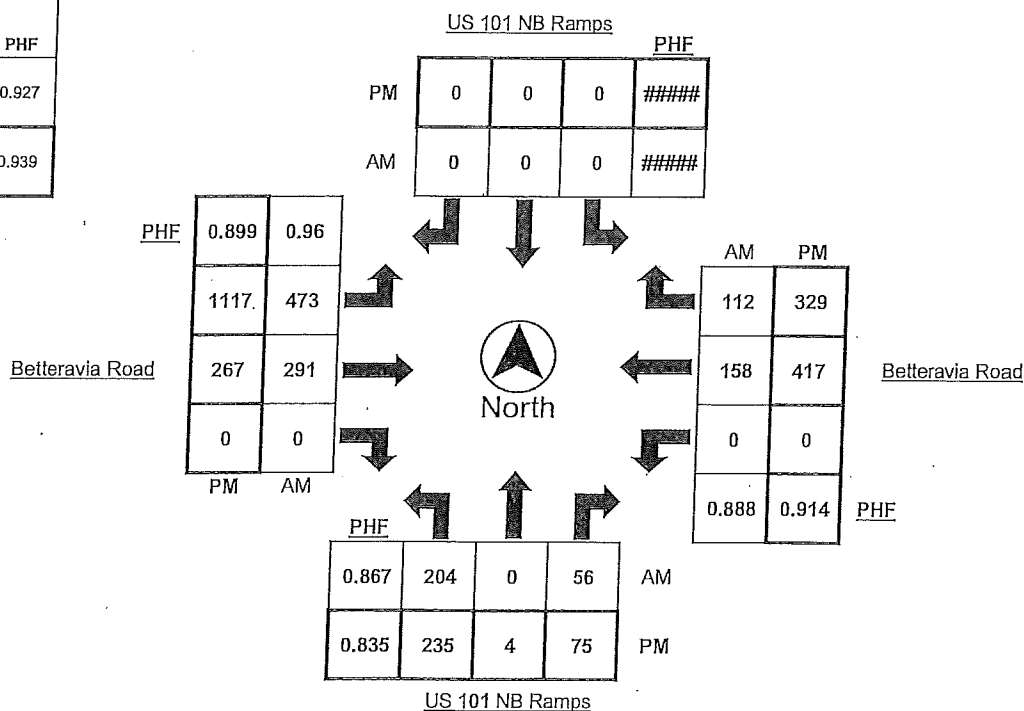
LOCATION Betteravia Rd @ US 101 NB Ramps LATITUDE 34.923560°
COUNTY Santa Barbara LONGITUDE -120.417314°
COLLECTION DATE Tuesday, September 13, 2016 WEATHER Clear

	Northbound				Southbound				Eastbound				Westbound			
Time	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
7:00 AM - 7:15 AM	22	0	22	17	0	0	0	0	127	71	0	0	0	37	17	15
7:15 AM - 7:30 AM	27	0	15	10	0	0	0	0	146	71	0	0	0	44	28	12
7:30 AM - 7:45 AM	40	0	14	14	0	0	0	0	136	71	0	0	0	28	36	18
7:45 AM - 8:00 AM	45	0	21	11	0	0	0	0	127	62	0	0	0	49	29	17
8:00 AM - 8:15 AM	44	0	18	12	0	0	0	0	100	77	0	0	0	27	26	14
8:15 AM - 8:30 AM	43	0	12	8	0	0	0	0	136	57	0	0	0	47	29	17
8:30 AM - 8:45 AM	54	0	14	9	0	0	0	0	118	77	0	0	0	40	26	12
8:45 AM - 9:00 AM	63	0	12	8	0	0	0	0	119	80	0	0	0	44	31	15
TOTAL	338	0	128	89	0	0	0	0	1009	566	0	0	0	316	222	120

	Northbound				Southbound				Eastbound				Westbound			
Time	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
4:00 PM - 4:15 PM	74	0	21	15	0	0	0	0	239	73	0	0	0	75	30	17
4:15 PM - 4:30 PM	72	0	18	10	0	0	0	0	219	75	0	0	0	98	48	19
4:30 PM - 4:45 PM	65	3	26	13	0	0	0	0	244	71	0	0	0	107	84	43
4:45 PM - 5:00 PM	60	0	14	7	0	0	0	0	247	70	0	0	0	86	71	27
5:00 PM - 5:15 PM	60	1	23	16	0	0	0	0	311	58	0	0	0	104	90	30
5:15 PM - 5:30 PM	50	0	12	10	0	0	0	0	315	70	0	0	0	120	84	34
5:30 PM - 5:45 PM	34	0	15	8	0	0	0	0	253	66	0	0	0	95	52	21
5:45 PM - 6:00 PM	32	1	13	6	0	0	0	0	215	71	0	0	0	70	43	22
TOTAL	447	5	142	85	0	0	0	0	2043	552	0	0	0	755	502	213

	Northbound				Southbound				Eastbound				Westbound			
PEAK HOUR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR	Left	Thru	Right	RTOR
8:00 AM - 9:00 AM	204	0	56	37	0	0	0	0	473	291	0	0	0	158	112	58
4:30 PM - 5:30 PM	235	4	75	46	0	0	0	0	1117	267	0	0	0	417	329	134

	PHF
AM	0.927
PM	0.939



LEVEL OF SERVICE CALCULATION WORKSHEETS

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 NORTHBOUND - BASELINE - RUFUGIO TO SR 1		

Geometric Data

Number of Lanes, In	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.4
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1560	Heavy Vehicle Adjustment Factor (fhv)	0.847
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	1046
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.44
Passenger Car Equivalent (ET)	3.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	74.4
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	14.1
Total Ramp Density Adjustment	0.6	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	74.4		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/8/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 SOUTHBOUND - BASELINE - RUFUGIO TO SR 1		

Geometric Data

Number of Lanes, ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.13
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.4
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	749	Heavy Vehicle Adjustment Factor (fHV)	0.847
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	502
Total Trucks, %	9.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.21
Passenger Car Equivalent (ET)	3.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	74.4
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	6.7
Total Ramp Density Adjustment	0.6	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	74.4		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 NORTHBOUND - BASELINE - SR 1 TO SR 246		

Geometric Data

Number of Lanes, ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	73.2
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	987	Heavy Vehicle Adjustment Factor (fhv)	0.806
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	696
Total Trucks, %	12.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.29
Passenger Car Equivalent (Et)	3.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	73.2
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	9.5
Total Ramp Density Adjustment	1.8	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	73.2		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 SOUTHBOUND - BASELINE - SR 1 TO SR 246		

Geometric Data

Number of Lanes, ln	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	73.2
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	655	Heavy Vehicle Adjustment Factor (fHV)	0.806
Peak Hour Factor	0.88	Flow Rate (V _p), pc/h/ln	462
Total Trucks, %	12.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (c _{adj}), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.19
Passenger Car Equivalent (E _t)	3.000		

Speed and Density

Lane Width Adjustment (f _{lw})	0.0	Average Speed (S), mi/h	73.2
Right-Side Lateral Clearance Adj. (f _{RLC})	0.0	Density (D), pc/mi/ln	6.3
Total Ramp Density Adjustment	1.8	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFS _{adj}), mi/h	73.2		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 NORTHBOUND - BASELINE - SR 246 TO CLARK		

Geometric Data

Number of Lanes, In	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.24
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.0
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1208	Heavy Vehicle Adjustment Factor (fhv)	0.833
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	824
Total Trucks, %	10.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34
Passenger Car Equivalent (Et)	3.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	74.0
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	11.1
Total Ramp Density Adjustment	1.0	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	74.0		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 SOUTHBOUND - BASELINE - SR 246 TO CLARK		

Geometric Data

Number of Lanes, In	2	Terrain Type	Rolling
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	0.24
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	74.0
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	987	Heavy Vehicle Adjustment Factor (fhv)	0.833
Peak Hour Factor	0.88	Flow Rate (Vp), pc/h/ln	673
Total Trucks, %	10.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.28
Passenger Car Equivalent (ET)	3.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	74.0
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	9.1
Total Ramp Density Adjustment	1.0	Level of Service (LOS)	A
Adjusted Free-Flow Speed (FFSadj), mi/h	74.0		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 NORTHBOUND - BASELINE - CLARK TO SM WAY		

Geometric Data

Number of Lanes, ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	1.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	71.8
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1591	Heavy Vehicle Adjustment Factor (fhv)	0.935
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	946
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.39
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	71.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	13.2
Total Ramp Density Adjustment	3.2	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	71.8		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 SOUTHBOUND - EXISTING - CLARK TO SM WAY		

Geometric Data

Number of Lanes, In	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	75.0	Total Ramp Density (TRD), ramps/mi	1.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	71.8
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1363	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	810
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2400
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2400
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.34
Passenger Car Equivalent (E _t)	2.000		

Speed and Density

Lane Width Adjustment (f _{lw})	0.0	Average Speed (S), mi/h	71.8
Right-Side Lateral Clearance Adj. (f _{RLC})	0.0	Density (D), pc/mi/ln	11.3
Total Ramp Density Adjustment	3.2	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFS _{adj}), mi/h	71.8		

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Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 NORTHBOUND - BASELINE - SM WAY TO BETTERAVIA		

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	1.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	66.8
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2295	Heavy Vehicle Adjustment Factor (fhv)	0.935
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	909
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2368
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.38
Passenger Car Equivalent (Et)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	66.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	13.6
Total Ramp Density Adjustment	3.2	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	66.8		

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HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 SOUTHBOUND - BASELINE - SM WAY TO BETTERAVIA		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	1.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	66.8
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	1957	Heavy Vehicle Adjustment Factor (fhv)	0.935
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	775
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2368
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.33
Passenger Car Equivalent (Et)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	66.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	11.6
Total Ramp Density Adjustment	3.2	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	66.8		

HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 NORTHBOUND - BASELINE - BETTERAVIA TO SR 166		

Geometric Data

Number of Lanes, ln	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	1.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	66.8
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	2892	Heavy Vehicle Adjustment Factor (fhv)	0.952
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	1125
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2368
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	66.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	16.8
Total Ramp Density Adjustment	3.2	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	66.8		

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HCS7 Basic Freeway Report

Project Information

Analyst	DLD	Date	8/9/18
Agency	ATE	Analysis Year	2018
Jurisdiction	SB COUNTY	Time Period Analyzed	PM PEAK
Project Description	US 101 SOUTHBOUND - BASELINE - BETTERAVIA TO SR 166		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	70.0	Total Ramp Density (TRD), ramps/mi	1.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	66.8
Right-Side Lateral Clearance, ft	6		

Adjustment Factors

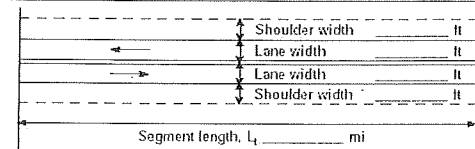
Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

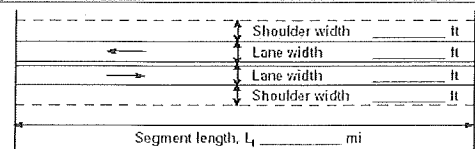
Demand and Capacity

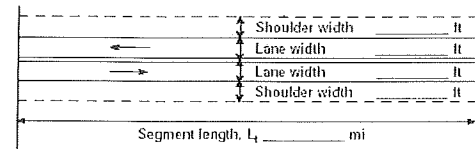
Demand Volume veh/h	2768	Heavy Vehicle Adjustment Factor (fhv)	0.952
Peak Hour Factor	0.90	Flow Rate (Vp), pc/h/ln	1077
Total Trucks, %	5.00	Capacity (c), pc/h/ln	2368
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2368
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.45
Passenger Car Equivalent (Et)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	66.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	16.1
Total Ramp Density Adjustment	3.2	Level of Service (LOS)	B
Adjusted Free-Flow Speed (FFSadj), mi/h	66.8		

DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET			
General Information		Site Information	
Analyst	DLD	Highway / Direction of Travel	SR 166
Agency or Company	ATE	From/To	US 101 to SR 33 South Junction
Date Performed	8/9/18	Jurisdiction	CALTRANS
Analysis Time Period	PM PEAK HOUR	Analysis Year	2018
Project Description: BASELINE CONDITIONS			
Input Data			
 Shoulder width _____ ft Lane width _____ ft Lane width _____ ft Shoulder width _____ ft Segment length, L_1 _____ mi		 ☒ Class I highway ☐ Class II highway ☐ Class III highway Terrain ☐ Level ☒ Rolling Grade Length _____ mi Up/down Peak-hour factor, PHF 0.88 No-passing zone 20% % Trucks and Buses, P_T 10% % Recreational vehicles, P_R 4% Access points _____ mi 1/mi	
Analysis direction vol., V_d 280 veh/h Opposing direction vol., V_o 187 veh/h Shoulder width ft 6.0 Lane Width ft 12.0 Segment Length mi 70.0			
Average Travel Speed			
	Analysis Direction (d)	Opposing Direction (o)	
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	2.1	2.3	
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	1.1	1.1	
Heavy-vehicle adjustment factor, $f_{HV,ATS} = 1 / (1 + P_T(E_T - 1) + P_R(E_R - 1))$	0.898	0.882	
Grade adjustment factor ¹ , $f_{g,ATS}$ (Exhibit 15-9)	0.84	0.76	
Demand flow rate ² , v_f (pc/h) $v_f = V_f / (PHF * f_{g,ATS} * f_{HV,ATS})$	422	317	
Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample ³ , S_{FM}		Base free-flow speed ⁴ , BFFS 55.0 mi/h	
Total demand flow rate, both directions, v		Adj. for lane and shoulder width ⁴ , f_{LS} (Exhibit 15-7) 0.0 mi/h	
Free-flow speed, $FFS = S_{FM} + 0.00776(v f_{HV,ATS})$		Adj. for access points ⁴ , f_A (Exhibit 15-8) 0.3 mi/h	
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15) 1.4 mi/h		Free-flow speed, FFS (FSS=BFFS- f_{LS} - f_A) 54.8 mi/h	
		Average travel speed, $ATS_d = FFS - 0.00776(V_{d,ATS} + V_{o,ATS}) - f_{np,ATS}$ 47.6 mi/h	
		Percent free flow speed, PFFS 87.0 %	
Percent Time-Spent-Following			
	Analysis Direction (d)	Opposing Direction (o)	
Passenger-car equivalents for trucks, E_T (Exhibit 15-18 or 15-19)	1.6	1.7	
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	1.0	1.0	
Heavy-vehicle adjustment factor, $f_{HV} = 1 / (1 + P_T(E_T - 1) + P_R(E_R - 1))$	0.943	0.935	
Grade adjustment factor ¹ , $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	0.86	0.81	
Directional flow rate ² , v_f (pc/h) $v_f = V_f / (PHF * f_{HV,PTSF} * f_{g,PTSF})$	392	281	
Base percent time-spent-following ⁴ , $BPTSF_d(\%) = 100(1 - e^{-a v_d^b})$		39.5	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)		33.7	
Percent time-spent-following, $PTSF_d(\%) = BPTSF_d + f_{np,PTSF} * (V_{d,PTSF} / V_{d,PTSF} + V_{o,PTSF})$		59.1	
Level of Service and Other Performance Measures			
Level of service, LOS (Exhibit 15-3)	C		
Volume to capacity ratio, v/c	0.19		
Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	1644		
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	1700		
Percent Free-Flow Speed PFFS _d (Equation 15-11 - Class III only)	87.0		
Bicycle Level of Service			
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	318.2		
Effective width, W_v (Eq. 15-29) ft	24.00		
Effective speed factor, S_f (Eq. 15-30)	4.79		
Bicycle level of service score, BLOS (Eq. 15-31)	5.57		
Bicycle level of service (Exhibit 15-4)	F		
Notes			
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain. 2. If v_f (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis—the LOS is F. 3. For the analysis direction only and for $v > 200$ veh/h. 4. For the analysis direction only. 5. Exhibit 15-20 provides coefficients a and b for Equation 15-10. 6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.			

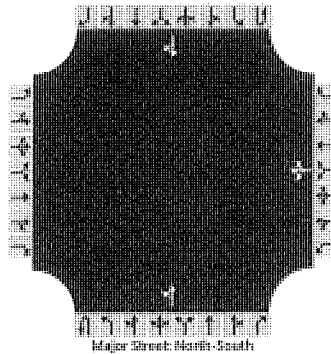
DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET			
General Information		Site Information	
Analyst	DLD	Highway / Direction of Travel	SR 166
Agency or Company	ATE	From/To	SR 33 South - SR 33 North
Date Performed	8/9/18	Jurisdiction	CALTRANS
Analysis Time Period	PM PEAK HOUR	Analysis Year	2018
Project Description: BASELINE CONDITIONS			
Input Data			
 Shoulder width _____ ft Lane width _____ ft Lane width _____ ft Shoulder width _____ ft Segment length, L_1 _____ mi		 ☒ Class I highway ☐ Class II highway ☐ Class III highway Terrain ☐ Level ☒ Rolling Grade Length _____ mi Up/down _____ Peak-hour factor, PHF _____ No-passing zone _____ % Trucks and Buses, P_T _____ % Recreational vehicles, P_R _____ Access points _____ mi	
Analysis direction vol., V_d 294 veh/h Opposing direction vol., V_o 196 veh/h Shoulder width ft 6.0 Lane Width ft 12.0 Segment Length mi 15.0			
Average Travel Speed			
	Analysis Direction (d)	Opposing Direction (o)	
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)	2.1	2.3	
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)	1.1	1.1	
Heavy-vehicle adjustment factor, $f_{HV,ATS} = 1 / (1 + P_T(E_T - 1) + P_R(E_R - 1))$	0.898	0.882	
Grade adjustment factor ¹ , $f_{g,ATS}$ (Exhibit 15-9)	0.85	0.77	
Demand flow rate ² , v_f (pc/h) $v_f = V_f / (PHF \cdot f_{g,ATS} \cdot f_{HV,ATS})$	438	328	
Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample ³ , S_{FM}		Base free-flow speed ⁴ , BFFS 55.0 mi/h	
Total demand flow rate, both directions, v		Adj. for lane and shoulder width ⁴ , f_{LS} (Exhibit 15-7) 0.0 mi/h	
Free-flow speed, FFS = $S_{FM} + 0.00776(v \cdot f_{HV,ATS})$		Adj. for access points ⁴ , f_A (Exhibit 15-8) 0.3 mi/h	
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15) 1.4 mi/h		Free-flow speed, FFS (FFS = BFFS · f_{LS} · f_A) 54.8 mi/h	
		Average travel speed, $ATS_d = FFS \cdot 0.00776(V_{d,ATS} + V_{o,ATS}) \cdot f_{np,ATS}$ 47.4 mi/h	
		Percent free flow speed, PFFS 86.7 %	
Percent Time-Spent-Following			
	Analysis Direction (d)	Opposing Direction (o)	
Passenger-car equivalents for trucks, E_T (Exhibit 15-18 or 15-19)	1.6	1.7	
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)	1.0	1.0	
Heavy-vehicle adjustment factor, $f_{HV} = 1 / (1 + P_T(E_T - 1) + P_R(E_R - 1))$	0.943	0.935	
Grade adjustment factor ¹ , $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)	0.87	0.81	
Directional flow rate ² , v_f (pc/h) $v_f = V_f / (PHF \cdot f_{HV,PTSF} \cdot f_{g,PTSF})$	407	294	
Base percent time-spent-following ⁴ , $BPTSF_d(\%) = 100(1 - e^{-a v_d^b})$		41.7	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)		32.5	
Percent time-spent-following, $PTSF_d(\%) = BPTSF_d + f_{np,PTSF} \cdot (V_{d,PTSF} / V_{d,PTSF} + V_{o,PTSF})$		60.6	
Level of Service and Other Performance Measures			
Level of service, LOS (Exhibit 15-3)	C		
Volume to capacity ratio, v/c	0.20		
Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h	1644		
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h	1700		
Percent Free-Flow Speed PFFS _d (Equation 15-11 - Class III only)	86.7		
Bicycle Level of Service			
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h	334.1		
Effective width, W_e (Eq. 15-29) ft	24.00		
Effective speed factor, S_f (Eq. 15-30)	4.79		
Bicycle level of service score, BLOS (Eq. 15-31)	5.59		
Bicycle level of service (Exhibit 15-4)	F		
Notes			
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain. 2. If v_d or $v_o \geq 1,700$ pc/h, terminate analysis—the LOS is F. 3. For the analysis direction only and for $v > 200$ veh/h. 4. For the analysis direction only. 5. Exhibit 15-20 provides coefficients a and b for Equation 15-10. 6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.			

DIRECTIONAL TWO-LANE HIGHWAY SEGMENT WORKSHEET			
General Information		Site Information	
Analyst	DLD	Highway / Direction of Travel	SR 166
Agency or Company	ATE	From/To	East of SR 33 North Junction
Date Performed	8/9/18	Jurisdiction	CALTRANS
Analysis Time Period	PM PEAK HOUR	Analysis Year	2018
Project Description: BASELINE CONDITIONS			
Input Data			
 Shoulder width _____ ft Lane width _____ ft Lane width _____ ft Shoulder width _____ ft Segment length, L _____ mi		 ☒ Class I highway ☐ Class II highway ☐ Class III highway Terrain ☒ Level ☐ Rolling Grade Length _____ mi Up/down _____ Peak-hour factor, PHF _____ 0.88 No-passing zone _____ 20% % Trucks and Buses, P_T _____ 10 % % Recreational vehicles, P_R _____ 4% Access points _____ 1/mi	
Analysis direction vol., V_d 199veh/h Opposing direction vol., V_o 132veh/h Shoulder width ft 6.0 Lane Width ft 12.0 Segment Length mi 5.0			
Average Travel Speed			
		Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-11 or 15-12)		1.5	1.7
Passenger-car equivalents for RVs, E_R (Exhibit 15-11 or 15-13)		1.0	1.0
Heavy-vehicle adjustment factor, $f_{HV,ATS} = 1 / (1 + P_T(E_T - 1) + P_R(E_R - 1))$		0.952	0.935
Grade adjustment factor ¹ , $f_{g,ATS}$ (Exhibit 15-9)		1.00	1.00
Demand flow rate ² , v_f (pc/h) $v_f = V_f / (PHF * f_{g,ATS} * f_{HV,ATS})$		238	160
Free-Flow Speed from Field Measurement		Estimated Free-Flow Speed	
Mean speed of sample ³ , S_{FM}		Base free-flow speed ⁴ , BFFS 55.0 mi/h	
Total demand flow rate, both directions, v		Adj. for lane and shoulder width ⁴ , f_{LS} (Exhibit 15-7) 0.0 mi/h	
Free-flow speed, $FFS = S_{FM} + 0.00776(v f_{HV,ATS})$		Adj. for access points ⁴ , f_A (Exhibit 15-8) 0.3 mi/h	
Adj. for no-passing zones, $f_{np,ATS}$ (Exhibit 15-15) 1.1 mi/h		Free-flow speed, FFS (FSS=BFFS- f_{LS} - f_A) 54.8 mi/h	
		Average travel speed, $ATS_d = FFS - 0.00776(V_{d,ATS} + V_{o,ATS}) - f_{np,ATS}$ 50.6 mi/h	
		Percent free flow speed, PFFS 92.4 %	
Percent Time-Spent-Following			
		Analysis Direction (d)	Opposing Direction (o)
Passenger-car equivalents for trucks, E_T (Exhibit 15-18 or 15-19)		1.1	1.1
Passenger-car equivalents for RVs, E_R (Exhibit 15-18 or 15-19)		1.0	1.0
Heavy-vehicle adjustment factor, $f_{HV} = 1 / (1 + P_T(E_T - 1) + P_R(E_R - 1))$		0.990	0.990
Grade adjustment factor ¹ , $f_{g,PTSF}$ (Exhibit 15-16 or Ex 15-17)		1.00	1.00
Directional flow rate ² , v_f (pc/h) $v_f = V_f / (PHF * f_{HV,PTSF} * f_{g,PTSF})$		228	152
Base percent time-spent-following ⁴ , $BPTSF_d(\%) = 100(1 - e^{-a v_d^b})$		24.1	
Adj. for no-passing zone, $f_{np,PTSF}$ (Exhibit 15-21)		35.5	
Percent time-spent-following, $PTSF_d(\%) = BPTSF_d + f_{np,PTSF} * (V_{d,PTSF} / V_{d,PTSF} + V_{o,PTSF})$		45.4	
Level of Service and Other Performance Measures			
Level of service, LOS (Exhibit 15-3)		B	
Volume to capacity ratio, v/c		0.13	
Capacity, $C_{d,ATS}$ (Equation 15-12) veh/h		1700	
Capacity, $C_{d,PTSF}$ (Equation 15-13) veh/h		1700	
Percent Free-Flow Speed PFFS _d (Equation 15-11 - Class III only)		92.4	
Bicycle Level of Service			
Directional demand flow rate in outside lane, v_{OL} (Eq. 15-24) veh/h		226.1	
Effective width, W_v (Eq. 15-29) ft		24.00	
Effective speed factor, S_f (Eq. 15-30)		4.79	
Bicycle level of service score, BLOS (Eq. 15-31)		5.39	
Bicycle level of service (Exhibit 15-4)		E	
Notes			
1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific downgrade segments are treated as level terrain. 2. If v_f (v_d or v_o) $\geq 1,700$ pc/h, terminate analysis—the LOS is F. 3. For the analysis direction only and for $v > 200$ veh/h. 4. For the analysis direction only. 5. Exhibit 15-20 provides coefficients a and b for Equation 15-10. 6. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.			

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	US 101 NB/REFUGIO ROAD
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	10/25/18	East/West Street	US 101 NB RAMP
Analysis Year	2018	North/South Street	REFUGIO ROAD
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.81
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						6	2	9		3	18				18	1
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

Delay, Queue Length, and Level of Service

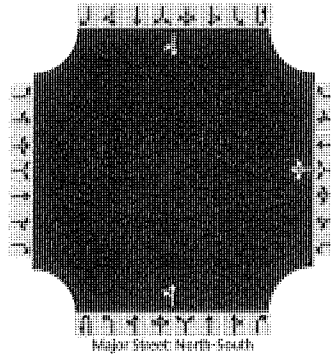
Flow Rate, v (veh/h)						21			4							
Capacity, c (veh/h)						985			1583							
v/c Ratio						0.02			0.00							
95% Queue Length, Q ₉₅ (veh)						0.1			0.0							
Control Delay (s/veh)						8.7			7.3							
Level of Service (LOS)						A			A							
Approach Delay (s/veh)					8.7				1.1							
Approach LOS					A											

AWD = 8.5 SEC = LOS A

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	US 101 NB/REFUGIO ROAD
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	10/25/18	East/West Street	US 101 NB RAMP
Analysis Year	2018	North/South Street	REFUGIO ROAD
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.81
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE + PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						6	2	9		3	24				18	7
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

Delay, Queue Length, and Level of Service

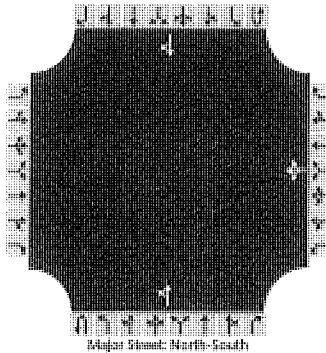
Flow Rate, v (veh/h)						21				4						
Capacity, c (veh/h)						973				1573						
v/c Ratio						0.02				0.00						
95% Queue Length, Q ₉₅ (veh)						0.1				0.0						
Control Delay (s/veh)						8.8				7.3						
Level of Service (LOS)						A				A						
Approach Delay (s/veh)					8.8				0.8							
Approach LOS					A											

AWD = 8.6 sec = LOS A

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	US 101 NB/REFUGIO ROAD
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	10/25/18	East/West Street	US 101 NB RAMP
Analysis Year	2018	North/South Street	REFUGIO ROAD
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.65
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						7	5	15		2	7				18	24
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						42				3						
Capacity, c (veh/h)						974				1529						
v/c Ratio						0.04				0.00						
95% Queue Length, Q ₉₅ (veh)						0.1				0.0						
Control Delay (s/veh)						8.9				7.4						
Level of Service (LOS)						A				A						
Approach Delay (s/veh)					8.9				1.6							
Approach LOS					A											

Handwritten: Awd = 8.8 sec = LOS A

HCS7 Two-Way Stop-Control Report

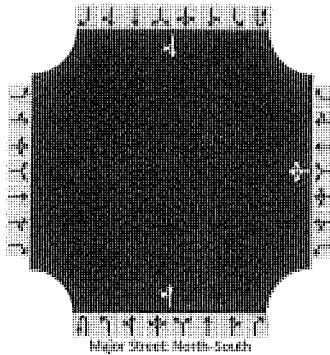
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	10/25/18
Analysis Year	2018
Time Analyzed	PM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE + PROJECT

Site Information

Intersection	US 101 NB/REFUGIO ROAD
Jurisdiction	SB COUNTY
East/West Street	US 101 NB RAMP
North/South Street	REFUGIO ROAD
Peak Hour Factor	0.65
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LTR			LT						TR
Volume (veh/h)						7	5	15		2	13				18	30
Percent Heavy Vehicles (%)						3	3	3		3						
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1	6.5	6.2		4.1						
Critical Headway (sec)						6.43	6.53	6.23		4.13						
Base Follow-Up Headway (sec)						3.5	4.0	3.3		2.2						
Follow-Up Headway (sec)						3.53	4.03	3.33		2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						42				3						
Capacity, c (veh/h)						958				1517						
v/c Ratio						0.04				0.00						
95% Queue Length, Q ₉₅ (veh)						0.1				0.0						
Control Delay (s/veh)						8.9				7.4						
Level of Service (LOS)						A				A						
Approach Delay (s/veh)					8.9				1.0							
Approach LOS					A											

AWD = 8.8 SEC = LOS A

2: US 101 SB & Betteravia

AM Peak Hour

Baseline

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	680	235	45	355	0	0	0	0	135	0	1030
Future Volume (vph)	0	680	235	45	355	0	0	0	0	135	0	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.67	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250									261
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	723	250	48	378	0	0	0	0	72	72	1096
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	35.0					45.0	45.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Green (s)		32.6	32.6	10.0	31.0					33.9	32.8	51.0
Actuated g/C Ratio		0.36	0.36	0.11	0.34					0.38	0.36	0.57
v/c Ratio		0.82	0.35	0.25	0.32					0.12	0.12	1.11
Control Delay		38.0	4.8	57.5	9.5					14.8	14.6	82.9
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		38.0	4.8	57.5	9.5					14.8	14.6	82.9
LOS		D	A	E	A					B	B	F
Approach Delay		29.5			14.9						75.0	
Approach LOS		C			B						E	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 70 (78%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 48.5

Intersection LOS: D

Intersection Capacity Utilization 80.3%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

2: US 101 SB & Betteravia
AM Peak Hour

Baseline + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	680	235	51	355	0	0	0	0	135	0	1030
Future Volume (vph)	0	680	235	51	355	0	0	0	0	135	0	1030
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.67	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			250									261
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	0	723	250	54	378	0	0	0	0	144	0	1096
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	723	250	54	378	0	0	0	0	72	72	1096
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	35.0					45.0	45.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Green (s)		32.6	32.6	10.0	31.0					33.9	32.8	51.0
Actuated g/C Ratio		0.36	0.36	0.11	0.34					0.38	0.36	0.57
v/c Ratio		0.82	0.35	0.28	0.32					0.12	0.12	1.11
Control Delay		38.0	4.8	57.7	9.6					14.8	14.6	82.9
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		38.0	4.8	57.7	9.6					14.8	14.6	82.9
LOS		D	A	E	A					B	B	F
Approach Delay		29.5			15.6						75.0	
Approach LOS		C			B						E	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 70 (78%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.11

Intersection Signal Delay: 48.6

Intersection LOS: D

Intersection Capacity Utilization 80.3%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

2: US 101 SB & Betteravia
AM Peak Hour

Cumulative

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	690	260	50	395	0	0	0	0	140	0	1035
Future Volume (vph)	0	690	260	50	395	0	0	0	0	140	0	1035
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.67	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			277									210
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	734	277	53	420	0	0	0	0	74	75	1101
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	34.0					46.0	46.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Green (s)		31.6	31.6	10.0	30.0					34.7	33.6	52.0
Actuated g/C Ratio		0.35	0.35	0.11	0.33					0.39	0.37	0.58
v/c Ratio		0.86	0.39	0.28	0.37					0.12	0.12	1.13
Control Delay		42.1	5.0	58.1	9.8					14.3	14.1	88.7
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		42.1	5.0	58.1	9.8					14.3	14.1	88.7
LOS		D	A	E	A					B	B	F
Approach Delay		31.9			15.2						79.8	
Approach LOS		C			B						E	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 72 (80%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 50.9

Intersection LOS: D

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

2: US 101 SB & Betteravia

AM Peak Hour

Cumulative + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	690	260	56	395	0	0	0	0	140	0	1035
Future Volume (vph)	0	690	260	56	395	0	0	0	0	140	0	1035
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.67	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2425	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			277									210
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	734	277	60	420	0	0	0	0	74	75	1101
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	34.0					46.0	46.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Green (s)		28.8	28.8	10.0	30.0					34.7	33.6	52.0
Actuated g/C Ratio		0.32	0.32	0.11	0.33					0.39	0.37	0.58
v/c Ratio		0.95	0.41	0.31	0.37					0.12	0.12	1.13
Control Delay		49.5	4.1	30.3	9.9					14.3	14.1	88.7
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		49.5	4.1	30.3	9.9					14.3	14.1	88.7
LOS		D	A	C	A					B	B	F
Approach Delay		37.0			12.4						79.8	
Approach LOS		D			B						E	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 79 (88%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 52.2

Intersection LOS: D

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

* User Entered Value

3: US 101 NB & Betteravia
AM Peak Hour

Baseline

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	515	300	0	0	130	115	270	0	60	0	0	0
Future Volume (vph)	515	300	0	0	130	115	270	0	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Fr _t						0.850			0.850			
Fl _t Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Fl _t Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						124			65			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	554	323	0	0	140	124	145	145	65	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	41.0	62.0			21.0	21.0	28.0	28.0	28.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	20.6	58.0			33.4	33.4	24.0	24.0	24.0			
Actuated g/C Ratio	0.23	0.64			0.37	0.37	0.27	0.27	0.27			
v/c Ratio	0.73	0.15			0.11	0.19	0.33	0.33	0.14			
Control Delay	19.8	6.8			20.1	5.1	29.2	29.2	7.8			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	19.8	6.8			20.1	5.1	29.2	29.2	7.8			
LOS	B	A			C	A	C	C	A			
Approach Delay		15.0			13.1			25.3				
Approach LOS		B			B			C				

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 17.1

Intersection LOS: B

Intersection Capacity Utilization 80.3%

ICU Level of Service D

Analysis Period (min) 15

3: US 101 NB & Betteravia

AM Peak Hour

Baseline + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	515	300	0	0	136	115	270	0	66	0	0	0
Future Volume (vph)	515	300	0	0	136	115	270	0	66	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frts						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						124			71			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	554	323	0	0	146	124	290	0	71	0	0	0
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	554	323	0	0	146	124	145	145	71	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	41.0	62.0			21.0	21.0	28.0	28.0	28.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	20.6	58.0			33.4	33.4	24.0	24.0	24.0			
Actuated g/C Ratio	0.23	0.64			0.37	0.37	0.27	0.27	0.27			
v/c Ratio	0.73	0.15			0.11	0.19	0.33	0.33	0.15			
Control Delay	19.8	6.8			20.2	5.1	29.2	29.2	7.5			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	19.8	6.8			20.2	5.1	29.2	29.2	7.5			
LOS	B	A			C	A	C	C	A			
Approach Delay		15.0			13.3			24.9				
Approach LOS		B			B			C				

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 17.1

Intersection LOS: B

Intersection Capacity Utilization 80.3%

ICU Level of Service D

Analysis Period (min) 15

3: US 101 NB & Betteravia
AM Peak Hour

Cumulative

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	530	305	0	0	140	120	305	0	75	0	0	0
Future Volume (vph)	530	305	0	0	140	120	305	0	75	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frts						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						129			81			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	570	328	0	0	151	129	164	164	81	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	40.0	60.0			20.0	20.0	30.0	30.0	30.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	21.1	56.0			30.9	30.9	26.0	26.0	26.0			
Actuated g/C Ratio	0.23	0.62			0.34	0.34	0.29	0.29	0.29			
v/c Ratio	0.73	0.15			0.13	0.21	0.35	0.35	0.16			
Control Delay	18.6	6.0			22.1	5.6	27.9	27.9	6.7			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	18.6	6.0			22.1	5.6	27.9	27.9	6.7			
LOS	B	A			C	A	C	C	A			
Approach Delay		14.0			14.5			23.7				
Approach LOS		B			B			C				

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 16.6
Intersection Capacity Utilization 81.7%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service D

3: US 101 NB & Betteravia

AM Peak Hour

Cumulative + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 	 		 	 			
Traffic Volume (vph)	530	311	0	0	140	120	305	0	81	0	0	0
Future Volume (vph)	530	311	0	0	140	120	305	0	81	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frnt						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						129			87			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	570	334	0	0	151	129	164	164	87	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	40.0	60.0			20.0	20.0	30.0	30.0	30.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	21.1	56.0			30.9	30.9	26.0	26.0	26.0			
Actuated g/C Ratio	0.23	0.62			0.34	0.34	0.29	0.29	0.29			
v/c Ratio	0.73	0.16			0.13	0.21	0.35	0.35	0.17			
Control Delay	17.3	2.1			22.1	5.6	27.9	27.9	6.6			
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	17.3	2.1			22.1	5.6	27.9	27.9	6.6			
LOS	B	A			C	A	C	C	A			
Approach Delay		11.7			14.5			23.4				
Approach LOS		B			B			C				

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 15.2

Intersection LOS: B

Intersection Capacity Utilization 81.7%

ICU Level of Service D

Analysis Period (min) 15

2: US 101 SB & Betteravia
PM Peak Hour

Baseline

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	1370	400	80	700	0	0	0	0	85	0	940
Future Volume (vph)	0	1370	400	80	700	0	0	0	0	85	0	940
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.58	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Fr't			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			285									185
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	1384	404	81	707	0	0	0	0	43	43	949
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	51.0					29.0	29.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Grn (s)		45.8	45.8	10.0	47.0					17.4	15.0	35.0
Actuated g/C Ratio		0.51	0.51	0.11	0.52					0.19	0.17	0.39
v/c Ratio		1.30	0.44	0.42	0.39					0.14	0.16	1.33
Control Delay		164.7	6.2	36.4	10.6					26.8	25.8	182.8
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		164.7	6.2	36.4	10.6					26.8	25.8	182.8
LOS		F	A	D	B					C	C	F
Approach Delay		128.9			13.3						169.8	
Approach LOS		F			B						F	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 115.4

Intersection LOS: F

Intersection Capacity Utilization 84.2%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

2: US 101 SB & Betteravia
PM Peak Hour

Baseline + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	1370	400	86	700	0	0	0	0	85	0	940
Future Volume (vph)	0	1370	400	86	700	0	0	0	0	85	0	940
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.58	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frnt			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			285									185
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	1384	404	87	707	0	0	0	0	43	43	949
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	51.0					29.0	29.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effect Green (s)		45.8	45.8	10.0	47.0					17.4	15.0	35.0
Actuated g/C Ratio		0.51	0.51	0.11	0.52					0.19	0.17	0.39
v/c Ratio		1.30	0.44	0.46	0.39					0.14	0.16	1.33
Control Delay		164.7	6.2	36.9	10.7					26.8	25.8	182.8
Queue Delay		0.0	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		164.7	6.2	36.9	10.7					26.8	25.8	182.8
LOS		F	A	D	B					C	C	F
Approach Delay		128.9			13.5						169.8	
Approach LOS		F			B						F	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 84 (93%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.33

Intersection Signal Delay: 115.3

Intersection LOS: F

Intersection Capacity Utilization 84.2%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

2: US 101 SB & Betteravia
PM Peak Hour

Cumulative

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑					↑	↑	↑
Traffic Volume (vph)	0	1425	515	85	795	0	0	0	0	90	0	955
Future Volume (vph)	0	1425	515	85	795	0	0	0	0	90	0	955
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.58	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Fr _t			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			361									150
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	1439	520	86	803	0	0	0	0	45	46	965
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	52.0					28.0	28.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Green (s)		46.8	46.8	10.0	48.0					16.8	14.4	34.0
Actuated g/C Ratio		0.52	0.52	0.11	0.53					0.19	0.16	0.38
v/c Ratio		1.32	0.53	0.45	0.44					0.15	0.18	1.43
Control Delay		173.8	6.9	37.2	10.3					27.8	26.9	226.0
Queue Delay		0.1	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		173.8	6.9	37.2	10.3					27.8	26.9	226.0
LOS		F	A	D	B					C	C	F
Approach Delay		129.5			12.9						208.9	
Approach LOS		F			B						F	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 83 (92%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.43

Intersection Signal Delay: 124.4

Intersection LOS: F

Intersection Capacity Utilization 87.8%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

2: US 101 SB & Betteravia

PM Peak Hour

Cumulative + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↓	↑↑					↓	↑	↑
Traffic Volume (vph)	0	1425	515	91	795	0	0	0	0	90	0	955
Future Volume (vph)	0	1425	515	91	795	0	0	0	0	90	0	955
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	400		0	0		0	335		0
Storage Lanes	0		1	1		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.58	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									0.850
Flt Protected				0.950						0.950	0.950	
Satd. Flow (prot)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Flt Permitted				0.950						0.950	0.950	
Satd. Flow (perm)	0	2099	1538	1719	3438	0	0	0	0	1633	1633	1538
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			361									150
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		967			480			569			488	
Travel Time (s)		14.7			7.3			12.9			11.1	
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)										50%		
Lane Group Flow (vph)	0	1439	520	92	803	0	0	0	0	45	46	965
Turn Type		NA	Perm	Prot	NA					Prot	NA	custom
Protected Phases		4 12		3	8					1	6	6 12
Permitted Phases			4 12									6
Total Split (s)				14.0	52.0					28.0	28.0	
Total Lost Time (s)				4.0	4.0					4.0	4.0	
Act Effct Green (s)		46.8	46.8	10.0	48.0					16.8	14.4	34.0
Actuated g/C Ratio		0.52	0.52	0.11	0.53					0.19	0.16	0.38
v/c Ratio		1.32	0.53	0.48	0.44					0.15	0.18	1.43
Control Delay		173.8	6.9	37.9	10.3					27.8	26.9	226.0
Queue Delay		0.1	0.0	0.0	0.0					0.0	0.0	0.0
Total Delay		173.8	6.9	37.9	10.3					27.8	26.9	226.0
LOS		F	A	D	B					C	C	F
Approach Delay		129.5			13.1						208.9	
Approach LOS		F			B						F	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 83 (92%), Referenced to phase 4:EBT, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.43

Intersection Signal Delay: 124.3

Intersection LOS: F

Intersection Capacity Utilization 87.8%

ICU Level of Service E

Analysis Period (min) 15

* User Entered Value

3: US 101 NB & Betteravia
PM Peak Hour

Baseline

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 							
Traffic Volume (vph)	1190	265	0	0	425	330	355	0	80	0	0	0
Future Volume (vph)	1190	265	0	0	425	330	355	0	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frts						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						328			85			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	1266	282	0	0	452	351	189	189	85	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	48.0	69.0			21.0	21.0	21.0	21.0	21.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	40.3	65.0			20.7	20.7	17.0	17.0	17.0			
Actuated g/C Ratio	0.45	0.72			0.23	0.23	0.19	0.19	0.19			
v/c Ratio	0.85	0.11			0.57	0.58	0.61	0.61	0.24			
Control Delay	7.2	0.5			35.1	9.3	43.1	43.1	9.3			
Queue Delay	1.7	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	8.9	0.5			35.1	9.3	43.1	43.1	9.3			
LOS	A	A			D	A	D	D	A			
Approach Delay		7.4			23.8			36.9				
Approach LOS		A			C			D				

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 16.9
Intersection Capacity Utilization 84.2%
Analysis Period (min) 15

Intersection LOS: B
ICU Level of Service E

3: US 101 NB & Betteravia

PM Peak Hour

Baseline + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1190	265	0	0	431	330	355	0	86	0	0	0
Future Volume (vph)	1190	265	0	0	431	330	355	0	86	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Fr _t						0.850			0.850			
Fl _t Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Fl _t Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						328			91			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	1266	282	0	0	459	351	189	189	91	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	48.0	69.0			21.0	21.0	21.0	21.0	21.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	40.3	65.0			20.7	20.7	17.0	17.0	17.0			
Actuated g/C Ratio	0.45	0.72			0.23	0.23	0.19	0.19	0.19			
v/c Ratio	0.85	0.11			0.58	0.58	0.61	0.61	0.25			
Control Delay	7.2	0.5			35.2	9.3	43.1	43.1	9.1			
Queue Delay	1.7	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	8.9	0.5			35.2	9.3	43.1	43.1	9.1			
LOS	A	A			D	A	D	D	A			
Approach Delay		7.4			24.0			36.5				
Approach LOS		A			C			D				

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 17.0

Intersection LOS: B

Intersection Capacity Utilization 84.2%

ICU Level of Service E

Analysis Period (min) 15

3: US 101 NB & Betteravia
PM Peak Hour

Cumulative

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1240	270	0	0	435	335	440	0	85	0	0	0
Future Volume (vph)	1240	270	0	0	435	335	440	0	85	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						352			90			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	1319	287	0	0	463	356	234	234	90	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	47.0	67.0			20.0	20.0	23.0	23.0	23.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	40.6	63.0			18.4	18.4	19.0	19.0	19.0			
Actuated g/C Ratio	0.45	0.70			0.20	0.20	0.21	0.21	0.21			
v/c Ratio	0.88	0.12			0.66	0.60	0.68	0.68	0.23			
Control Delay	7.8	0.5			39.0	8.8	44.1	44.1	8.4			
Queue Delay	4.7	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	12.5	0.5			39.0	8.8	44.1	44.1	8.4			
LOS	B	A			D	A	D	D	A			
Approach Delay		10.3			25.9			38.3				
Approach LOS		B			C			D				

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 19.8

Intersection LOS: B

Intersection Capacity Utilization 87.8%

ICU Level of Service E

Analysis Period (min) 15

3: US 101 NB & Betteravia

PM Peak Hour

Cumulative + Project

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1240	270	0	0	441	335	440	0	91	0	0	0
Future Volume (vph)	1240	270	0	0	441	335	440	0	91	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	380		0	0		250	0		165	0		0
Storage Lanes	2		0	0		1	1		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Frt						0.850			0.850			
Flt Protected	0.950						0.950	0.950				
Satd. Flow (prot)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Flt Permitted	0.950						0.950	0.950				
Satd. Flow (perm)	3335	3438	0	0	3438	1538	1633	1633	1538	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						352			97			
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		453			540			561			479	
Travel Time (s)		6.9			8.2			12.8			10.9	
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
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Shared Lane Traffic (%)							50%					
Lane Group Flow (vph)	1319	287	0	0	469	356	234	234	97	0	0	0
Turn Type	Prot	NA			NA	Perm	Prot	NA	Perm			
Protected Phases	7	4			8		5	2				
Permitted Phases						8			2			
Total Split (s)	47.0	67.0			20.0	20.0	23.0	23.0	23.0			
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Act Effct Green (s)	40.6	63.0			18.4	18.4	19.0	19.0	19.0			
Actuated g/C Ratio	0.45	0.70			0.20	0.20	0.21	0.21	0.21			
v/c Ratio	0.88	0.12			0.67	0.60	0.68	0.68	0.24			
Control Delay	7.8	0.5			39.3	8.8	44.1	44.1	8.3			
Queue Delay	4.7	0.0			0.0	0.0	0.0	0.0	0.0			
Total Delay	12.5	0.5			39.3	8.8	44.1	44.1	8.3			
LOS	B	A			D	A	D	D	A			
Approach Delay		10.3			26.2			37.9				
Approach LOS		B			C			D				

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 4:EBT and 7:EBL, Start of Green, Master Intersection

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 19.9

Intersection LOS: B

Intersection Capacity Utilization 87.8%

ICU Level of Service E

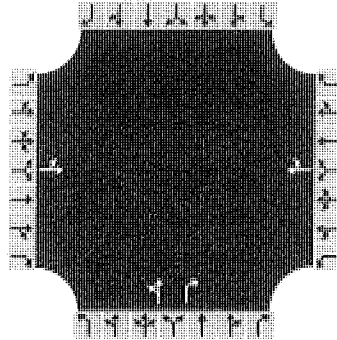
Analysis Period (min) 15

HCS7 All-Way Stop Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/SR 166
Agency/Co.	ATE	Jurisdiction	SLO COUNTY
Date Performed	8/9/18	East/West Street	SR 166
Analysis Year	2018	North/South Street	US 101 NB RAMP
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.93
Time Analyzed	AM PEAK HOUR		
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	48	29			233	31	231	1	172			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR			LT	R				
Flow Rate, v (veh/h)	83			284			249	185				
Percent Heavy Vehicles	6			6			6	6				

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20	3.20				
Initial Degree of Utilization, x	0.074			0.252			0.222	0.164				
Final Departure Headway, hd (s)	5.64			5.14			6.09	4.88				
Final Degree of Utilization, x	0.130			0.405			0.422	0.251				
Move-Up Time, m (s)	2.0			2.0			2.3	2.3				
Service Time, ts (s)	3.64			3.14			3.79	2.58				

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	83			284			249	185					
Capacity	638			700			591	737					
95% Queue Length, Q ₉₅ (veh)	0.4			2.0			2.1	1.0					
Control Delay (s/veh)	9.5			11.6			13.2	9.2					
Level of Service, LOS	A			B			B	A					
Approach Delay (s/veh)	9.5			11.6			11.5						
Approach LOS	A			B			B						
Intersection Delay, s/veh LOS	11.3						B						58

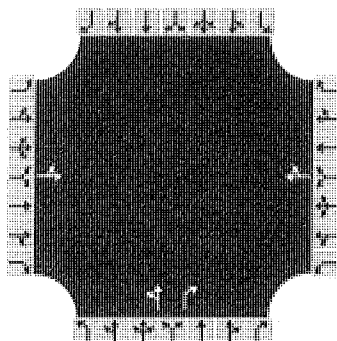
5B

HCS7 All-Way Stop Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/SR 166
Agency/Co.	ATE	Jurisdiction	SLO COUNTY
Date Performed	8/9/18	East/West Street	SR 166
Analysis Year	2018	North/South Street	US 101 NB RAMP
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.93
Time Analyzed	AM PEAK HOUR		
Project Description	BASELINE + PROJECT CONDITIONS		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	48	29			239	31	231	1	178			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR			LT	R				
Flow Rate, v (veh/h)	83			290			249	191				
Percent Heavy Vehicles	6			6			6	6				

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20	3.20				
Initial Degree of Utilization, x	0.074			0.258			0.222	0.170				
Final Departure Headway, hd (s)	5.67			5.16			6.11	4.90				
Final Degree of Utilization, x	0.130			0.416			0.423	0.261				
Move-Up Time, m (s)	2.0			2.0			2.3	2.3				
Service Time, ts (s)	3.67			3.16			3.81	2.60				

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	83			290			249	191					
Capacity	635			698			589	734					
95% Queue Length, Q ₉₅ (veh)	0.4			2.1			2.1	1.0					
Control Delay (s/veh)	9.5			11.8			13.2	9.3					
Level of Service, LOS	A			B			B	A					
Approach Delay (s/veh)	9.5			11.8			11.5						
Approach LOS	A			B			B						
Intersection Delay, s/veh LOS	11.4						B						5

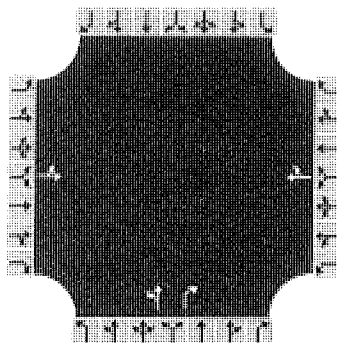
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HCS7 All-Way Stop Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/SR 166
Agency/Co.	ATE	Jurisdiction	SLO COUNTY
Date Performed	8/9/18	East/West Street	SR 166
Analysis Year	2018	North/South Street	US 101 NB RAMP
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.96
Time Analyzed	PM PEAK HOUR		
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	22	60			237	41	480	4	260			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR			LT	R				
Flow Rate, v (veh/h)	85			290			504	271				
Percent Heavy Vehicles	6			6			6	6				

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20	3.20				
Initial Degree of Utilization, x	0.076			0.257			0.448	0.241				
Final Departure Headway, hd (s)	6.42			5.86			6.26	5.05				
Final Degree of Utilization, x	0.152			0.472			0.876	0.380				
Move-Up Time, m (s)	2.0			2.0			2.3	2.3				
Service Time, ts (s)	4.42			3.86			3.96	2.75				

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	85			290			504	271					
Capacity	561			614			575	712					
95% Queue Length, Q ₉₅ (veh)	0.5			2.5			10.0	1.8					
Control Delay (s/veh)	10.6			14.0			38.1	10.8					
Level of Service, LOS	B			B			E	B					
Approach Delay (s/veh)	10.6			14.0			28.6						
Approach LOS	B			B			D						
Intersection Delay, s/veh LOS	23.6						C						5

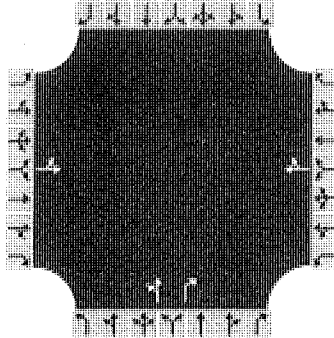
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HCS7 All-Way Stop Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/SR 166
Agency/Co.	ATE	Jurisdiction	SLO COUNTY
Date Performed	8/9/18	East/West Street	SR 166
Analysis Year	2018	North/South Street	US 101 NB RAMP
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.96
Time Analyzed	PM PEAK HOUR		
Project Description	BASELINE + PROJECT CONDITIONS		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Volume	22	60			243	41	480	4	266			
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR			LT	R				
Flow Rate, v (veh/h)	85			296			504	277				
Percent Heavy Vehicles	6			6			6	6				

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20			3.20	3.20				
Initial Degree of Utilization, x	0.076			0.263			0.448	0.246				
Final Departure Headway, hd (s)	6.44			5.87			6.28	5.07				
Final Degree of Utilization, x	0.153			0.483			0.879	0.391				
Move-Up Time, m (s)	2.0			2.0			2.3	2.3				
Service Time, ts (s)	4.44			3.87			3.98	2.77				

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	85			296			504	277					
Capacity	559			613			573	709					
95% Queue Length, Q ₉₅ (veh)	0.5			2.6			10.1	1.9					
Control Delay (s/veh)	10.6			14.2			38.6	11.0					
Level of Service, LOS	B			B			E	B					
Approach Delay (s/veh)	10.6			14.2			28.8						
Approach LOS	B			B			D						
Intersection Delay, s/veh LOS	23.8						C						56

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HCS7 Two-Way Stop-Control Report

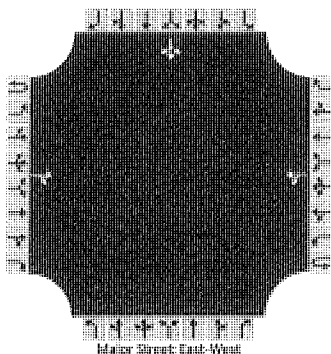
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE CONDITIONS

Site Information

Intersection	US 101 SB/SR 166
Jurisdiction	SLO COUNTY
East/West Street	SR 166
North/South Street	US 101 SB RAMP
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration				TR		LT									LTR	
Volume (veh/h)			55	372		236	228							22	1	19
Percent Heavy Vehicles (%)						6								6	6	6
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1	6.5	6.2
Critical Headway (sec)						4.16								6.46	6.56	6.26
Base Follow-Up Headway (sec)						2.2								3.5	4.0	3.3
Follow-Up Headway (sec)						2.25								3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						268									48	
Capacity, c (veh/h)						1059									337	
v/c Ratio						0.25									0.14	
95% Queue Length, Q ₉₅ (veh)						1.0									0.5	
Control Delay (s/veh)						9.5									17.4	
Level of Service (LOS)						A									C	
Approach Delay (s/veh)					6.2								17.4			
Approach LOS													C			

AWD = 7.9 SEC = LOS A

HCS7 Two-Way Stop-Control Report

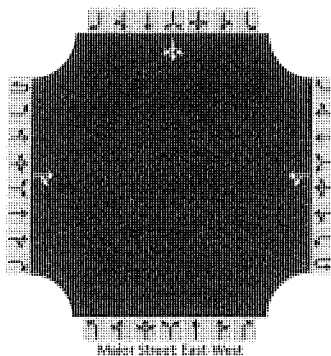
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE + PROJECT CONDITIONS

Site Information

Intersection	US 101 SB/SR 166
Jurisdiction	SLO COUNTY
East/West Street	SR 166
North/South Street	US 101 SB RAMP
Peak Hour Factor	0.88
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration				TR		LT									LTR	
Volume (veh/h)			55	372		242	228							22	1	19
Percent Heavy Vehicles (%)						6								6	6	6
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1	6.5	6.2
Critical Headway (sec)						4.16								6.46	6.56	6.26
Base Follow-Up Headway (sec)						2.2								3.5	4.0	3.3
Follow-Up Headway (sec)						2.25								3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						275									48	
Capacity, c (veh/h)						1059									331	
v/c Ratio						0.26									0.14	
95% Queue Length, Q ₉₅ (veh)						1.0									0.5	
Control Delay (s/veh)						9.6									17.7	
Level of Service (LOS)						A									C	
Approach Delay (s/veh)					6.3								17.7			
Approach LOS													C			

AWD = 8.0 s/veh = LOS A

HCS7 Two-Way Stop-Control Report

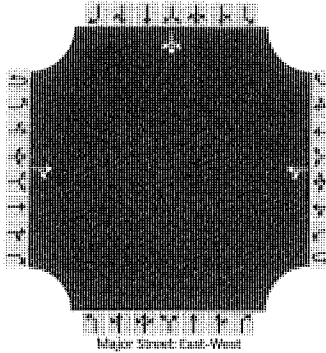
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE CONDITIONS

Site Information

Intersection	US 101 SB/SR 166
Jurisdiction	SLO COUNTY
East/West Street	SR 166
North/South Street	US 101 SB RAMP
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration				TR		LT									LTR	
Volume (veh/h)			38	423		220	492							43	1	38
Percent Heavy Vehicles (%)						6								6	6	6
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1	6.5	6.2
Critical Headway (sec)						4.16								6.46	6.56	6.26
Base Follow-Up Headway (sec)						2.2								3.5	4.0	3.3
Follow-Up Headway (sec)						2.25								3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						237									88	
Capacity, c (veh/h)						1049									257	
v/c Ratio						0.23									0.34	
95% Queue Length, Q ₉₅ (veh)						0.9									1.5	
Control Delay (s/veh)						9.4									26.1	
Level of Service (LOS)						A									D	
Approach Delay (s/veh)					5.0								26.1			
Approach LOS													D			

AWD = 13.9 SEC = LOS B

HCS7 Two-Way Stop-Control Report

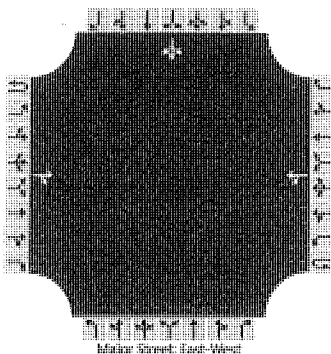
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE + PROJECT CONDITIONS

Site Information

Intersection	US 101 SB/SR 166
Jurisdiction	SLO COUNTY
East/West Street	SR 166
North/South Street	US 101 SB RAMP
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration				TR		LT									LTR	
Volume (veh/h)			38	423		226	492							43	1	38
Percent Heavy Vehicles (%)						6								6	6	6
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1								7.1	6.5	6.2
Critical Headway (sec)						4.16								6.46	6.56	6.26
Base Follow-Up Headway (sec)						2.2								3.5	4.0	3.3
Follow-Up Headway (sec)						2.25								3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						243									88	
Capacity, c (veh/h)						1049									254	
v/c Ratio						0.23									0.35	
95% Queue Length, Q ₉₅ (veh)						0.9									1.5	
Control Delay (s/veh)						9.5									26.6	
Level of Service (LOS)						A									D	
Approach Delay (s/veh)					5.1								26.6			
Approach LOS													D			

AWD = 14.0 SEC = LOS B

HCS7 Two-Way Stop-Control Report

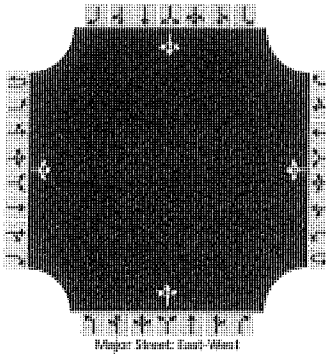
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE CONDITIONS

Site Information

Intersection	SR 166/BASIC SCHOOL ROAD
Jurisdiction	KERN COUNTY
East/West Street	SR 166
North/South Street	BASIC SCHOOL ROAD
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	160	0		5	104	11		0	10	10		78	4	4
Percent Heavy Vehicles (%)		6				6				6	6	6		6	6	6
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.16				4.16				7.16	6.56	6.26		7.16	6.56	6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.25				2.25				3.55	4.05	3.35		3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				6					24					104
Capacity, c (veh/h)		1423				1359					676					583
v/c Ratio		0.00				0.00					0.04					0.18
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1					0.6
Control Delay (s/veh)		7.5			0.0	7.7			0.0		10.5					12.5
Level of Service (LOS)		A			A	A			A		B					B
Approach Delay (s/veh)	0.1				0.4				10.5				12.5			
Approach LOS									B				B			

AWD = 11.9 sec = LOS B

HCS7 Two-Way Stop-Control Report

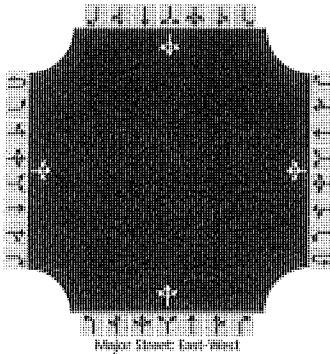
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE + PROJECT CONDITIONS

Site Information

Intersection	SR 166/BASIC SCHOOL ROAD
Jurisdiction	KERN COUNTY
East/West Street	SR 166
North/South Street	BASIC SCHOOL ROAD
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		2	160	6		5	104	11		6	10	10		78	4	4
Percent Heavy Vehicles (%)		6				6				6	6	6		6	6	6
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.16				4.16				7.16	6.56	6.26		7.16	6.56	6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.25				2.25				3.55	4.05	3.35		3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2				6					31				104	
Capacity, c (veh/h)		1423				1351					651				580	
v/c Ratio		0.00				0.00					0.05				0.18	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.2				0.6	
Control Delay (s/veh)		7.5		0.0		7.7		0.0			10.8				12.6	
Level of Service (LOS)		A		A		A		A			B				B	
Approach Delay (s/veh)	0.1				0.4				10.8				12.6			
Approach LOS									B				B			

AWD = 11.9 SEC LOS B

HCS7 Two-Way Stop-Control Report

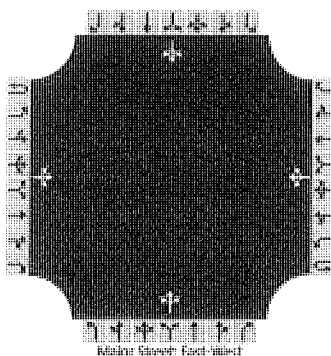
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE CONDITIONS

Site Information

Intersection	SR 166/BASIC SCHOOL ROAD
Jurisdiction	KERN COUNTY
East/West Street	SR 166
North/South Street	BASIC SCHOOL ROAD
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	124	1		8	141	30		3	4	12		8	3	6
Percent Heavy Vehicles (%)		6				6				6	6	6		6	6	6
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.16				4.16				7.16	6.56	6.26		7.16	6.56	6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.25				2.25				3.55	4.05	3.35		3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				10					23				20	
Capacity, c (veh/h)		1344				1409					724				633	
v/c Ratio		0.00				0.01					0.03				0.03	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.7		0.0		7.6		0.1			10.1				10.9	
Level of Service (LOS)		A		A		A		A			B				B	
Approach Delay (s/veh)	0.2				0.4				10.1				10.9			
Approach LOS									B				B			

AWD = 9.85 sec = LOS A

HCS7 Two-Way Stop-Control Report

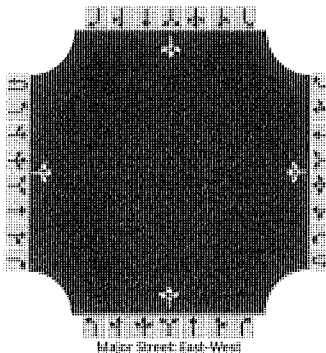
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	8/9/18
Analysis Year	2018
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	BASELINE + PROJECT CONDITIONS

Site Information

Intersection	SR 166/BASIC SCHOOL ROAD
Jurisdiction	KERN COUNTY
East/West Street	SR 166
North/South Street	BASIC SCHOOL ROAD
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		3	124	7		8	141	30		9	4	12		8	3	6
Percent Heavy Vehicles (%)		6				6				6	6	6		6	6	6
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.16				4.16				7.16	6.56	6.26		7.16	6.56	6.26
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.25				2.25				3.55	4.05	3.35		3.55	4.05	3.35

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4				10					30				20	
Capacity, c (veh/h)		1344				1400					676				630	
v/c Ratio		0.00				0.01					0.04				0.03	
95% Queue Length, Q ₉₅ (veh)		0.0				0.0					0.1				0.1	
Control Delay (s/veh)		7.7		0.0		7.6		0.1			10.6				10.9	
Level of Service (LOS)		A		A		A		A			B				B	
Approach Delay (s/veh)	0.2				0.4				10.6				10.9			
Approach LOS									B				B			

AWD = 10.0 sec = LOS A

ACCIDENT DATA

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 4038859

Request Name: sb-slo-kern-101-166-33

Ref Date: 08/27/2018

Request- & Line	L C	D R	L I C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 5	H	T	I	05 SB 101 R036.619 - 05 SB 101 R057.117	01-JAN-15	31-DEC-17	N	L						N	N	Y
1 6	H	T	I	05 SB 101 R057.117 - 05 SB 101 082.183	01-JAN-15	31-DEC-17	N	L						N	N	Y
1 7	H	T	I	05 SB 101 082.183 - 05 SB 101 086.588	01-JAN-15	31-DEC-17	N	L						N	N	Y
1 8	H	T	I	05 SB 101 086.588 - 05 SB 101 090.988	01-JAN-15	31-DEC-17	N	L						N	N	Y
1 9	H	T	I	05 SLO 101 000.000 - 05 SLO 101 000.813	01-JAN-15	31-DEC-17	N	L						N	N	Y

Event Log:

Job id is : 43400 Accidents Table B Request sb-slo-kern-101-166-33 Submitted by T5ETOYAM
 05 SB 101 R 36.619 - 05 SB 101 R 57.117 01/01/2015 TO 12/31/2017
 05 SB 101 R 57.117 - 05 SB 101 82.183 01/01/2015 TO 12/31/2017
 05 SB 101 82.183 - 05 SB 101 86.588 01/01/2015 TO 12/31/2017
 05 SB 101 86.588 - 05 SB 101 90.988 01/01/2015 TO 12/31/2017
 05 SLO 101 0 - 05 SLO 101 .813 01/01/2015 TO 12/31/2017

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description			Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates						
				Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	Actual F+I	Tot	Average Fat	F+I	Tot	
05 SB 101 R036.619 - 05 SB 101 R057.116	0001-0005	2015-01-01	2017-12-31	20.319 MI H 36 mo. R	395	4	113	117	124	202	164	4 160	26.6	591.61	0.007	.20	.67	0.009	.20	.53
05 SB 101 R057.117 - 05 SB 101 082.182	0001-0006	2015-01-01	2017-12-31	24.983 MI H 36 mo. NA	233	6	80	86	87	15	99	7 114	29.2	799.54	0.007	.11	.29	0.009	.19	.51
05 SB 101 082.183 - 05 SB 101 086.587	0001-0007	2015-01-01	2017-12-31	4.405 MI H 36 mo. S	89	1	28	29	49	10	34	1 34	50.8	245.25	0.004	.12	.36	0.004	.14	.43
05 SB 101 086.588 - 05 SB 101 090.987	0001-0008	2015-01-01	2017-12-31	4.40 MI H 36 mo. NA	222	0	63	63	148	18	91	0 81	65.3	314.90	0.000	.20	.71	0.004	.18	.55
05 SLO 101 000.000 - 05 SLO 101 000.812	0001-0009	2015-01-01	2017-12-31	.813 MI H 36 mo. NA	53	1	18	19	34	16	19	2 25	71.6	63.80	0.016	.30	.83	0.005	.17	.51

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
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OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 4038869

Request Name: sb-slo-kern-101-166-33

Ref Date: 08/27/2018

Request- & Line	L O C	D I R	L S C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
3 5	R	T	I	05 SB 101 086.470 - 05 SB 101 086.471	01-JAN-15	31-DEC-17	N	L						N	N	N
3 6	R	T	I	05 SB 101 086.690 - 05 SB 101 086.691	01-JAN-15	31-DEC-17	N	L						N	N	N
3 7	R	T	I	05 SB 101 086.450 - 05 SB 101 086.451	01-JAN-15	31-DEC-17	N	L						N	N	N
3 8	R	T	I	05 SB 101 086.700 - 05 SB 101 086.701	01-JAN-15	31-DEC-17	N	L						N	N	N
4 5	R	T	I	05 SB 101 088.490 - 05 SB 101 088.491	01-JAN-15	31-DEC-17	N	L						N	N	N
4 6	R	T	I	05 SB 101 088.780 - 05 SB 101 088.781	01-JAN-15	31-DEC-17	N	L						N	N	N
4 7	R	T	I	05 SB 101 088.468 - 05 SB 101 088.469	01-JAN-15	31-DEC-17	N	L						N	N	N
4 8	R	T	I	05 SB 101 088.772 - 05 SB 101 088.773	01-JAN-15	31-DEC-17	N	L						N	N	N
6 7	R	T	I	05 SLO 101 000.680 - 05 SLO 101 000.681	01-JAN-15	31-DEC-17	N	L						N	N	N
6 8	R	T	I	05 SLO 101 001.002 - 05 SLO 101 001.003	01-JAN-15	31-DEC-17	N	L						N	N	N
6 9	R	T	I	05 SLO 101 000.670 - 05 SLO 101 000.671	01-JAN-15	31-DEC-17	N	L						N	N	N
6 10	R	T	I	05 SLO 101 000.980 - 05 SLO 101 000.981	01-JAN-15	31-DEC-17	N	L						N	N	N
8 1	I	T	I	06 KER 166 004.980 - 06 KER 166 004.981	01-JAN-15	31-DEC-17	N	L						N	N	N

Event Log:

Job id is : 43409 Accidents Table B Request sb-slo-kern-101-166-33 Submitted by T5ETOYAM

05 SLO 101 .68 - 05 SLO 101 .681 01/01/2015 TO 12/31/2017

05 SLO 101 1.002 - 05 SLO 101 1.003 01/01/2015 TO 12/31/2017

05 SLO 101 .67 - 05 SLO 101 .671 01/01/2015 TO 12/31/2017

05 SLO 101 .98 - 05 SLO 101 .981 01/01/2015 TO 12/31/2017

05 SB 101 88.49 - 05 SB 101 88.491 01/01/2015 TO 12/31/2017

05 SB 101 88.78 - 05 SB 101 88.781 01/01/2015 TO 12/31/2017

05 SB 101 88.468 - 05 SB 101 88.469 01/01/2015 TO 12/31/2017

05 SB 101 88.772 - 05 SB 101 88.773 01/01/2015 TO 12/31/2017

06 KER 166 4.98 - 06 KER 166 4.981 01/01/2015 TO 12/31/2017
05 SB 101 86.47 - 05 SB 101 86.471 01/01/2015 TO 12/31/2017
05 SB 101 86.69 - 05 SB 101 86.691 01/01/2015 TO 12/31/2017
05 SB 101 86.45 - 05 SB 101 86.451 01/01/2015 TO 12/31/2017
05 SB 101 86.7 - 05 SB 101 86.701 01/01/2015 TO 12/31/2017

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description	Rate Group (RUS)	No. of Accidents / Significance									Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Actual Fat	Actual F+I				Tot	Average Fat	Average F+I	Tot		
05 SB 101 086.470 101/NB OFF TO BETTERAVIA RD 0003-0005 2015-01-01 2017-12-31 36 mo.	R 10 U	4	0	0	0	4	1	0	0	0	4.8 .0	5.28 +	0.000	.00	.76	0.004	.32	.92	
05 SB 101 086.690 101/NB ON FROM BETTERAVIA R 0003-0006 2015-01-01 2017-12-31 36 mo.	R 12 U	6	0	1	1	6	1	1	0	1	10.0 .0	10.93 +	0.000	.09	.55	0.002	.21	.60	
05 SB 101 086.450 101/SB ON FROM BETTERAVIA R 0003-0007 2015-01-01 2017-12-31 36 mo.	R 12 U	2	0	1	1	2	0	1	0	1	4.3 .0	4.75 +	0.000	.21	.42	0.002	.21	.60	
05 SB 101 086.700 101/SB OFF TO BETTERAVIA RD 0003-0008 2015-01-01 2017-12-31 36 mo.	R 10 U	28	0	5	5	26	2	4	0	5	10.0 .0	10.97 +	0.000	.46	2.55	0.004	.32	.92	
05 SB 101 088.490 101/NB OFF TO RTE 166 MAIN 0004-0005 2015-01-01 2017-12-31 36 mo.	R 10 U	7	0	0	0	5	0	3	0	0	8.0 .0	8.81 +	0.000	.00	.79	0.004	.32	.92	
05 SB 101 088.780 101/NB ON FROM RTE 166 MAIN 0004-0006 2015-01-01 2017-12-31 36 mo.	R 12 U	12	0	3	3	10	3	5	0	5	5.5 .0	6.00 +	0.000	.50	2.00	0.002	.21	.60	
05 SB 101 088.468 101/SB ON FR RTE 166/MAIN 0004-0007 2015-01-01 2017-12-31 36 mo.	R 28 U	1	0	0	0	1	0	0	0	0	7.6 .0	8.28 +	0.000	.00	.12	0.001	.14	.48	
05 SB 101 088.772 101/166/E MAIN ST, SB OFF 0004-0008 2015-01-01 2017-12-31 36 mo.	R 54 U	4	0	1	1	3	0	0	0	1	6.3 .0	6.92 +	0.000	.14	.58	0.003	.24	.68	
05 SLO 101 000.680 101/NB OFF TO N JCT 166 0006-0007 2015-01-01 2017-12-31 36 mo.	R 54 U	0	0	0	0	0	0	0	0	0	6.2 .0	6.83 +	0.000	.00	.00	0.003	.24	.68	
05 SLO 101 001.002 101/NB ON FR RTE 166 0006-0008 2015-01-01 2017-12-31 36 mo.	R 56 U	0	0	0	0	0	0	0	0	0	.8 .0	.88 +	0.000	.00	.00	0.002	.16	.47	
05 SLO 101 000.670 101/SB ON FROM N JCT 166 0006-0009 2015-01-01 2017-12-31 36 mo.	R 12 U	5	0	2	2	1	0	2	0	2	6.8 .0	7.42 +	0.000	.27	.67	0.002	.21	.60	
05 SLO 101 000.980 101/SB OFF TO N JCT 166 0006-0010 2015-01-01 2017-12-31 36 mo.	R 10 U	1	0	1	1	1	0	0	0	1	1.0 .0	1.14 +	0.000	.88	.88	0.004	.32	.92	

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

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California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description					Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
						Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	Actual F+I	Tot	Average Fat	Average F+I	Average Tot
06 KER 166 004.980 BASIC SCHOOL ROAD,	0008-0001	2015-01-01	2017-12-31	36 mo.	I 17 R	2	0	1	1	1	0	1	0 5	3.3 .1	3.75 +	0.000	.27	.53	0.003	.07	.16

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 4038875

Request Name: sb-slo-kern-101-166-33

Ref Date: 08/27/2018

Request- & Line	L O C	D I R	L S C	Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
2 5	H	T	I	05 SLO 166 008.927 - 05 SLO 166 074.628	01-JAN-15	31-DEC-17	N	L						N	N	Y
2 6	H	T	I	05 SLO 033 002.691 - 05 SLO 033 004.951	01-JAN-15	31-DEC-17	N	L						N	N	Y
2 7	H	T	I	06 KER 033 000.000 - 06 KER 033 R011.555	01-JAN-15	31-DEC-17	N	L						N	N	Y
2 8	H	T	I	06 KER 166 000.010 - 06 KER 166 004.980	01-JAN-15	31-DEC-17	N	L						N	N	Y

Event Log:

Job id is : 43414 Accidents Table B Request sb-slo-kern-101-166-33 Submitted by T5ETOYAM
 05 SLO 166 8.927 - 05 SLO 166 74.628 01/01/2015 TO 12/31/2017
 05 SLO 033 2.691 - 05 SLO 033 4.951 01/01/2015 TO 12/31/2017
 06 KER 033 0 - 06 KER 033 R 11.555 01/01/2015 TO 12/31/2017
 06 KER 166 .01 - 06 KER 166 4.98 01/01/2015 TO 12/31/2017

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description			Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates						
				Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	Actual F+I	Tot	Average Fat	F+I	Tot	
05 SLO 166 008.927 - 05 SLO 166 074.627	0002-0005	2015-01-01	2017-12-31	62.165 MI H 36 mo. R	167	10	71	81	57	15	74	13 119	3.0	204.40	0.049	.40	.82	0.019	.30	.70
05 SLO 033 002.691 - 05 SLO 033 004.950	0002-0006	2015-01-01	2017-12-31	2.233 MI H 36 mo. R	10	1	3	4	6	0	4	1 4	3.8	9.38	0.107	.43	1.07	0.021	.30	.68
06 KER 033 000.000 - 06 KER 033 R011.554	0002-0007	2015-01-01	2017-12-31	11.555 MI H 36 mo. NA	40	3	15	18	22	6	17	3 26	3.8	48.12	0.062	.37	.83	0.022	.44	.98
06 KER 166 000.010 - 06 KER 166 004.979	0002-0008	2015-01-01	2017-12-31	4.970 MI H 36 mo. NA	13	1	8	9	5	1	3	1 13	3.0	16.34	0.061	.55	.80	0.017	.33	.76

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 4039386

Request Name: CPRA SB 101 Refugio Ramps ATE

Ref Date: 08/29/2018

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	05 SB 101 R036.243 - 05 SB 101 R036.889	01-JAN-15	31-DEC-17	N	L						N	N	N

Event Log:

Job id is : 43693 Accidents Table B Request CPRA SB 101 Refugio Ramps ATE Submitted by T5SCADEN
05 SB 101 R 36.243 - 05 SB 101 R 36.889 01/01/2015 TO 12/31/2017

California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description				Rate Group (RUS)	No. of Accidents / Significance						Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
					Tot	Fat	Inj	F+I	Multi Veh	Wet				Dark	Fat	Actual F+I	Tot	Fat	F+I
05 SB 101 R036.243	101/SB ON FR REFUGIO			R 19	0	0	0	0	0	0	0	.3	.35 +	0.000	.00	.00	0.006	.17	.43
0001-0001	2015-01-01	2017-12-31	36 mo.	R							0	.0							
05 SB 101 R036.380	101/NB OFF TO REFUGIO			R 09	0	0	0	0	0	0	0	.3	.29 +	0.000	.00	.00	0.010	.33	.98
0001-0001	2015-01-01	2017-12-31	36 mo.	R							0	.0							
05 SB 101 R036.513	101/SB OFF TO REFUGIO			R 21	0	0	0	0	0	0	0	.2	.23 +	0.000	.00	.00	0.007	.51	1.48
0001-0001	2015-01-01	2017-12-31	36 mo.	R							0	.0							
05 SB 101 R036.888	101/NB ON FR REFUGIO			R 11	1	0	1	1	1	0	0	.2	.26 +	0.000	3.85	3.85	0.005	.17	.50
0001-0001	2015-01-01	2017-12-31	36 mo.	R							1	.0							

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected}^{1/2})) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - US 101 - REFUGIO RD I/C TO SR 246 I/C (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{26600 \times 1095 \times 0.53 \times 20.32}{1000000} = 313.686$$

$$\text{Number Significant} = 360.639$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected}^{1/2})) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - US 101 SB OFF-RAMP FROM BETTERAVIA RD (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{10970 \times 1095 \times 0.92 \times 1}{1000000} = 11.0512$$

$$\text{Number Significant} = 20.9437$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - US 101 - BETTERAVIA RD I/C TO SB/SLO COUNTY LINE (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{65300 \times 1095 \times 0.55 \times 4.4}{1000000} = 173.038$$

$$\text{Number Significant} = 208.253$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - US 101 - SB/SLO COUNTY LINE TO SR 166 I/C (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{71600 \times 1095 \times 0.51 \times 0.813}{1000000} = 32.5078$$

$$\text{Number Significant} = 48.524$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - SR 166 - US 101 TO SR 33 SOUTH JUNCTION (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{3000 \times 1095 \times 0.7 \times 62.165}{1000000} = 142.948$$

$$\text{Number Significant} = 175.076$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - SR 33 - SR 166 SOUTH JUNCTION to KERN COUNTY LINE (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{3800 \times 1095 \times 0.68 \times 2.233}{1000000} = 6.31823$$

$$\text{Number Significant} = 14.1223$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - SR 33 - SR 166 NORTH JUNCTION to BASIC SCHOOL ROAD (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{3000 \times 1095 \times 0.76 \times 4.97}{1000000} = 12.4081$$

$$\text{Number Significant} = 22.8111$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - US 101 SB ON-RAMP AT SR 166 I/C (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{6800 \times 1095 \times 0.6 \times 1}{1000000} = 4.4676$$

$$\text{Number Significant} = 11.2414$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - SR 166/BASIC SCHOOL ROAD INTERSECTION (January 1, 2015 through December 31, 2015)

$$\text{Number Expected} = \frac{3400 \times 1095 \times 0.16 \times 1}{1000000} = 0.59568$$

$$\text{Number Significant} = 3.91284$$

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for roadway segments.

CALCULATIONS - US 101 NB ON-RAMP FROM REFUGIO RD (January 1, 2015 through December 31, 2017)

$$\text{Number Expected} = \frac{200 \times 1095 \times 0.5 \times 1}{1000000} = 0.1095$$

$$\text{Number Significant} = 2.29092$$

Appendix D.2

Traffic and Circulation Study Addendum



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Since 1978

Richard L. Pool P.E.
Scott A. Schell, AICP PTP

November 19, 2019

17092L05

Patrice Surmeier, P.E.
Regulatory Restart Lead
ExxonMobil SYU Regulatory Compliance Group
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EXXONMOBIL INTERIM TRUCKING PERMIT: TRAFFIC STUDY ADDENDUM

Associated Transportation Engineers (ATE) prepared a traffic and circulation study in January 2018 for the ExxonMobil Interim Trucking Permit Project. That study was reviewed and commented upon by County and Caltrans staffs as part of the processing for the Administrative Draft EIR. That study was revised to address the comments and the revised report was published in February 2019 and included in the Draft Supplemental Environmental Impact Report - ExxonMobil Interim Trucking for SYU Phased Restart. Caltrans then reviewed the draft SEIR and provided additional comments. As requested by the County on October 15, 2019, ATE is providing the attached Addendum 1 to the Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project which provides information to address the Caltrans comments.

Associated Transportation Engineers

Dan Dawson
Supervising Transportation Planner

SAS/DLD

Attachments

Addendum 1
Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project

US 101/SR 166 Interchange Analyses (Updated)

Caltrans requested that the level of service analysis for the US 101/SR 166 interchange be updated with new traffic counts and recommended using the SYNCHRO software program for the level of service calculations in order to account for the interchange configuration with multi-legged intersections.

Caltrans provided new traffic counts for the interchange that were collected in May 2019. The new counts show an early morning peak hour from 5:30-6:30 AM – which is prior to the AM commuter period that typically occurs during the 7:00-9:00 AM period (and was analyzed in the ExxonMobil traffic study dated February 19, 2019). Levels of service were calculated using the Caltrans recommended SYNCHRO software program for the 5:30-6:30 AM peak hour as well as for the 7:00-9:00 AM and 4:00-6:00 PM peak commuter periods. Tables 1, 2 and 3 compare the Baseline and Baseline + Project delays and levels of service for the US 101/SR 166 intersections based on the SYNCHRO program (level of service worksheets attached for reference). The tables as identify the Project's traffic additions (in PCEs) and the significance of the Project's traffic additions based on Santa Barbara County and Caltrans impact criteria.

Table 1
US 101/SR 166 LOS – CALTRANS SYNCHRO MODEL – 5:30-6:30 AM

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/SR 166	> 50 Sec./LOS F	> 50 Sec./LOS F	12	YES
US 101 SB/SR 166				
WB Left Turn	7.9 Sec./LOS A	7.9 Sec./LOS A	6	NO
SB Left+ Thru + Right	20.3 Sec./LOS C	20.3 Sec./LOS C		
Intersection Average:	11.0 Sec./LOS B	11.0 Sec./LOS B		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using Caltrans impact threshold, which is the addition of 1 or more trips for intersections forecast to operate at LOS D, E or F.

As shown in Table 1, the US 101 NB Ramps/SR 166 intersection operates at LOS F during the 5:30-6:30 AM peak hour period. The Project would add 12 PCEs to the US 101 NB Ramps/SR 166 intersection during the 5:30-6:30 AM period, a potential significant impact according to County and Caltrans impact criteria.

Addendum 1
Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project

Table 2
US 101/SR 166 LOS – CALTRANS SYNCHRO MODEL – 7:00-9:00 AM

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/SR 166	11.3 Sec./LOS B	11.4 Sec./LOS B	12	NO
US 101 SB/SR 166				
WB Left Turn	9.6 Sec./LOS A	9.6 Sec./LOS A	6	NO
SB Left+ Thru + Right	21.5 Sec./LOS C	22.1 Sec./LOS C		
Intersection Average:	11.4 Sec./LOS B	11.6 Sec./LOS B		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using Caltrans impact threshold, which is the addition of 1 or more trips for intersections forecast to operate at LOS D, E or F.

As shown in Table 2, the US 101/SR 166 intersections operate at LOS B during the 7:00-9:00 AM peak commuter period based on the SYNCHRO software program recommended by Caltrans. The Project's additions would be less than significant since the interchange operates at LOS C or better, which meets the County and Caltrans LOS C standard.

Table 3
US 101/SR 166 LOS – CALTRANS SYNCHRO MODEL – 4:00-6:00 PM

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/SR 166	23.7 Sec./LOS C	23.8 Sec./LOS C	12	NO
US 101 SB/SR 166				
WB Left Turn	9.4 Sec./LOS A	9.5 Sec./LOS A	6	YES
SB Left+ Thru + Right	38.4 Sec./LOS E	40.0 Sec./LOS E		
Intersection Average:	17.3 Sec./LOS C	17.6 Sec./LOS C		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using Caltrans impact threshold, which is the addition of 1 or more trips for intersections forecast to operate at LOS D, E or F.

As shown in Table 3, the southbound off-ramp approach at the US 101 SB/SR 166 intersection operates at LOS E during the peak 1-hour within the 4:00-6:00 PM peak commuter period with Baseline and Baseline + Project traffic. The Caltrans traffic counts show that the overall peak 1-hour period occurs from 4:00-5:00 PM. The Project would add 6 PCEs to the intersection during the 4:00-5:00 PM hour, a potential significant impact according to Caltrans impact criteria.

Addendum 1
Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project

US 101/El Capitan Interchange Analyses (New)

The applicant is planning to route trucks to the US 101/El Capitan interchange during periods when the US 101/Refugio Road ramps are closed by Caltrans for the US 101/Refugio Road improvement project (Caltrans currently does not have fixed construction dates). County staff requested traffic counts and level of service analysis at the US 101/El Capitan interchange to determine potential impacts by trucks using the interchange during periods when the ramps at US 101/Refugio Road interchange are closed by Caltrans for the interchange improvements.

Levels of Service & Potential Impacts. Traffic counts were collected at the US 101/El Capitan interchange during the midweek in September 2019 as well as during the July 4th, 2019 holiday period in order to assess potential impacts.

Tables 4 and 5 list the Baseline and Baseline + Project delays and levels of service for the US 101/El Capitan interchange for the weekday AM and PM peak periods; and Tables 6 and 7 list the Baseline and Baseline + Project delays and levels of service for the July 4th holiday period (worksheets showing the traffic volumes and level of service calculations are attached). The tables also identify the Project's traffic additions (in PCEs) and the significance of the Project's traffic additions based on County and Caltrans impact criteria.

Table 4
US 101/El Capitan Interchange
Baseline + Project Impacts – AM Peak Hour – Non-Holiday Weekday

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/Calle Real NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	6	NO
US 101 SB/Beach Access Rd				
NB Left Turn	7.2 Sec./LOS A	7.2 Sec./LOS A	6	NO
SB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A		
WB Left+ Thru+ Right	8.7 Sec./LOS A	8.8 Sec./LOS A		
Intersection Average:	7.9 Sec./LOS A	8.1 Sec./LOS A		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using County and Caltrans impact thresholds.

Addendum 1
Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project

Table 5
US 101/El Capitan Interchange
Baseline + Project Impacts – PM Peak Hour – Non-Holiday Weekday

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/Calle Real NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	6	NO
US 101 SB/Beach Access Rd NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	6	NO
SB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A		
WB Left+ Thru + Right	8.9 Sec./LOS A	9.1 Sec./LOS A		
Intersection Average:	7.8 Sec./LOS A	8.0 Sec./LOS A		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using County and Caltrans impact thresholds.

Table 6
US 101/El Capitan Interchange
Baseline + Project Impacts – AM Peak Hour – July 4th Holiday

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/Calle Real NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	6	NO
US 101 SB/Beach Access Rd NB Left Turn	7.3 Sec./LOS A	7.2 Sec./LOS A	6	NO
SB Left Turn	7.4 Sec./LOS A	7.3 Sec./LOS A		
WB Left+ Thru + Right	9.0 Sec./LOS A	9.2 Sec./LOS A		
Intersection Average:	8.0 Sec./LOS A	8.2 Sec./LOS A		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using County and Caltrans impact thresholds.

Addendum 1
Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project

Table 7
US 101/El Capitan Interchange
Baseline + Project Impacts – PM Peak Hour – July 4th Holiday

Intersection	Delay / LOS		Project Added	
	Baseline	Baseline + Project	PCEs(a)	Significant Impact?(b)
US 101 NB/Calle Real NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	6	NO
US 101 SB/Beach Access Rd NB Left Turn	7.3 Sec./LOS A	7.3 Sec./LOS A	6	NO
SB Left Turn	7.4 Sec./LOS A	7.4 Sec./LOS A		
WB Left + Thru + Right	9.0 Sec./LOS A	9.1 Sec./LOS A		
Intersection Average:	8.4 Sec./LOS A	8.6 Sec./LOS A		

(a) Project Added PCEs: 2 PCEs per truck (flat terrain).

(b) Significant Impact determined using County and Caltrans impact thresholds.

As shown in Tables 4-7, the US 101/El Capitan interchange operates at LOS A during the AM and PM peak hour periods with Baseline and Baseline + Project traffic during the typical midweek period as well as during the July 4th holiday period, which meet the County and Caltrans standards. Thus, the Project would not significantly impact the US 101/El Capitan interchange during periods when the US 101/Refugio Road ramps are closed by Caltrans.

Accident Analysis. The County requested an accident analysis for the US 101/El Capitan interchange. Accident data was obtained from Caltrans for the most current three-year period on file – which is from September 1, 2016 through August 31, 2019 (Caltrans accident data in attached for reference).

It is important to note that Caltrans uses accident data as a screening tool to identify potential safety problems on the State highway system. The accident analysis is a two-stop process. The first step is to calculate the rate of accidents and then compare the accident rate to California statewide averages for similar facilities. By nature, accident rates experienced on a specific facility are lower than and higher than the statewide average rate for similar facilities since statewide averages are comprised of lower-than-average rates + higher-than-average rates = average. The second step applies to locations where accident rates are higher than the statewide average to determine if the number of accidents is significant and requires further investigation. If the accident rate experienced on a facility is higher than the statewide average, the Caltrans significance test is performed to determine if the number of accidents that occurred is statistically significant. If the number of accidents experienced is statistically significant, then more detailed safety investigations are performed to determine if there are accident patterns that can be corrected by changing design features of the facility (e.g. widen traffic lanes, widen roadway shoulders, improve sight distances, change roadway curvatures, add signs, install traffic signals, etc.).

Addendum 1
Final Traffic and Circulation Study ExxonMobil Interim Trucking Permit Project

Table 8 lists the accident rates for the US 101/El Capitan interchange. The text following the table discusses the rate of accidents and the need for detailed safety investigations to identify correctable accident patterns.

Table 8
Accident Rates – US 101/El Capitan Interchange

US 101 Ramp	Accident Rate(a)	Statewide Average Rate(b)
US 101 NB On-Ramp	0.00	0.41
US 101 NB Off-Ramp	0.00	0.49
US 101 SB On-Ramp	0.00	0.50
US 101 SB Off-Ramp	4.72	0.49

(a) Actual rate of accidents per million vehicle miles.

(b) California statewide average rate for similar facilities.

As shown in Table 8, the rate of accidents on 3 of the 4 ramps was 0.00 (there were no reported accidents on these ramps during the 3-year period) and the rates are below the statewide averages for similar facilities. As shown, the rate of accidents on the US 101 Southbound Off-Ramp is higher than the California statewide average for similar facilities (Accident Rate = 4.72; Statewide Avenue Rate = 0.49).

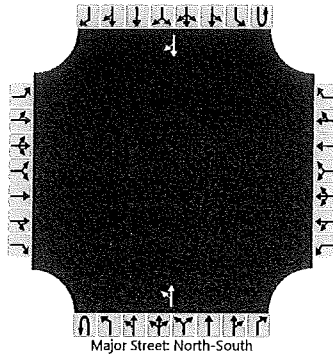
The US 101 Southbound Off-Ramp carries a low traffic volume (210 vehicles per day) which triggers the higher-than-average accident rate for the ramp. One accident occurred on the US 101 Southbound Off-Ramp during the 3-year reporting period, which was a motorcycle that overturned on the off-ramp due to speeding and the driver was injured. The accident occurred at 11 PM on a Sunday night. The Caltrans significance test was performed to determine if the number of accidents is significant (see attached worksheet showing the Caltrans significance test). The results show that the number of accidents required to be statistically significant is 2 accidents within the 3-year period (more than the 1 accident that occurred). Thus, further investigation is not warranted since the number of accidents that occurred is less than significant.

HCS7 Two-Way Stop-Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/CALLE REAL
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 NB ON-RAMP
Analysis Year		North/South Street	CALLE REAL
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.77
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										5	23				11	1
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

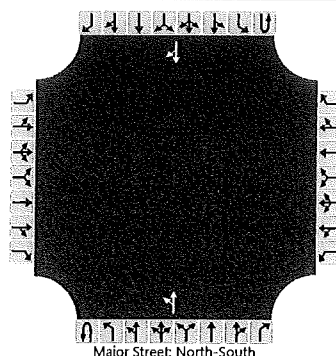
Flow Rate, v (veh/h)										6						
Capacity, c (veh/h)										1596						
v/c Ratio										0.00						
95% Queue Length, Q ₉₅ (veh)										0.0						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									1.3							
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/CALLE REAL
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 NB ON-RAMP
Analysis Year		North/South Street	CALLE REAL
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.77
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE + PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										5	29				11	7
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

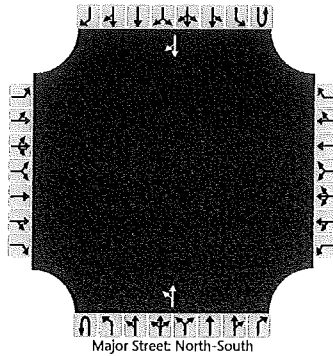
Flow Rate, v (veh/h)										6						
Capacity, c (veh/h)										1585						
v/c Ratio										0.00						
95% Queue Length, Q ₉₅ (veh)										0.0						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									1.1							
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/CALLE REAL
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 NB ON-RAMP
Analysis Year		North/South Street	CALLE REAL
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.84
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										13	19				24	1
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

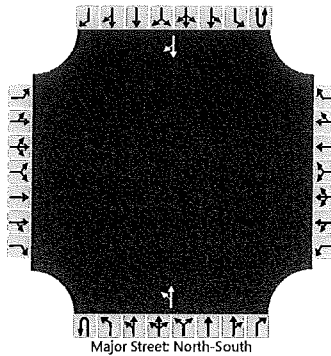
Flow Rate, v (veh/h)										15						
Capacity, c (veh/h)										1577						
v/c Ratio										0.01						
95% Queue Length, Q ₉₅ (veh)										0.0						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									3.0							
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information

Analyst	DLD	Intersection	US 101 NB/CALLE REAL
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 NB ON-RAMP
Analysis Year		North/South Street	CALLE REAL
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.84
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE + PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										13	25				24	7
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

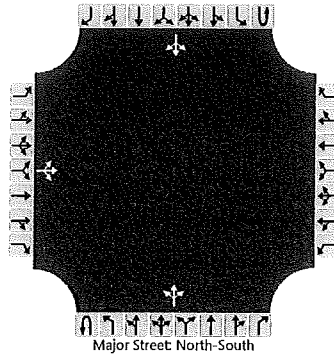
Flow Rate, v (veh/h)										15						
Capacity, c (veh/h)										1567						
v/c Ratio										0.01						
95% Queue Length, Q ₉₅ (veh)										0.0						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									2.6							
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information

Analyst	DLD	Intersection	US 101 SB/BEACH ACCESS
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 SB RAMPS
Analysis Year		North/South Street	BEACH ACCESS ROAD
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.78
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		4	1	8						0	6	15		18	5	2
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			17							0				23		
Capacity, c (veh/h)			990							1604				1580		
v/c Ratio			0.02							0.00				0.01		
95% Queue Length, Q ₉₅ (veh)			0.1							0.0				0.0		
Control Delay (s/veh)			8.7							7.2				7.3		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	8.7								0.0				5.3			
Approach LOS	A															

AWD = 7.9 SEC = LOS A

HCS7 Two-Way Stop-Control Report

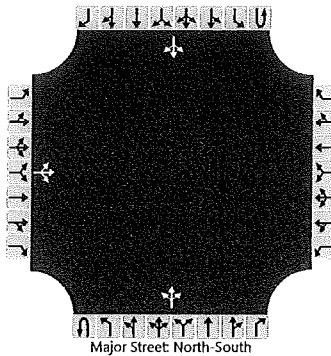
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/1/2019
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE + PROJECT

Site Information

Intersection	US 101 SB/BEACH ACCESS
Jurisdiction	SB COUNTY
East/West Street	US 101 SB RAMPS
North/South Street	BEACH ACCESS ROAD
Peak Hour Factor	0.78
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		10	1	8						0	6	15		18	5	2
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

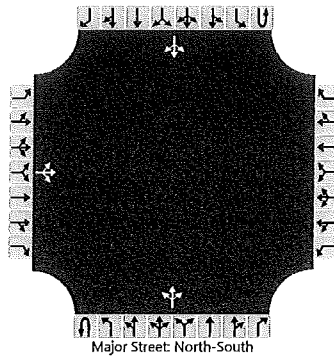
Flow Rate, v (veh/h)			24							0				23		
Capacity, c (veh/h)			962							1604				1580		
v/c Ratio			0.03							0.00				0.01		
95% Queue Length, Q ₉₅ (veh)			0.1							0.0				0.0		
Control Delay (s/veh)			8.8							7.2				7.3		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	8.8								0.0				5.3			
Approach LOS	A															

AWD = 8.1 SEC = LOS A

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	US 101 SB/BEACH ACCESS
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 SB RAMPS
Analysis Year		North/South Street	BEACH ACCESS ROAD
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		8	0	5						0	10	12		28	17	1
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

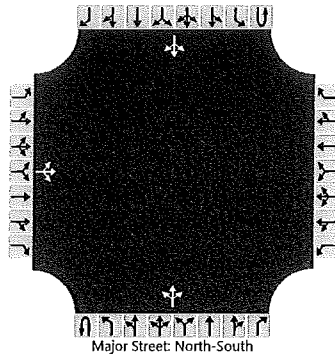
Flow Rate, v (veh/h)			15							0				31		
Capacity, c (veh/h)			929							1589				1583		
v/c Ratio			0.02							0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.0							0.0				0.1		
Control Delay (s/veh)			8.9							7.3				7.3		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	8.9								0.0				4.5			
Approach LOS	A															

Handwritten: $AWD = 7.8 \text{ Sec} = LOS A$

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	US 101 SB/BEACH ACCESS
Agency/Co.	ATE	Jurisdiction	SB COUNTY
Date Performed	11/1/2019	East/West Street	US 101 SB RAMPS
Analysis Year		North/South Street	BEACH ACCESS ROAD
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	BASELINE + PROJECT		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		14	0	5						0	10	12		28	17	1
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			21							0				31		
Capacity, c (veh/h)			908							1589				1583		
v/c Ratio			0.02							0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.1							0.0				0.1		
Control Delay (s/veh)			9.1							7.3				7.3		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	9.1								0.0				4.5			
Approach LOS	A															

AWD = 8.0 Sec = LOS A

DEFINITIONS

$$\text{Number Expected} = \frac{\text{ADT} \times \text{Time} \times \text{Rate Expected} \times \text{Length}}{1000000}$$

$$\text{Number Significant} = \text{Number Expected} + (2.576 \times (\text{Number Expected})^{1/2}) + 1.329$$

NOTES: Number Significant using 99.5% confidence level.

For intersections & ramps, use annual number of entering vehicles in place of ADT and delete length. The NR is the same as for highway segments.

CALCULATIONS - US 101 SB OFF-RAMP to EI CAPITAN (September 1, 2016 through August 31, 2019)

$$\text{Number Expected} = \frac{210 \times 1095 \times 0.49 \times 1}{1000000} = 0.11268$$

$$\text{Number Significant} = 2.30637$$

HCS7 Two-Way Stop-Control Report

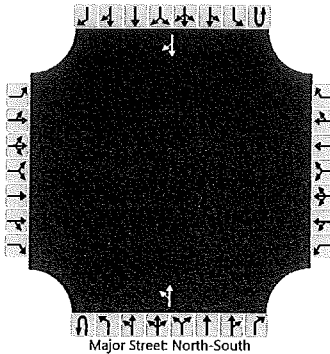
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/18/19
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE CONDITIONS - JULY 4TH WEEKEND

Site Information

Intersection	US 101 NB/CALLE REAL
Jurisdiction	SB COUNTY
East/West Street	US 101 NB ON-RAMP
North/South Street	CALLE REAL
Peak Hour Factor	0.77
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										16	15				21	2
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)										21						
Capacity, c (veh/h)										1577						
v/c Ratio										0.01						
95% Queue Length, Q ₉₅ (veh)										0.0						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									3.8							
Approach LOS																

HCS7 Two-Way Stop-Control Report

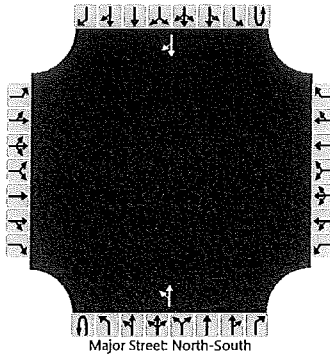
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/18/19
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE + PROJECT - JULY 4TH WEEKEND

Site Information

Intersection	US 101 NB/CALLE REAL
Jurisdiction	SB COUNTY
East/West Street	US 101 NB ON-RAMP
North/South Street	CALLE REAL
Peak Hour Factor	0.77
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										16	21				21	8
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)										21						
Capacity, c (veh/h)										1566						
v/c Ratio										0.01						
95% Queue Length, Q ₉₅ (veh)										0.0						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									3.2							
Approach LOS																

HCS7 Two-Way Stop-Control Report

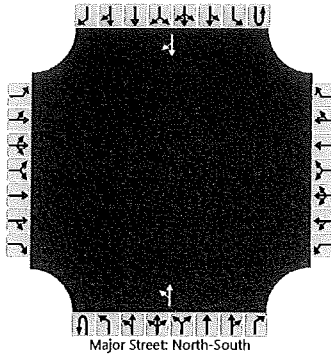
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/1/2019
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE CONDITIONS - JULY 4TH WEEKEND

Site Information

Intersection	US 101 NB/CALLE REAL
Jurisdiction	SB COUNTY
East/West Street	US 101 NB ON-RAMP
North/South Street	CALLE REAL
Peak Hour Factor	0.84
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										27	36				21	4
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)										4.1						
Critical Headway (sec)										4.13						
Base Follow-Up Headway (sec)										2.2						
Follow-Up Headway (sec)										2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)										32						
Capacity, c (veh/h)										1577						
v/c Ratio										0.02						
95% Queue Length, Q ₉₅ (veh)										0.1						
Control Delay (s/veh)										7.3						
Level of Service (LOS)										A						
Approach Delay (s/veh)									3.2							
Approach LOS																

HCS7 Two-Way Stop-Control Report

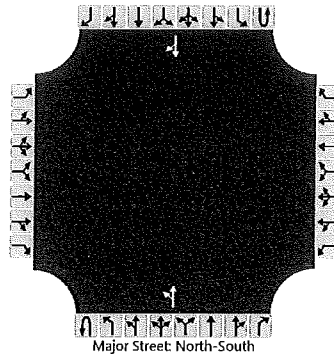
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/1/2019
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE + PROJECT - JULY 4TH WEEKEND

Site Information

Intersection	US 101 NB/CALLE REAL
Jurisdiction	SB COUNTY
East/West Street	US 101 NB ON-RAMP
North/South Street	CALLE REAL
Peak Hour Factor	0.84
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration										LT						TR
Volume (veh/h)										27	42				21	10
Percent Heavy Vehicles (%)										3						
Proportion Time Blocked																
Percent Grade (%)																
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)									4.1							
Critical Headway (sec)									4.13							
Base Follow-Up Headway (sec)									2.2							
Follow-Up Headway (sec)									2.23							

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)									32							
Capacity, c (veh/h)									1567							
v/c Ratio									0.02							
95% Queue Length, Q ₉₅ (veh)									0.1							
Control Delay (s/veh)									7.3							
Level of Service (LOS)									A							
Approach Delay (s/veh)									3.0							
Approach LOS																

HCS7 Two-Way Stop-Control Report

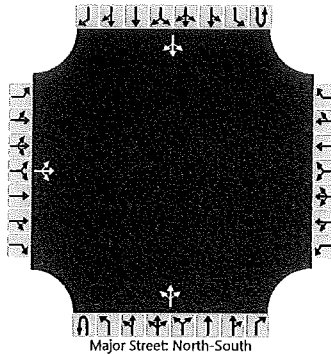
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/1/2019
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE CONDITIONS - JULY 4TH WEEKEND

Site Information

Intersection	US 101 SB/BEACH ACCESS
Jurisdiction	SB COUNTY
East/West Street	US 101 SB RAMPS
North/South Street	BEACH ACCESS ROAD
Peak Hour Factor	0.78
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		2	3	8						0	14	21		25	25	3
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			17							0				32		
Capacity, c (veh/h)			913							1569				1557		
v/c Ratio			0.02							0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.1							0.0				0.1		
Control Delay (s/veh)			9.0							7.3				7.4		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	9.0								0.0				3.6			
Approach LOS	A															

AWD = 8.0 sec = LOS A

HCS7 Two-Way Stop-Control Report

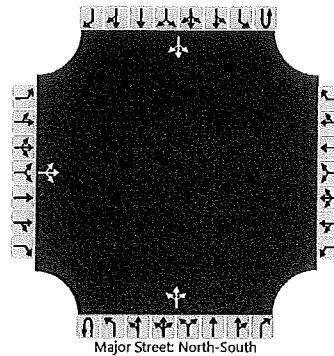
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/1/2019
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE + PROJECT - JULY 4TH WEEKEND

Site Information

Intersection	US 101 SB/BEACH ACCESS
Jurisdiction	SB COUNTY
East/West Street	US 101 SB RAMPS
North/South Street	BEACH ACCESS ROAD
Peak Hour Factor	0.78
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		8	3	8						0	14	21		25	25	3
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			24							0				32		
Capacity, c (veh/h)			884							1569				1557		
v/c Ratio			0.03							0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.1							0.0				0.1		
Control Delay (s/veh)			9.2							7.3				7.4		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	9.2								0.0				3.6			
Approach LOS	A															

$$Awd = 8.2 \text{ sec} = LOS A$$

HCS7 Two-Way Stop-Control Report

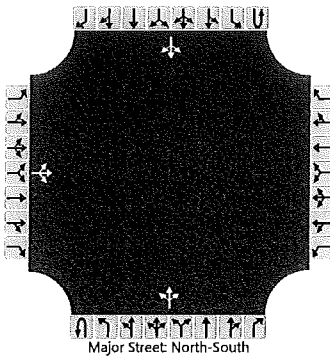
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/16/19
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE CONDITIONS - JULY 4TH WEEKEND

Site Information

Intersection	US 101 SB/BEACH ACCESS
Jurisdiction	SB COUNTY
East/West Street	US 101 SB RAMPS
North/South Street	BEACH ACCESS ROAD
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		8	0	33						1	22	32		21	53	1
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			46							1				24		
Capacity, c (veh/h)			956							1536				1536		
v/c Ratio			0.05							0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.2							0.0				0.0		
Control Delay (s/veh)			9.0							7.3				7.4		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	9.0								0.1				2.2			
Approach LOS	A															

AWD = 8.4 sec = LOS A

HCS7 Two-Way Stop-Control Report

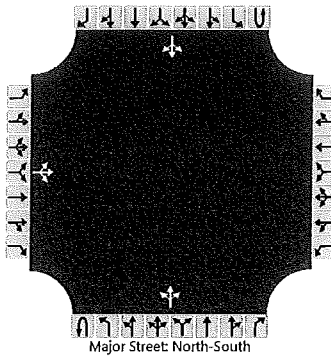
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	11/16/19
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	North-South
Project Description	BASELINE + PROJECT - JULY 4TH WEEKEND

Site Information

Intersection	US 101 SB/BEACH ACCESS
Jurisdiction	SB COUNTY
East/West Street	US 101 SB RAMPS
North/South Street	BEACH ACCESS ROAD
Peak Hour Factor	0.89
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LTR								LTR				LTR	
Volume (veh/h)		14	0	33						1	22	32		21	53	1
Percent Heavy Vehicles (%)		3	3	3						3				3		
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2						4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23						4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3						2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33						2.23				2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			53							1				24		
Capacity, c (veh/h)			933							1536				1536		
v/c Ratio			0.06							0.00				0.02		
95% Queue Length, Q ₉₅ (veh)			0.2							0.0				0.0		
Control Delay (s/veh)			9.1							7.3				7.4		
Level of Service (LOS)			A							A				A		
Approach Delay (s/veh)	9.1								0.1				2.2			
Approach LOS	A															

AWD = 8.6 SEC = LOS A

California Department of Transportation

OTM22130

Table B - Selective Accident Rate Calculation

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

1. TASAS - TSN has officially replaced the TASAS - "Legacy" database.
2. Reports from TSN are to be used and interpreted by the California Department of Transportation (Caltrans) officials or authorized representative.
3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

OTM22130

Table B - Selective Accident Rate Calculation

Report Parameters-

Event ID: 4163572

Request Name: R004292-102419_SB-101-EI Cap

Ref Date: 10/29/2019

Request- & Line	L D L O I S C R C			Route/Location	Begin Date	End Date	Rate Type	Out Seq	Override Rates			Override ADT		Req. Type	Com- bine?	Excl Ramp?
									Rate	Inj%	Fat%	Main	Cross			
1 1	R	T	I	05 SB 101 033.560 - 05 SB 101 034.201	01-SEP-16	31-AUG-19	N	L						N	N	N

Event Log:

Job id is : 119305 Accidents Table B Request R004292-102419_SB-101-EI Cap Submitted by T5MX/ONG
05 SB 101 33.56 - 05 SB 101 34.201 09/01/2016 TO 08/31/2019

Volume Information

Volume information is summarized for each request under the following headings.

A **ADT MAIN X—ST.** All **Average Daily Traffic (ADT)** figures shown in this column are to the 1000/s and are weighted averages for the time period. On highway segment requests the ADT value is the average ADT along the highway segment. For ramps the value is simply the ADT on the ramp. For intersections the top figure is the entering ADT on mainline (State Highway) while the bottom figure is the entering ADT on the cross street.

B **TOTAL MV+ OR MVM.** On intersections and ramps the figures represent **Million Vehicles (MV)** using the facility. On highway segments the figure represents the **Million Vehicle Miles (MVM)** of travel on the segment. Note: All MV data is indicated with a + following the value.

Rate Calculations.

For each request Table B lists the actual accident rates and the expected accident rates for the facility. Both the Actual and Average rates are listed under the following headings.

1

FAT. Fatal accident rate -the fatal accidents divided by the MV or MVM figures.

2

F+I. Fatal + Injury accident rate -the total of fatal and injury accidents divided by the MV or MVM figures.

3

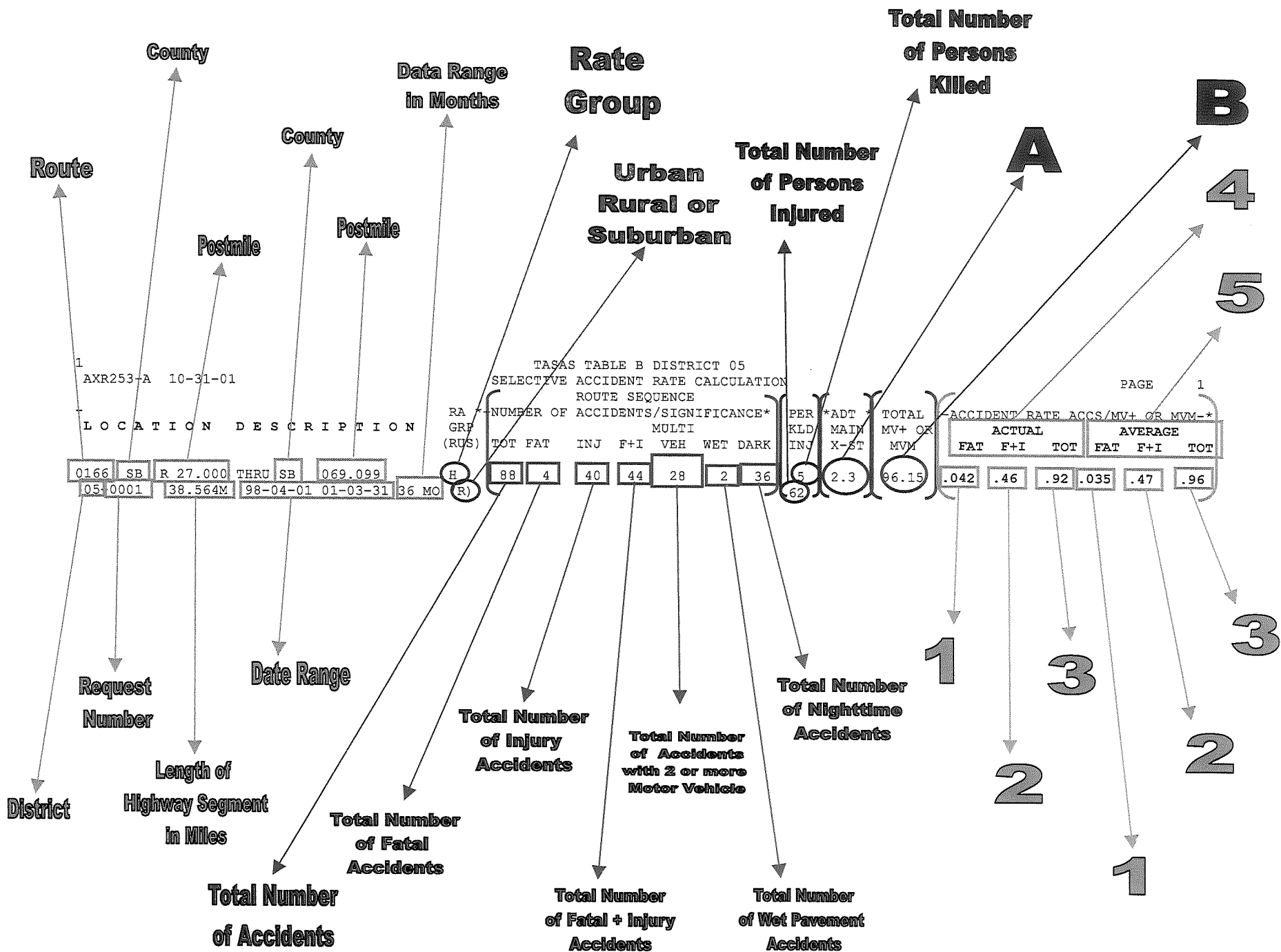
TOT. Total accident rate -the total number of accidents divided by the MV or MVM figures.

4

The **ACTUAL** accident rate is the actual accident rate for the highway segment listed on the Table B.

5

The **AVERAGE** accident rate is the rate for similar type of highway segments listed on the Table B with the same volumes.



California Department of Transportation
Table B - Selective Accident Rate Calculation

Location Description					Rate Group (RUS)	No. of Accidents / Significance							Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates					
						Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark				Fat	Actual F+I	Tot	Average Fat	Average F+I	Tot
05 SB 101 033.560 101/NB OFF TO EL CAPITAN	0001-0001	2016-09-01	2019-08-31	36 mo.	R 17 R	0	0	0	0	0	0	0	0	.5 .0	.58 +	0.000	.00	.00	0.007	.19	.49
05 SB 101 033.700 101/SB ON FROM EL CAPITAN	0001-0001	2016-09-01	2019-08-31	36 mo.	R 11 R	0	0	0	0	0	0	0	0	.5 .0	.58 +	0.000	.00	.00	0.005	.17	.50
05 SB 101 034.140 101/NB ON FROM EL CAPITAN	0001-0001	2016-09-01	2019-08-31	36 mo.	R 31 R	0	0	0	0	0	0	0	0	.2 .0	.20 +	0.000	.00	.00	0.006	.15	.41
05 SB 101 034.200 101/SB OFF TO EL CAPITAN	0001-0001	2016-09-01	2019-08-31	36 mo.	R 17 R	1	0	1	1	0	0	1	0	.2 .0	.21 +	0.000	4.72	4.72	0.007	.19	.49

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

Policy controlling the use of Traffic Accident Surveillance and Analysis System (TASAS) - Transportation Systems Network (TSN) Reports

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3. Electronic versions of these reports may be emailed between Caltrans' employees only using the State computer system.
4. The contents of these reports shall be considered confidential and may be privileged pursuant to 23 U.S.C. Section 409, and are for the sole use of the intended recipient(s). Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and destroy all copies of the original message. Do not print, copy or forward.

California Department of Transportation

OTM22215

TSAR - ACCIDENT SUMMARY

REPORT PARAMETERS:

REPORT DATE : 10/29/2019
REFERENCE DATE : 10/29/2019
SUBMITTOR : T5MXIONG
REPORT TITLE : ' R004292-102419_SB-101-E1 Capitan Ramps
EVENT ID : '
4163571

LOCATION CRITERIA:

FROM: 05-SB-101 033.560 TO: 05-SB-101 034.201

SELECTION CRITERIA:

1 1 AND 515 - INTRSRAMP ACC LOC IN 1,2,3,4

Accidents Date Range:

From -- 09/01/2016 To -- 08/31/2019

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - ACCIDENT SUMMARY
' R004292-102419_SB-101-El Capitan Ramps '

TOTAL ACCIDENTS 1	FATAL 0	INJURY 1	PDO 0	PERSONS KILLED INJURED 0 1		MOTOR VEHICLES INVOLVED NUMBER PCT 1 100.0		INVOLVED CODE 1	<---LINES CODED---> NUMBER PCT CODE		
						0	0.0	2	1	0.0	1
						0	0.0	3	1	100.0	2
						0	0.0	>3	0	0.0	3
						0	0.0		0	0.0	4
									0	0.0	5
									0	0.0	6
									0	0.0	7
									0	0.0	8
									0	0.0	9

<---- HOUR OF DAY ----> NUMBER PCT CODE			<--- ACCESS CONTROL ---> NUMBER PCT CODE			<--- SIDE OF HIGHWAY ---> NUMBER PCT CODE		
0	0.0	00- 12 MID.	0	0.0	C-CONVENTIONAL	0	0.0	N-NORTHBOUND
0	0.0	01- 1 A.M.	0	0.0	E-EXPRESSWAY	1	100.0	S-SOUTHBOUND
0	0.0	02- 2 A.M.	1	100.0	F-FREEWAY	0	0.0	E-EASTBOUND
0	0.0	03- 3 A.M.	0	0.0	S-1-WAY CITY ST	0	0.0	W-WESTBOUND
0	0.0	04- 4 A.M.	0	0.0	--INVALID DATA			
0	0.0	05- 5 A.M.	0	0.0	+--NO DATA			
0	0.0	06- 6 A.M.						
0	0.0	07- 7 A.M.						
0	0.0	08- 8 A.M.						
0	0.0	09- 9 A.M.						
0	0.0	10- 10 A.M.						
0	0.0	11- 11 A.M.						
0	0.0	12- 12 NOON						
0	0.0	13- 1 P.M.						
0	0.0	14- 2 P.M.						
0	0.0	15- 3 P.M.						
0	0.0	16- 4 P.M.						
0	0.0	17- 5 P.M.						
0	0.0	18- 6 P.M.						
0	0.0	19- 7 P.M.						
0	0.0	20- 8 P.M.						
0	0.0	21- 9 P.M.						
0	0.0	22- 10 P.M.						
1	100.0	23- 11 P.M.	1	100.0	2018	0	0.0	10-OCTOBER
0	0.0	25- UNKNOWN	0	0.0	2019	0	0.0	11-NOVEMBER
						0	0.0	12-DECEMBER

<----- YEAR -----> NUMBER PCT CODE			<----- MONTH -----> NUMBER PCT CODE			<----- DAY OF WEEK -----> NUMBER PCT CODE		
0	0.0	2009	0	0.0	01-JANUARY	1	100.0	1-SUNDAY
0	0.0	2010	0	0.0	02-FEBRUARY	0	0.0	2-MONDAY
0	0.0	2011	1	100.0	03-MARCH	0	0.0	3-TUESDAY
0	0.0	2012	0	0.0	04-APRIL	0	0.0	4-WEDNESDAY
0	0.0	2013	0	0.0	05-MAY	0	0.0	5-THURSDAY
0	0.0	2014	0	0.0	06-JUNE	0	0.0	6-FRIDAY
0	0.0	2015	0	0.0	07-JULY	0	0.0	7-SATURDAY
0	0.0	2016	0	0.0	08-AUGUST			
0	0.0	2017	0	0.0	09-SEPTEMBER			
0	0.0	2018	0	0.0	10-OCTOBER			
0	0.0	2019	0	0.0	11-NOVEMBER			
					12-DECEMBER			

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - ACCIDENT SUMMARY
'R004292-102419_SB-101-EI Capitan Ramps'

<-- PRIMARY COLLISION FACTOR -->		
NUMBER	PCT	CODE
0	0.0	1-INFLUENCE ALCOHOL
0	0.0	2-FOLLOW TOO CLOSE
0	0.0	3-FAILURE TO YIELD
0	0.0	4-IMPROPER TURN
1	100.0	5-SPEEDING
0	0.0	6-OTHER VIOLATIONS
0	0.0	B-IMPROPER DRIVING
0	0.0	C-OTHER THAN DRIVER
0	0.0	D-UNKNOWN
0	0.0	E-FELL SLEEP
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<--- TYPE OF COLLISION --->		
NUMBER	PCT	CODE
0	0.0	A-HEAD-ON
0	0.0	B-SIDESWIPE
0	0.0	C-REAR END
0	0.0	D-BROADSIDE
0	0.0	E-HIT OBJECT
1	100.0	F-OVERTURN
0	0.0	G-AUTO-PEDESTRIAN
0	0.0	H-OTHER
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<--- ROADWAY CONDITION --->		
NUMBER	PCT	CODE
0	0.0	A-HOLES, RUTS
0	0.0	B-LOOSE MATERIAL
0	0.0	C-OBSTRUCTION ON ROAD
0	0.0	D-CONSTRUCT-REPAIR-ZONE
0	0.0	E-REDUCED ROAD WIDTH
0	0.0	F-FLOODED
0	0.0	G-OTHER
1	100.0	H-NO UNUSUAL CONDITION
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- WEATHER ----->		
NUMBER	PCT	CODE
1	100.0	A-CLEAR
0	0.0	B-CLOUDY
0	0.0	C-RAINING
0	0.0	D-SNOWING
0	0.0	E-FOG
0	0.0	F-OTHER
0	0.0	G-WIND
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- LIGHTING ----->		
NUMBER	PCT	CODE
0	0.0	A-DAY LIGHT
0	0.0	B-DUSK/DAWN
0	0.0	C-DARK-STREET LIGHT
1	100.0	D-DARK-NO STREET LIGHT
0	0.0	E-DARK-INOPR STREET LIGHT
0	0.0	F-DARK-NOT STATED
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- ROAD SURFACE ----->		
NUMBER	PCT	CODE
1	100.0	A-DRY
0	0.0	B-WET
0	0.0	C-SNOWY, ICY
0	0.0	D-SLIPPERY
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- RIGHT OF WAY CONTROL ----->		
NUMBER	PCT	CODE
0	0.0	A-CONTROL FUNCTIONING
0	0.0	B-CONTROL NOT FUNCTIONING
0	0.0	C-CONTROLS OBSCURED
1	100.0	D-NO CONTROLS PRESENT
0	0.0	<-NOT STATED
0	0.0	-INVALID CODES

<----- HIGHWAY GROUP ----->		
NUMBER	PCT	CODE
0	0.0	R-IND. ALIGN RIGHT
0	0.0	L-IND. ALIGN LEFT
1	100.0	D-DIVIDED
0	0.0	U-UNDIVIDED

<- INTERSECTION/RAMP ACCIDENT LOCATION ->		
NUMBER	PCT	CODE
0	0.0	1-RAMP INTERSECTION (EXIT)
1	100.0	2-RAMP
0	0.0	3-RAMP ENTRY
0	0.0	4-RAMP AREA, INTERSECTION STREET
0	0.0	5-IN INTERSECTION
0	0.0	6-OUTSIDE INTRSC-T-NONSTATE RTE
0	0.0	--DOES NOT APPLY

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - PARTY SUMMARY
' R004292-102419_SB-101-El Capitan Ramps '

<----- PARTY TYPE ----->			<- MOVEMENT PRECEDING COLLISION ->			<---- OTHER ASSOCIATED FACTORS ---->				
NUMBER	PCT	CODE	NUMBER	PCT	CODE	#1 NUMBER	PCT	#2 NUMBER	PCT	CODE
0	0.0	A-PASNGR CAR/STA WAGON	0	0.0	A-STOPPED	0	0.0	0	0.0	1-INFLUENCE ALCOHOL
0	0.0	B-PASNGR CAR W/TRAILER	1	100.0	B-PROCEDED STRAIGHT	0	0.0	0	0.0	2-FOLLOW TOO CLOSE
1	100.0	C-MOTORCYCLE	0	0.0	C-RAN OFF ROAD	0	0.0	0	0.0	3-FAILURE TO YIELD
0	0.0	D-PICKUP/PANEL TRUCK	0	0.0	D-MAKING RIGHT TURN	0	0.0	0	0.0	4-IMPROPER TURN
0	0.0	E-PICKUP/PANEL W/TRAILER	0	0.0	E-MAKING LEFT TURN	0	0.0	0	0.0	5-SPEEDING
0	0.0	F-TRUCK/TRUCK TRACTOR	0	0.0	F-MAKING U TURN	0	0.0	0	0.0	6-OTHER VIOLATIONS
0	0.0	G-TRUCK/TRACTOR & 1 TRAILER	0	0.0	G-BACKING	0	0.0	0	0.0	A-CELL PHONE* (INATTN)
0	0.0	2-TRUCK/TRACTOR & 2 TRAILER	0	0.0	H-SLOWING, STOPPING	0	0.0	0	0.0	B-ELECTRC EQUIP* (INATTN)
0	0.0	3-TRUCK/TRACTOR & 3 TRAILER	0	0.0	I-PASS OTHER VEHICLE	0	0.0	0	0.0	C-RADIO/CD/HDPHN* (INATTN)
0	0.0	4-SINGLE UNIT TANKER	0	0.0	J-CHANGING LANES	0	0.0	0	0.0	D-SMOKING* (INATTN)
0	0.0	5-TRUCK/TRA & 1 TANK TRALR	0	0.0	K-PARKING	0	0.0	0	0.0	E-VISION OBSCUREMENT
0	0.0	6-TRUCK/TRA & 2 TANK TRALR	0	0.0	L-ENTER FROM SHLDR	0	0.0	0	0.0	F-INATTENTION - OTHER
0	0.0	H-SCHOOL BUS	0	0.0	M-OTHER UNSAFE TURN	0	0.0	0	0.0	G-STOP & GO TRAFFIC
0	0.0	I-OTHER BUS	0	0.0	N-CROSS INTO OPP LN	1	100.0	0	0.0	H-ENTER/LEAVE RAMP
0	0.0	J-EMERGENCY VEHICLE	0	0.0	O-PARKED	0	0.0	0	0.0	I-PREVIOUS COLLISION
0	0.0	K-HIGHWAY CONST EQUIP.**	0	0.0	P-MERGING	0	0.0	0	0.0	J-UNFAMILIAR WITH ROAD
0	0.0	L-BICYCLE	0	0.0	Q-TRAVEL WRONG WAY	0	0.0	0	0.0	K-DEFECT VEHICLE EQUIP
0	0.0	M-OTHER-MOTOR VEH	0	0.0	R-OTHER	0	0.0	0	0.0	L-UNINVOLVED VEHICLE
0	0.0	N-OTHER-NON-MOTOR VEH	0	0.0	<-NOT STATED	0	0.0	0	0.0	M-OTHER
0	0.0	O-SPILLED LOADS				0	0.0	1	100.0	N-NONE APPARENT
0	0.0	P-DISENGAGED TOW				0	0.0	0	0.0	P-WIND
0	0.0	Q-UNINVOLVED VEHICLE				0	0.0	0	0.0	R-RAMP ACCIDENT
0	0.0	R-MOPED				0	0.0	0	0.0	S-RUNAWAY VEHICLE
0	0.0	T-TRAIN	0	0.0	2- XING XWALK - INTRST	0	0.0	0	0.0	T-EATING* (INATTN)
0	0.0	U-PEDESTRIAN	0	0.0	3- XING XWALK - NOT INTR	0	0.0	0	0.0	U-CHILDREN* (INATTN)
1	100.0	V-DISMOUNT PEDESTRIAN	0	0.0	4- XING NOT XWALK	0	0.0	0	0.0	V-ANIMALS* (INATTN)
0	0.0	W-ANIMAL - LIVESTOCK	0	0.0	5- ROADWAY - INCL SHLDR	0	0.0	0	0.0	W-PERSNL HYGIENE* (INATTN)
0	0.0	X-ANIMAL - DEER	0	0.0	6- NOT IN ROADWAY	0	0.0	0	0.0	X-READING* (INATTN)
0	0.0	Z-ANIMAL - OTHER	0	0.0	7- APRH-LEAVE SCHL BUS	1	100.0	1	100.0	<-NOT STATED
			0	0.0	- INVALID CODES	0	0.0	0	0.0	--DOES NOT APPLY

<----- DIRECTION OF TRAVEL ---->			<---- SPECIAL INFORMATION ---->			* INATTENTION CODES EFF. 01-01-01				
NUMBER	PCT	CODE	NUMBER	PCT	CODE					
0	0.0	N-N, NE, NW BOUND	0	0.0	A-HAZARDOUS MATERIALS					
1	100.0	S-S, SE, SW BOUND	0	0.0	B-CELL PHONE IN USE*					
0	0.0	E-EASTBOUND	1	100.0	C-CELL PHONE NOT IN USE*					
0	0.0	W-WESTBOUND	0	0.0	D-CELL PHONE NONE/UNKNOWN*					
1	100.0	<-NOT STATED	1	100.0	<-NOT STATED					
0	0.0	--DOES NOT APPLY	0	0.0	--DOES NOT APPLY					
0	0.0	-INVALID CODES	0	0.0	-INVALID CODES					

** INCLUDES EQUIPMENT ENGAGED IN CONST/MAINT
ACTIVITIES AS OF 00-02-22

* SPECIAL INFORMATION CODES EFF. 04-01-01

TASAS SELECTIVE RECORD RETRIEVAL
TSAR - PARTY SUMMARY
' R004292-102419_SB-101-El Capitan Ramps '

<----- OBJECT STRUCK ----->				
PRIMARY		OTHERS		CODE
NUMBER	PCT	NUMBER	PCT	
0	0.0	0	0.0	01-SIDE OF BRIDGE RAILING
0	0.0	0	0.0	02-END OF BRIDGE RAILING
0	0.0	0	0.0	03-PIER, COLUMN, ABUTMENT
0	0.0	0	0.0	04-BOTTOM OF STRUCTURE
0	0.0	0	0.0	05-BRIDGE END POST IN GORE
0	0.0	0	0.0	06-END OF GUARD RAIL
0	0.0	0	0.0	07-BRIDGE APPROACH GUARD RAIL
0	0.0	0	0.0	10-LIGHT OR SIGNAL POLE
0	0.0	0	0.0	11-UTILITY POLE
0	0.0	0	0.0	12-POLE (TYPE NOT STATED)
0	0.0	0	0.0	13-TRAFFIC SIGN/SIGN POST
0	0.0	0	0.0	14-OTHER SIGNS NOT TRAFFIC
0	0.0	0	0.0	15-GUARDRAIL
0	0.0	0	0.0	16-MEDIAN BARRIER
0	0.0	0	0.0	17-WALL (EXCEPT SOUND WALL)
0	0.0	0	0.0	18-DIKE OR CURB
0	0.0	0	0.0	19-TRAFFIC ISLAND
0	0.0	0	0.0	20-RAISED BARS
0	0.0	0	0.0	21-CONCRETE OBJ (HDWL, D.I.)
0	0.0	0	0.0	22-GUIDEPOST, CULVERT, PM
0	0.0	0	0.0	23-CUT SLOPE OR EMBANKMENT
0	0.0	0	0.0	24-OVER EMBANKMENT
0	0.0	0	0.0	25-IN WATER
0	0.0	0	0.0	26-DRAINAGE DITCH
0	0.0	0	0.0	27-FENCE
0	0.0	0	0.0	28-TREES
0	0.0	0	0.0	29-PLANTS
0	0.0	0	0.0	30-SOUND WALL
0	0.0	0	0.0	40-NATURAL MATRL ON ROAD
0	0.0	0	0.0	41-TEMP BARRICADES, CONES
0	0.0	0	0.0	42-OTHER OBJECT ON ROAD
0	0.0	0	0.0	43-OTHER OBJECT OFF ROAD
1	100.0	0	0.0	44-OVERTURNED
0	0.0	0	0.0	45-CRASH CUSHION (SAND)
0	0.0	0	0.0	46-CRASH CUSHION (OTHER)
0	0.0	0	0.0	51-CALL BOX
0	0.0	0	0.0	98-UNKNOWN OBJECT STRUCK
0	0.0	1	100.0	99- NO OBJECT INVOLVED
0	0.0	0	0.0	V1 THRU V9 VEHICLE 1 TO 9
0	0.0	0	0.0	<< NOT STATED
1	100.0	1	100.0	-- DOES NOT APPLY
0	0.0	0	0.0	- INVALID CODES

<----- LOCATION OF COLLISION ----->				
PRIMARY		OTHERS		CODE
NUMBER	PCT	NUMBER	PCT	
0	0.0	0	0.0	A-BEYOND MEDIAN OR STRIPE-LEFT
0	0.0	0	0.0	B-BEYOND SHLDER DRIVERS LEFT
0	0.0	0	0.0	C-LEFT SHOULDER AREA
0	0.0	0	0.0	D-LEFT LANE
0	0.0	0	0.0	E-INTERIOR LANES
1	100.0	0	0.0	F-RIGHT LANE
0	0.0	0	0.0	G-RIGHT SHOULDER AREA
0	0.0	0	0.0	H-BEYOND SHLDER DRIVERS RIGHT
0	0.0	0	0.0	I-GORE AREA
0	0.0	0	0.0	J-OTHER
0	0.0	0	0.0	V-HOV LANE(S)
0	0.0	0	0.0	W-HOV LANE BUFFER AREA
0	0.0	1	100.0	<-NOT STATED
1	100.0	1	100.0	--DOES NOT APPLY
0	0.0	0	0.0	-INVALID CODES

<----- DRUG/PHYSICAL ----->				
PRIMARY		OTHERS		CODE
NUMBER	PCT	NUMBER	PCT	
1	100.0	0	0.0	A-HAD NOT BEEN DRINKING
0	0.0	0	0.0	B-HBD - UNDER INFLUENCE
0	0.0	0	0.0	C-HBD - NOT UNDER INFLUENCE
0	0.0	0	0.0	D-HBD - IMPAIRMENT UNKNOWN
0	0.0	0	0.0	E-UNDER DRUG INFLUENCE
0	0.0	0	0.0	F-OTHER PHYSICAL IMPAIRMENT
0	0.0	0	0.0	G-IMPAIRMENT NOT KNOWN
0	0.0	0	0.0	H-NOT APPLICABLE
0	0.0	0	0.0	I-FATIGUE
1	100.0	1	100.0	< NOT STATED
0	0.0	0	0.0	--DOES NOT APPLY
0	0.0	0	0.0	-INVALID CODES



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April 6, 2020

17092L07

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EXXONMOBIL INTERIM TRUCKING PERMIT: US 101/SR 166 CUMULATIVE FORECASTS

The following cumulative traffic forecasts are being provided for the US 101/SR 166 interchange. Cumulative traffic forecasts are provided for two scenarios: one based on historical traffic growth for the anticipated length of the Project and one based on forecasts published by San Luis Obispo County. The two methods provide similar cumulative level of service forecasts.

Cumulative Forecasts – Traffic Growth

The ExxonMobil Interim Trucking Permit Project will allow trucking of oil for seven years or until the pipeline is available, whichever is shorter. Year 2028 cumulative baseline volumes were forecasts based on historical traffic growth. The traffic forecasts contained in the EIR traffic study represent 2018 conditions. As outlined in the traffic study, Caltrans historical count data shows that volumes on US 101 have grown at a rate of about 0.7% per year over the past 10 years. To be conservative, the traffic study assumed a 1% per year growth factor for US 101. For SR 166, the Caltrans historical count data shows that volumes have grown at a rate of about 7% per year over the past 10 years.

Year 2028 cumulative traffic forecasts were developed for the US 101/SR 166 interchange assuming a 3% per year growth rate, which equates to a total increase of 30% for the 10-year period (assumes 3% per year traffic growth between 2018 and 2028). Cumulative (Year 2028) and Cumulative (Year 2028) + Project levels of service are provided in Table 1, along with the Project's traffic contributions to each intersection.

Table 1
US 101/SR 166 – Cumulative (Year 2028) Forecasts

Intersection	Delay / LOS		Project Added	
	Cumulative	Cumulative + Project	PCEs(a)	% Increase(b)
AM PEAK HOUR				
US 101 NB/SR 166	14.7 Sec./LOS B	15.0 Sec./LOS B	12	0.016
US 101 SB/SR 166				
WB Left Turn	11.1 Sec./LOS B	11.2 Sec./LOS B	6	0.006
SB Left+ Thru+ Right	49.7 Sec./LOS E	> 50.0 Sec./LOS F		
Intersection Average:	16.9 Sec./LOS C	17.4 Sec./LOS C		
PM PEAK HOUR				
US 101 NB/SR 166	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F	12	0.011
US 101 SB/SR 166				
WB Left Turn	10.8 Sec./LOS B	10.9 Sec./LOS B	6	0.005
SB Left+ Thru+ Right	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F		
Intersection Average:	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F		

(a) Project Added PCEs based on 2 PCEs per truck.

(b) Project Added % Increase in traffic based on entering volumes.

The Cumulative (Year 2028) + Project forecasts show that the US 101 Northbound Ramp/SR 166 intersection is forecast to operate at LOS B during the AM peak period and LOS F during the PM peak period; and the US 101 Southbound Ramp/SR 166 intersection is forecast to operate at LOS F during the AM and PM peak periods.

Cumulative Forecasts – SLO County Traffic Model

Cumulative traffic forecasts for US 101/SR 166 interchange are included in San Luis Obispo County's *South County Circulation Study and Traffic Impact Fee Update*, January 2016. The cumulative forecasts were generated by the County's traffic model and assume full buildout of the current General Plan land uses within the SLO South County area, superimposed on top of appropriate background traffic growth on the "through" corridors within the community and its vicinity (e.g. US 101, SR 1, and SR 166) and traffic growth to/from other "gateways" to the area. These cumulative forecasts represent Year 2035 conditions.

As noted, the ExxonMobil Interim Trucking Permit Project is expected to result in trucks running until 2028 – which is 7 years prior to the 2035 forecasts published by San Luis Obispo County. Thus, the SLO County forecasts include traffic growth beyond the 2028 horizon year for the ExxonMobil Project.

The SLO County document show the Year 2035 traffic forecasts for the US 101/SR 166 interchange (copy attached). Table 2 lists the Cumulative (Year 2035) and Cumulative (Year 2035) + Project levels of service, along with the Project's traffic additions to each intersection.

Table 2
US 101/SR 166 – Cumulative (Year 2035) Forecasts

Intersection	Delay / LOS		Project Added	
	Cumulative	Cumulative + Project	PCEs(a)	% Increase(b)
AM PEAK HOUR				
US 101 NB/SR 166	16.8 Sec./LOS C	17.0 Sec./LOS C	12	0.011
US 101 SB/SR 166				
WB Left Turn	10.8 Sec./LOS B	10.9 Sec./LOS B	6	0.005
SB Left+ Thru+ Right	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F		
Intersection Average:	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F		
PM PEAK HOUR				
US 101 NB/SR 166	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F	12	0.008
US 101 SB/SR 166				
WB Left Turn	12.2 Sec./LOS B	12.2 Sec./LOS B	6	0.004
SB Left+ Thru+ Right	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F		
Intersection Average:	> 50.0 Sec./LOS F	> 50.0 Sec./LOS F		

(a) Project Added PCEs based on 2 PCEs per truck.

(b) Project Added % Increase in traffic based on entering volumes.

The Cumulative (Year 2035) + Project forecasts show that the US 101 Northbound Ramp/SR 166 intersection is forecast to operate at LOS C during the AM peak period and LOS F during the PM peak period; and the US 101 Southbound Ramp/SR 166 intersection is forecast to operate at LOS F during the AM and PM peak periods.

Associated Transportation Engineers



Dan Dawson
Senior Transportation Planner

Attachments

Appendix D.3

U.S. Highway 101/Betteravia Road Interchange Modeling with Improvements

2: US 101 SB & Betteravia

EXISTING AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	764	206	39	420	0	0	0	0	101	1	1025
Future Volume (veh/h)	0	764	206	39	420	0	0	0	0	101	1	1025
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	796	215	41	438	0				106	0	1068
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	1086	3725	1178	51	576	0				265	0	2168
Arrive On Green	0.00	1.00	1.00	0.03	0.17	0.00				0.08	0.00	0.08
Sat Flow, veh/h	1739	4893	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	796	215	41	438	0				106	0	1068
Grp Sat Flow(s),veh/h/ln	1739	1223	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	0.0	0.0	2.1	10.8	0.0				2.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.1	10.8	0.0				2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	1086	3725	1178	51	576	0				265	0	2168
V/C Ratio(X)	0.00	0.21	0.18	0.80	0.76	0.00				0.40	0.00	0.49
Avail Cap(c_a), veh/h	1086	3725	1178	155	1002	0				348	0	2242
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.4	35.8	0.0				39.6	0.0	6.2
Incr Delay (d2), s/veh	0.0	0.1	0.3	24.3	2.1	0.0				1.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.2	4.5	0.0				1.1	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.3	67.7	37.9	0.0				40.6	0.0	6.3
LnGrp LOS	A	A	A	E	D	A				D	A	A
Approach Vol, veh/h		1011			479						1174	
Approach Delay, s/veh		0.2			40.5						9.4	
Approach LOS		A			D						A	
Timer - Assigned Phs			3	4		6	7	8				
Phs Duration (G+Y+Rc), s			6.6	72.5		10.9	60.2	19.0				
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s			8.0	61.0		9.0	43.0	26.0				
Max Q Clear Time (g_c+l1), s			4.1	2.0		4.6	0.0	12.8				
Green Ext Time (p_c), s			0.0	6.9		2.2	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

2: US 101 SB & Betteravia

EXISTING + PROJECT AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 						 	 
Traffic Volume (veh/h)	0	764	206	45	420	0	0	0	0	101	1	1025
Future Volume (veh/h)	0	764	206	45	420	0	0	0	0	101	1	1025
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	796	215	47	438	0				106	0	1068
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	1086	3702	1171	59	576	0				265	0	2168
Arrive On Green	0.00	1.00	1.00	0.03	0.17	0.00				0.08	0.00	0.08
Sat Flow, veh/h	1739	4893	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	796	215	47	438	0				106	0	1068
Grp Sat Flow(s), veh/h/ln	1739	1223	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	0.0	0.0	2.4	10.8	0.0				2.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	10.8	0.0				2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	1086	3702	1171	59	576	0				265	0	2168
V/C Ratio(X)	0.00	0.22	0.18	0.79	0.76	0.00				0.40	0.00	0.49
Avail Cap(c_a), veh/h	1086	3702	1171	155	1002	0				348	0	2242
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.2	35.8	0.0				39.6	0.0	6.2
Incr Delay (d2), s/veh	0.0	0.1	0.3	20.7	2.1	0.0				1.0	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.3	4.5	0.0				1.1	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.3	63.8	37.9	0.0				40.6	0.0	6.3
LnGrp LOS	A	A	A	E	D	A				D	A	A
Approach Vol, veh/h		1011			485						1174	
Approach Delay, s/veh		0.2			40.4						9.4	
Approach LOS		A			D						A	
Timer - Assigned Phs			3	4		6	7	8				
Phs Duration (G+Y+Rc), s			7.1	72.1		10.9	60.2	19.0				
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s			8.0	61.0		9.0	43.0	26.0				
Max Q Clear Time (g_c+l1), s			4.4	2.0		4.6	0.0	12.8				
Green Ext Time (p_c), s			0.0	6.9		2.2	0.0	2.1				
Intersection Summary												
HCM 6th Ctrl Delay			11.5									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

2: US 101 SB & Betteravia

CUMULATIVE AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	773	237	44	482	0	0	0	0	111	1	1063
Future Volume (veh/h)	0	773	237	44	482	0	0	0	0	111	1	1063
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	805	247	46	502	0				117	0	1107
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	1047	3693	1168	58	644	0				274	0	2107
Arrive On Green	0.00	1.00	1.00	0.03	0.19	0.00				0.08	0.00	0.08
Sat Flow, veh/h	1739	4893	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	805	247	46	502	0				117	0	1107
Grp Sat Flow(s),veh/h/ln	1739	1223	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	0.0	0.0	2.4	12.4	0.0				2.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	12.4	0.0				2.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	1047	3693	1168	58	644	0				274	0	2107
V/C Ratio(X)	0.00	0.22	0.21	0.80	0.78	0.00				0.43	0.00	0.53
Avail Cap(c_a), veh/h	1047	3693	1168	135	1002	0				348	0	2173
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	43.2	34.9	0.0				39.5	0.0	7.1
Incr Delay (d2), s/veh	0.0	0.1	0.4	21.1	2.1	0.0				1.1	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.3	5.1	0.0				1.3	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.4	64.3	37.0	0.0				40.6	0.0	7.3
LnGrp LOS	A	A	A	E	D	A				D	A	A
Approach Vol, veh/h		1052			548						1224	
Approach Delay, s/veh		0.2			39.3						10.5	
Approach LOS		A			D						B	
Timer - Assigned Phs			3	4		6	7	8				
Phs Duration (G+Y+Rc), s			7.0	71.9		11.1	58.2	20.7				
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s			7.0	62.0		9.0	43.0	26.0				
Max Q Clear Time (g_c+I1), s			4.4	2.0		4.9	0.0	14.4				
Green Ext Time (p_c), s			0.0	7.1		2.2	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			12.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

2: US 101 SB & Betteravia

CUMULATIVE + PROJECT AM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 						 	 
Traffic Volume (veh/h)	0	773	237	50	482	0	0	0	0	111	1	1063
Future Volume (veh/h)	0	773	237	50	482	0	0	0	0	111	1	1063
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	805	247	52	502	0				117	0	1107
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	1047	3670	1161	66	644	0				274	0	2107
Arrive On Green	0.00	1.00	1.00	0.04	0.19	0.00				0.08	0.00	0.08
Sat Flow, veh/h	1739	4893	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	805	247	52	502	0				117	0	1107
Grp Sat Flow(s),veh/h/ln	1739	1223	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	0.0	0.0	2.7	12.4	0.0				2.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.7	12.4	0.0				2.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	1047	3670	1161	66	644	0				274	0	2107
V/C Ratio(X)	0.00	0.22	0.21	0.79	0.78	0.00				0.43	0.00	0.53
Avail Cap(c_a), veh/h	1047	3670	1161	155	1002	0				348	0	2173
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	0.99	0.99	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	42.9	34.9	0.0				39.5	0.0	7.1
Incr Delay (d2), s/veh	0.0	0.1	0.4	18.3	2.1	0.0				1.1	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	1.4	5.1	0.0				1.3	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.4	61.3	37.0	0.0				40.6	0.0	7.3
LnGrp LOS	A	A	A	E	D	A				D	A	A
Approach Vol, veh/h		1052			554						1224	
Approach Delay, s/veh		0.2			39.2						10.5	
Approach LOS		A			D						B	
Timer - Assigned Phs			3	4		6	7	8				
Phs Duration (G+Y+Rc), s			7.4	71.5		11.1	58.2	20.7				
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s			8.0	61.0		9.0	43.0	26.0				
Max Q Clear Time (g_c+I1), s			4.7	2.0		4.9	0.0	14.4				
Green Ext Time (p_c), s			0.0	7.1		2.2	0.0	2.3				

Intersection Summary

HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

2: US 101 SB & Betteravia

EXISTING PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1242	379	45	597	0	0	0	0	64	1	841
Future Volume (veh/h)	0	1242	379	45	597	0	0	0	0	64	1	841
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	1335	408	48	642	0				70	0	904
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	993	3262	1191	61	812	0				215	0	1958
Arrive On Green	0.00	0.77	0.77	0.03	0.23	0.00				0.06	0.00	0.06
Sat Flow, veh/h	1739	4236	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	1335	408	48	642	0				70	0	904
Grp Sat Flow(s),veh/h/ln	1739	1059	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	9.5	7.4	2.5	15.7	0.0				1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.5	7.4	2.5	15.7	0.0				1.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	993	3262	1191	61	812	0				215	0	1958
V/C Ratio(X)	0.00	0.41	0.34	0.79	0.79	0.00				0.33	0.00	0.46
Avail Cap(c_a), veh/h	993	3262	1191	174	1233	0				309	0	2042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	0.62	0.62	0.88	0.88	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.5	3.2	43.1	32.4	0.0				40.4	0.0	8.6
Incr Delay (d2), s/veh	0.0	0.2	0.5	18.0	1.8	0.0				0.9	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.4	1.3	6.3	0.0				0.8	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.7	3.7	61.1	34.2	0.0				41.3	0.0	8.7
LnGrp LOS	A	A	A	E	C	A				D	A	A
Approach Vol, veh/h		1743			690						974	
Approach Delay, s/veh		3.7			36.1						11.1	
Approach LOS		A			D						B	
Timer - Assigned Phs			3	4		6	7	8				
Phs Duration (G+Y+Rc), s			7.1	73.3		9.6	55.4	25.1				
Change Period (Y+Rc), s			4.0	4.0		4.0	4.0	4.0				
Max Green Setting (Gmax), s			9.0	61.0		8.0	38.0	32.0				
Max Q Clear Time (g_c+l1), s			4.5	11.5		3.7	0.0	17.7				
Green Ext Time (p_c), s			0.0	15.1		1.8	0.0	3.4				
Intersection Summary												
HCM 6th Ctrl Delay			12.4									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

2: US 101 SB & Betteravia

EXISTING + PROJECT PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1242	379	51	597	0	0	0	0	64	1	841
Future Volume (veh/h)	0	1242	379	51	597	0	0	0	0	64	1	841
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	1335	408	55	642	0				70	0	904
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	993	3239	1183	70	812	0				215	0	1958
Arrive On Green	0.00	0.76	0.76	0.04	0.23	0.00				0.06	0.00	0.06
Sat Flow, veh/h	1739	4236	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	1335	408	55	642	0				70	0	904
Grp Sat Flow(s),veh/h/ln	1739	1059	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	9.8	7.6	2.8	15.7	0.0				1.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.8	7.6	2.8	15.7	0.0				1.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	993	3239	1183	70	812	0				215	0	1958
V/C Ratio(X)	0.00	0.41	0.34	0.79	0.79	0.00				0.33	0.00	0.46
Avail Cap(c_a), veh/h	993	3239	1183	174	1233	0				309	0	2042
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.88	0.88	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.6	3.4	42.8	32.4	0.0				40.4	0.0	8.6
Incr Delay (d2), s/veh	0.0	0.2	0.5	15.5	1.8	0.0				0.9	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.5	1.5	6.3	0.0				0.8	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.9	3.9	58.3	34.2	0.0				41.3	0.0	8.7
LnGrp LOS	A	A	A	E	C	A				D	A	A
Approach Vol, veh/h		1743			697						974	
Approach Delay, s/veh		3.9			36.1						11.1	
Approach LOS		A			D						B	
Timer - Assigned Phs												
		3	4		6	7	8					
Phs Duration (G+Y+Rc), s		7.6	72.8		9.6	55.4	25.1					
Change Period (Y+Rc), s		4.0	4.0		4.0	4.0	4.0					
Max Green Setting (Gmax), s		9.0	61.0		8.0	38.0	32.0					
Max Q Clear Time (g_c+I1), s		4.8	11.8		3.7	0.0	17.7					
Green Ext Time (p_c), s		0.0	15.1		1.8	0.0	3.4					
Intersection Summary												
HCM 6th Ctrl Delay		12.5										
HCM 6th LOS		B										
Notes												
User approved volume balancing among the lanes for turning movement.												

2: US 101 SB & Betteravia

CUMULATIVE PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1254	503	47	639	0	0	0	0	69	1	855
Future Volume (veh/h)	0	1254	503	47	639	0	0	0	0	69	1	855
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	1348	541	51	687	0				75	0	919
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	965	3246	1186	65	862	0				220	0	1913
Arrive On Green	0.00	0.77	0.77	0.04	0.25	0.00				0.06	0.00	0.06
Sat Flow, veh/h	1739	4236	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	1348	541	51	687	0				75	0	919
Grp Sat Flow(s),veh/h/ln	1739	1059	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	9.8	11.3	2.6	16.7	0.0				1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	9.8	11.3	2.6	16.7	0.0				1.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	965	3246	1186	65	862	0				220	0	1913
V/C Ratio(X)	0.00	0.42	0.46	0.79	0.80	0.00				0.34	0.00	0.48
Avail Cap(c_a), veh/h	965	3246	1186	174	1272	0				309	0	1993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.87	0.87	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.6	3.8	43.0	31.7	0.0				40.4	0.0	9.3
Incr Delay (d2), s/veh	0.0	0.2	0.8	16.7	1.9	0.0				0.9	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.2	2.2	1.4	6.8	0.0				0.8	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.8	4.6	59.6	33.6	0.0				41.3	0.0	9.5
LnGrp LOS	A	A	A	E	C	A				D	A	A
Approach Vol, veh/h		1889			738						994	
Approach Delay, s/veh		4.1			35.4						11.9	
Approach LOS		A			D						B	
Timer - Assigned Phs												
Phs Duration (G+Y+Rc), s		7.3	73.0		9.7	54.0	26.4					
Change Period (Y+Rc), s		4.0	4.0		4.0	4.0	4.0					
Max Green Setting (Gmax), s		9.0	61.0		8.0	37.0	33.0					
Max Q Clear Time (g_c+I1), s		4.6	13.3		3.9	0.0	18.7					
Green Ext Time (p_c), s		0.0	16.5		1.8	0.0	3.7					
Intersection Summary												
HCM 6th Ctrl Delay			12.6									
HCM 6th LOS			B									

Notes

User approved volume balancing among the lanes for turning movement.

2: US 101 SB & Betteravia

CUMULATIVE + PROJECT PM PEAK HOUR

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1254	503	53	639	0	0	0	0	69	1	855
Future Volume (veh/h)	0	1254	503	53	639	0	0	0	0	69	1	855
Initial Q (Qb), 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
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	0				1826	1826	1826
Adj Flow Rate, veh/h	0	1348	541	57	687	0				75	0	919
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	0				5	5	5
Cap, veh/h	965	3227	1179	73	862	0				220	0	1913
Arrive On Green	0.00	0.76	0.76	0.04	0.25	0.00				0.06	0.00	0.06
Sat Flow, veh/h	1739	4236	1547	1739	3561	0				3478	0	3095
Grp Volume(v), veh/h	0	1348	541	57	687	0				75	0	919
Grp Sat Flow(s), veh/h/ln	1739	1059	1547	1739	1735	0				1739	0	1547
Q Serve(g_s), s	0.0	10.0	11.5	2.9	16.7	0.0				1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	10.0	11.5	2.9	16.7	0.0				1.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	965	3227	1179	73	862	0				220	0	1913
V/C Ratio(X)	0.00	0.42	0.46	0.78	0.80	0.00				0.34	0.00	0.48
Avail Cap(c_a), veh/h	965	3227	1179	174	1272	0				309	0	1993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.86	0.86	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.7	3.9	42.7	31.7	0.0				40.4	0.0	9.3
Incr Delay (d2), s/veh	0.0	0.2	0.8	14.6	1.9	0.0				0.9	0.0	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
%ile BackOfQ(50%),veh/ln	0.0	1.2	2.3	1.5	6.7	0.0				0.8	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.0	4.7	57.3	33.6	0.0				41.3	0.0	9.5
LnGrp LOS	A	A	A	E	C	A				D	A	A
Approach Vol, veh/h		1889			744						994	
Approach Delay, s/veh		4.2			35.4						11.9	
Approach LOS		A			D						B	
Timer - Assigned Phs												
		3	4		6	7	8					
Phs Duration (G+Y+Rc), s		7.8	72.6		9.7	54.0	26.4					
Change Period (Y+Rc), s		4.0	4.0		4.0	4.0	4.0					
Max Green Setting (Gmax), s		9.0	61.0		8.0	37.0	33.0					
Max Q Clear Time (g_c+l1), s		4.9	13.5		3.9	0.0	18.7					
Green Ext Time (p_c), s		0.0	16.5		1.8	0.0	3.7					
Intersection Summary												
HCM 6th Ctrl Delay			12.7									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Appendix D.4

Refugio Road/Calle Real/ El Capitan Bike and Pedestrian Counts

Location: Refugio Rd & Calle Real/Refugio Canyon Rd
City: Goleta
Control: 1-Way Stop(WB)

Project ID: 19-02046-005
Date: 7/5/2019

Bikes

NS/EW Streets:	Refugio Rd				Refugio Rd				Calle Real/Refugio Canyon Rd				Calle Real/Refugio Canyon Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9:45 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0	0	0	0	100.00%	0.00%	0.00%	0.00%	4

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0.5 WT	0.5 WR	0 WU	
10:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	4
10:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3
1:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	66.67%	33.33%	0.00%	50.00%	50.00%	0.00%	0.00%	0	0	0	0	66.67%	0.00%	33.33%	0.00%	13

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	0.5 WT	0.5 WR	0 WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0	0	0	0	0	0	0	0	0	0	0	0	1

Location: Refugio Rd & Calle Real/Refugio Canyon Rd
City: Goleta

Project ID: 19-02046-005
Date: 7/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Refugio Rd		Refugio Rd		Calle Real/Refugio Canyon Rd		Calle Real/Refugio Canyon Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	2	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	1	2
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	1	1	2
9:45 AM	0	0	0	0	1	0	0	0	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	1	2	0	1	0	1	2	7
	0.00%	100.00%	100.00%	0.00%	100.00%	0.00%	33.33%	66.67%	

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	0	0	0	0	0	0	0	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	1	0	0	0	3	2	0	6
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	2	2	4
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	0	0	0	0	1	2
12:15 PM	1	0	0	0	0	0	1	2	4
12:30 PM	0	8	0	0	0	0	0	9	17
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	1	1
1:15 PM	0	8	0	0	0	0	0	8	16
1:30 PM	4	3	0	0	1	0	3	3	14
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	5	21	0	0	1	3	8	26	64
	19.23%	80.77%			25.00%	75.00%	23.53%	76.47%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	1	0	0	0	0	0	4	
2:00 PM	0	1	0	0	0	0	0	3	4
2:15 PM	8	4	0	0	0	0	10	4	26
2:30 PM	0	2	0	0	2	0	2	2	8
2:45 PM	0	0	0	0	0	0	6	0	6
3:00 PM	0	0	0	0	0	0	0	5	5
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	1	0	0	0	0	0	2	0	3
3:45 PM	0	0	0	0	0	0	1	0	1
4:00 PM	7	0	0	0	0	0	7	0	14
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	5	2	0	0	0	0	5	2	14
4:45 PM	4	3	0	0	0	0	4	3	14
5:00 PM	1	0	0	0	2	0	1	0	4
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	4	0	4
5:45 PM	0	0	0	0	0	0	3	0	3
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	26	13	0	0	4	0	46	23	112
	66.67%	33.33%			100.00%	0.00%	66.67%	33.33%	

Location: Refugio Rd & Calle Real/Refugio Canyon Rd
City: Goleta
Control: 1-Way Stop(WB)

Project ID: 19-02046-005
Date: 7/6/2019

Bikes

NS/EW Streets:	Refugio Rd				Refugio Rd				Calle Real/Refugio Canyon Rd				Calle Real/Refugio Canyon Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	0	1	0	0	0	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	40.00%	0.00%	60.00%	0.00%	5

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	0	1	0	0	0	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
10:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	40.00%	60.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	8

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	1	0	0	0	1	0	0	0	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
3:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0	0	0	0	0	0	0	0	5

Location: Refugio Rd & Calle Real/Refugio Canyon Rd
City: Goleta

Project ID: 19-02046-005
Date: 7/6/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Refugio Rd		Refugio Rd		Calle Real/Refugio Canyon Rd		Calle Real/Refugio Canyon Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	1	0	0	0	0	0	1	2
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	1	0	0	0	0	0	1	2
	0.00%	100.00%					0.00%	100.00%	

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	1	0	1
10:30 AM	0	0	0	0	0	0	0	1	1
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	1	2	3
12:00 PM	0	0	0	0	0	0	3	4	7
12:15 PM	0	0	0	0	0	0	0	5	5
12:30 PM	0	3	0	0	0	0	0	15	18
12:45 PM	0	0	0	0	0	0	0	4	4
1:00 PM	0	3	0	0	0	0	0	7	10
1:15 PM	2	2	0	0	0	0	2	2	8
1:30 PM	0	2	0	0	0	0	1	2	5
1:45 PM	0	11	0	0	0	0	0	14	25
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	2	21	0	0	0	0	8	56	87
	8.70%	91.30%					12.50%	87.50%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	3	4	0	0	0	0	3	6	16
2:15 PM	0	0	0	0	0	0	2	4	6
2:30 PM	0	0	0	0	0	0	3	14	17
2:45 PM	0	1	0	0	0	0	3	5	9
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	2	0	0	1	3
3:30 PM	0	0	0	0	0	0	5	0	5
3:45 PM	0	0	0	0	1	0	4	0	5
4:00 PM	0	0	0	0	0	0	5	1	6
4:15 PM	0	0	0	0	0	0	3	7	10
4:30 PM	0	0	0	0	2	0	4	2	8
4:45 PM	0	0	0	0	0	0	2	2	4
5:00 PM	11	0	0	0	4	0	17	2	34
5:15 PM	5	2	0	0	0	0	10	2	19
5:30 PM	0	1	0	0	0	0	8	3	12
5:45 PM	3	0	0	0	0	0	3	2	8
6:00 PM	4	0	0	0	0	0	4	0	8
6:15 PM	0	0	0	0	0	0	0	2	2
6:30 PM	0	2	0	0	0	0	7	2	11
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	26	10	0	0	9	0	83	55	183
	72.22%	27.78%			100.00%	0.00%	60.14%	39.86%	

Location: Refugio Rd & Calle Real/Refugio Canyon Rd
City: Goleta
Control: 1-Way Stop(WB)

Project ID: 19-02046-005
Date: 7/7/2019

Bikes

NS/EW Streets:		Refugio Rd				Refugio Rd				Calle Real/Refugio Canyon Rd				Calle Real/Refugio Canyon Rd				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0.5	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	9:45 AM	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :		0	1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	4
		0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	

NOON		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0.5	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
	10:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	1	0	4
	10:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	2
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	11:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3
	1:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :		0	2	1	0	2	2	0	0	0	0	0	0	4	0	2	0	13
		0.00%	66.67%	33.33%	0.00%	50.00%	50.00%	0.00%	0.00%					66.67%	0.00%	33.33%	0.00%	

PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0.5	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		0.00%	100.00%	0.00%	0.00%													

Location: Refugio Rd & Calle Real/Refugio Canyon Rd
City: Goleta

Project ID: 19-02046-005
Date: 7/7/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Refugio Rd		Refugio Rd		Calle Real/Refugio Canyon Rd		Calle Real/Refugio Canyon Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	2	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	1	2
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	1	2	3
9:45 AM	0	0	0	0	1	0	1	0	2
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	1	2	0	1	0	2	3	9
	0.00%	100.00%	100.00%	0.00%	100.00%	0.00%	40.00%	60.00%	

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	0	0	0	0	0	0	0	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	1	0	3	0	3	2	1	10
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	2	0	0	0	0	0	2	2	6
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	0	0	0	0	1	2
12:15 PM	1	0	0	0	0	0	1	2	4
12:30 PM	0	8	0	0	0	0	0	9	17
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	1	1
1:15 PM	0	8	0	0	0	0	0	8	16
1:30 PM	4	3	0	0	1	0	4	3	15
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	7	21	0	3	1	3	9	27	71
	25.00%	75.00%	0.00%	100.00%	25.00%	75.00%	25.00%	75.00%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	1	0	0	0	0	0	5	
2:00 PM	0	1	0	0	0	0	0	2	3
2:15 PM	9	4	0	0	0	0	10	4	27
2:30 PM	0	2	0	0	2	0	2	2	8
2:45 PM	0	0	0	0	0	0	3	0	3
3:00 PM	0	0	0	0	0	0	0	5	5
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	1	0	0	0	0	0	2	0	3
4:00 PM	0	0	0	0	0	0	1	0	1
4:15 PM	6	0	1	0	1	0	6	0	14
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	5	2	0	0	0	0	5	2	14
5:00 PM	4	3	0	0	0	0	4	2	13
5:15 PM	1	0	0	0	2	0	1	0	4
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	4	0	4
6:00 PM	0	0	0	0	0	0	2	0	2
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	1	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	26	13	1	0	5	0	40	23	108
	66.67%	33.33%	100.00%	0.00%	100.00%	0.00%	63.49%	36.51%	

Location: Refugio Rd/Refugio Beach Rd & Calle Real/Refugio Canyon Rd
City: Goleta
Control: 0

Project ID: 19-02067-005
Date: 9/18/2019

Bikes

NS/EW Streets:	Refugio Rd/Refugio Beach Rd				Refugio Rd/Refugio Beach Rd				Calle Real/Refugio Canyon Rd				Calle Real/Refugio Canyon Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
					100.00%	0.00%	0.00%	0.00%									
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0	0	0	0	50.00%	0.00%	0.00%	50.00%	4
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2	0	4

Location: Refugio Rd/Refugio Beach Rd & Calle Real/Refugio Canyon Rd
City: Goleta

Project ID: 19-02067-005
Date: 9/18/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Refugio Rd/Refugio Beach Rd		Refugio Rd/Refugio Beach Rd		Calle Real/Refugio Canyon Rd		Calle Real/Refugio Canyon Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	1
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	1	1
							0.00%	100.00%	

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	2	0	0	0	0	2	2	0	6
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	2	0	2	0	0	0	4
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	1	1
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	1	0	1
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	2	0	2	0	2	2	3	1	12
	100.00%	0.00%	100.00%	0.00%	50.00%	50.00%	75.00%	25.00%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	1	1
2:45 PM	0	3	1	1	3	0	0	0	8
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	1	0	1
3:45 PM	0	0	1	2	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	1	1
4:15 PM	0	2	0	0	0	0	0	2	4
4:30 PM	1	0	0	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	1	0	2
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	1	1
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	2	5	3	3	3	0	3	5	24
	28.57%	71.43%	50.00%	50.00%	100.00%	0.00%	37.50%	62.50%	

Location: Refugio Rd/Refugio Beach Rd & Calle Real/Refugio Canyon Rd
City: Goleta
Control: 0

Project ID: 19-02067-005
Date: 9/19/2019

Bikes

NS/EW Streets:	Refugio Rd/Refugio Beach Rd				Refugio Rd/Refugio Beach Rd				Calle Real/Refugio Canyon Rd				Calle Real/Refugio Canyon Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR :	07:15 AM - 08:15 AM				0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0	0	0	0	0	0	0	0	6
PEAK HR :	10:45 AM - 11:45 AM				0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
PEAK HR VOL :	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	100.00%	0.00%	0.00%	0.00%	4
PEAK HR :	03:00 PM - 04:00 PM				0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

Location: Refugio Rd/Refugio Beach Rd & Calle Real/Refugio Canyon Rd
City: Goleta

Project ID: 19-02067-005
Date: 9/19/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Refugio Rd/Refugio Beach Rd		Refugio Rd/Refugio Beach Rd		Calle Real/Refugio Canyon Rd		Calle Real/Refugio Canyon Rd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	0	0	0	0	0	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	2	0	1	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	3	0	0	0	0	0	0	3
9:15 AM	6	3	0	0	0	0	0	0	9
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB 8	WB 6	EB 1	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 15
APPROACH %'s :	57.14%	42.86%	100.00%	0.00%					

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	1	0	0	0	0	0	1	
10:00 AM	1	0	0	0	0	0	1	0	2
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	1	0	1
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	1	0	1	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	1	1
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB 1	WB 1	EB 0	WB 1	NB 0	SB 1	NB 2	SB 2	TOTAL 8
APPROACH %'s :	50.00%	50.00%	0.00%	100.00%	0.00%	100.00%	50.00%	50.00%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	0	0	0	0	0	0	0	0	
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	1	2	0	0	2	1	6
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	2	2
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	2	0	0	0	0	3
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	0	1
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB 0	WB 0	EB 2	WB 4	NB 0	SB 0	NB 5	SB 3	TOTAL 14
APPROACH %'s :			33.33%	66.67%			62.50%	37.50%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara
Control: 1-Way Stop(NB)

Project ID: 19-02046-002
Date: 7/5/2019

Bikes

NS/EW Streets:	El Capitan State Beach Rd				El Capitan State Beach Rd				US 101 NB Ramps				US 101 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	4
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	2	0	0	0	0	0	0	0	0	0	3	0	1	4	0	0	10
	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	20.00%	80.00%	0.00%	0.00%	
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	6
10:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:15 AM	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
11:45 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10
12:00 PM	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
12:15 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3
12:30 PM	2	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	8
12:45 PM	4	0	0	0	0	0	0	0	0	0	14	0	0	1	0	0	19
1:00 PM	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	6
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
1:30 PM	5	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	7
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	27	0	0	0	0	0	0	0	0	0	49	0	0	4	0	0	80
	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
2:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	5
2:30 PM	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	6
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
3:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
3:30 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
3:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	3	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	7
6:45 PM	2	0	0	0	0	0	0	0	0	0	7	0	0	2	0	0	11
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	17	0	5	0	0	0	0	0	0	2	19	0	2	8	0	0	53
	77.27%	0.00%	22.73%	0.00%					0.00%	9.52%	90.48%	0.00%	20.00%	80.00%	0.00%	0.00%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara

Project ID: 19-02046-002
Date: 7/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan State Beach Rd		El Capitan State Beach Rd		US 101 NB Ramps		US 101 NB Ramps		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	7:00 AM	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	1	0	1
	7:30 AM	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	2	2
	8:30 AM	0	0	0	0	0	0	1	1
	8:45 AM	0	0	0	0	0	0	2	2
9:00 AM	0	0	0	0	0	0	3	10	13
9:15 AM	0	0	0	0	0	0	4	0	4
9:30 AM	0	0	0	0	0	0	1	1	2
9:45 AM	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 11 40.74%	SB 16 59.26%	TOTAL 27

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	7	2	9
10:15 AM	0	0	0	0	2	0	4	11	17
10:30 AM	0	0	0	0	0	0	4	5	9
10:45 AM	0	0	0	0	0	0	2	6	8
11:00 AM	0	0	0	0	0	0	2	4	6
11:15 AM	0	0	0	0	0	0	0	2	2
11:30 AM	0	0	0	0	0	0	5	9	14
11:45 AM	0	0	0	0	0	0	1	5	6
12:00 PM	0	0	0	0	0	0	0	13	13
12:15 PM	0	0	0	0	0	0	0	2	2
12:30 PM	0	0	0	0	0	0	2	0	2
12:45 PM	0	0	0	0	0	0	0	2	2
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	3	1	4
1:30 PM	0	0	0	0	0	0	7	0	7
1:45 PM	0	0	0	0	0	0	8	3	11
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	2	0	45	65	112
					100.00%	0.00%	40.91%	59.09%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	10	2	12
2:15 PM	0	0	0	0	0	0	3	0	3
2:30 PM	0	0	0	0	0	0	4	0	4
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	3	1	4
3:15 PM	0	0	0	0	0	0	7	1	8
3:30 PM	0	0	0	1	0	0	2	0	3
3:45 PM	0	0	0	0	0	0	25	0	25
4:00 PM	0	0	0	0	0	0	4	3	7
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	0	0	2	2	4
5:15 PM	0	0	0	0	0	0	6	5	11
5:30 PM	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	7	0	7
6:00 PM	0	0	0	0	0	0	12	0	12
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	4	0	4
6:45 PM	0	0	0	0	0	0	10	0	10
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	3	0	0	102	14	119
			0.00%	100.00%			87.93%	12.07%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara
Control: 1-Way Stop(NB)

Project ID: 19-02046-002
Date: 7/6/2019

Bikes

NS/EW Streets:	El Capitan State Beach Rd				El Capitan State Beach Rd				US 101 NB Ramps				US 101 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
7:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9:30 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	3	0	0	5
9:45 AM	2	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	5
TOTAL VOLUMES :	NL 10	NT 0	NR 1	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 8	EU 0	WL 1	WT 3	WR 0	WU 0	TOTAL 23
APPROACH %'s :	90.91%	0.00%	9.09%	0.00%					0.00%	0.00%	100.00%	0.00%	25.00%	75.00%	0.00%	0.00%	
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
11:00 AM	3	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	14
11:15 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	2	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	5
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	7	0	1	0	0	0	0	0	0	0	13	0	0	1	0	0	22
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
1:45 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
TOTAL VOLUMES :	NL 14	NT 0	NR 1	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 45	EU 0	WL 2	WT 3	WR 0	WU 0	TOTAL 65
APPROACH %'s :	93.33%	0.00%	6.67%	0.00%					0.00%	0.00%	100.00%	0.00%	40.00%	60.00%	0.00%	0.00%	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	1 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	0 WL	1 WT	0 WR	0 WU	
2:00 PM	10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	11
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL 29	NT 0	NR 3	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 0	ER 6	EU 0	WL 2	WT 0	WR 0	WU 0	TOTAL 40
APPROACH %'s :	90.63%	0.00%	9.38%	0.00%					0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara

Project ID: 19-02046-002
Date: 7/6/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan State Beach Rd		El Capitan State Beach Rd		US 101 NB Ramps		US 101 NB Ramps		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	7:00 AM	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	1	1	2
	7:45 AM	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	16	16
	8:15 AM	0	0	0	0	0	2	0	2
	8:30 AM	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	16	1
9:00 AM	0	0	0	0	0	0	4	0	4
9:15 AM	0	0	0	0	0	0	0	3	3
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 25 54.35%	SB 21 45.65%	TOTAL 46

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	1	0	0	1	0	2
10:30 AM	0	0	0	0	0	0	1	0	1
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	4	4
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	4	4
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	1	0	1
12:30 PM	0	0	0	0	0	0	4	0	4
12:45 PM	0	0	0	0	0	0	4	5	9
1:00 PM	0	0	0	0	0	0	1	0	1
1:15 PM	0	0	0	0	0	0	0	1	1
1:30 PM	0	0	0	0	0	0	0	3	3
1:45 PM	0	0	0	0	0	0	0	10	10
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	1	0	0	12	27	40
			0.00%	100.00%			30.77%	69.23%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	5	0	5
2:15 PM	0	0	0	0	0	0	0	6	6
2:30 PM	0	0	0	0	0	0	1	0	1
2:45 PM	0	0	0	0	0	0	3	6	9
3:00 PM	0	0	0	0	0	0	9	2	11
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	3	0	2	0	5
3:45 PM	0	0	0	0	0	0	0	3	3
4:00 PM	0	0	0	4	0	0	11	0	15
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	10	3	13
4:45 PM	0	0	0	0	0	0	8	0	8
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	2	0	0	0	2
5:30 PM	0	0	0	0	0	0	4	0	4
5:45 PM	0	0	0	0	0	0	2	0	2
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	4	5	0	55	20	84
			0.00%	100.00%	100.00%	0.00%	73.33%	26.67%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara
Control: 1-Way Stop(NB)

Project ID: 19-02046-002
Date: 7/7/2019

Bikes

NS/EW Streets:	El Capitan State Beach Rd				El Capitan State Beach Rd				US 101 NB Ramps				US 101 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	4

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	3
11:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:15 PM	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	5
12:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	27

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
2:45 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00 PM	2	0	0	0	0	0	0	0	0	0	6	0	0	2	0	0	10
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	3	0	2	0	0	0	0	0	0	0	1	0	2	0	0	0	8
4:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	3	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	7
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
6:30 PM	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	3
6:45 PM	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	89.47%	0.00%	10.53%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	42.86%	57.14%	0.00%	0.00%	47

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara

Project ID: 19-02046-002
Date: 7/7/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan State Beach Rd		El Capitan State Beach Rd		US 101 NB Ramps		US 101 NB Ramps			
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
	7:00 AM	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	
	7:30 AM	0	0	0	0	0	0	2	2	
	7:45 AM	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	1	1	
	8:15 AM	0	0	0	0	0	0	1	2	3
	8:30 AM	0	0	0	0	0	0	3	0	3
	8:45 AM	0	0	0	0	0	0	1	0	1
9:00 AM	0	0	0	0	0	0	0	3	3	
9:15 AM	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 5 38.46%	SB 8 61.54%	TOTAL 13	

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	1	1
10:30 AM	0	0	0	0	0	0	0	3	3
10:45 AM	0	0	0	0	0	0	1	0	1
11:00 AM	0	0	0	1	0	0	8	2	11
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	2	2
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	3	3
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	3	3
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	3	0	3
1:45 PM	0	0	0	0	0	0	2	5	7
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	1	0	0	14	19	34
			0.00%	100.00%			42.42%	57.58%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	3	0	0	3	4	10
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	11	6	17
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	3	0	3
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	1	1
4:00 PM	0	0	0	0	0	0	0	7	7
4:15 PM	0	0	0	0	0	0	8	0	8
4:30 PM	0	0	0	0	0	0	0	11	11
4:45 PM	0	0	0	0	0	0	3	0	3
5:00 PM	0	0	0	0	0	0	0	1	1
5:15 PM	0	0	0	0	0	0	3	0	3
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	15	0	15
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	6	0	6
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	3	0	0	52	30	85
			0.00%	100.00%			63.41%	36.59%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara
Control: 0

Project ID: 19-02067-002
Date: 9/18/2019

Bikes

NS/EW Streets:	El Capitan State Beach Rd				El Capitan State Beach Rd				US 101 NB Ramps				US 101 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0.00%	0.00%	100.00%	0.00%	0	0	0	0	2

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	3

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	5

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara

Project ID: 19-02067-002
Date: 9/18/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan State Beach Rd		El Capitan State Beach Rd		US 101 NB Ramps		US 101 NB Ramps		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	1	1
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0 0.00%	SB 1 100.00%	TOTAL 1

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	1	0	1
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	19	19
11:00 AM	0	0	0	0	0	0	0	15	15
11:15 AM	0	0	0	0	0	0	0	1	1
11:30 AM	0	0	0	0	0	0	0	18	18
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	2	0	2
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	3	53	56
							5.36%	94.64%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	2	2
4:15 PM	0	0	0	0	0	0	52	0	52
4:30 PM	0	0	0	0	0	0	2	0	2
4:45 PM	0	0	0	0	0	0	0	2	2
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	2	0	2
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	56	4	60
							93.33%	6.67%	

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara
Control: 0

Project ID: 19-02067-002
Date: 9/19/2019

Bikes

NS/EW Streets:	El Capitan State Beach Rd				El Capitan State Beach Rd				US 101 NB Ramps				US 101 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	0	0	0	0	3

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	6

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	0	0	0	0	7

Location: El Capitan State Beach Rd & US 101 NB Ramps
City: Santa Barbara

Project ID: 19-02067-002
Date: 9/19/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan State Beach Rd		El Capitan State Beach Rd		US 101 NB Ramps		US 101 NB Ramps	
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
7:00 AM	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0
7:30 AM	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB
APPROACH %'s :	0	0	0	0	1	0	0	0
					100.00%	0.00%		
								TOTAL
								1

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
10:00 AM	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	1
11:00 AM	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	2	0
11:45 AM	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	1	0
12:15 PM	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	2	0	0	0
1:00 PM	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB
APPROACH %'s :	0	0	0	0	2	0	3	3
					100.00%	0.00%	50.00%	50.00%
								TOTAL
								8

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG	
	EB	WB	EB	WB	NB	SB	NB	SB
2:00 PM	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	11
5:00 PM	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	10	0
6:00 PM	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB
APPROACH %'s :	0	0	0	0	0	0	10	13
							43.48%	56.52%
								TOTAL
								23

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara
Control: No Control

Project ID: 19-02046-004
Date: 7/5/2019

Bikes

NS/EW Streets:	El Capitan Terrace Ln				El Capitan Terrace Ln				Calle Real				Calle Real				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	0	0	0	0	0	0	0	3	2	1	8
					100.00%	0.00%	0.00%	0.00%					0.00%	50.00%	33.33%	16.67%	
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	0	0	0	4	0	0	0	4	0	0	9
					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1	0	1	0	1	0	0	0	0	0	5	0	8
					50.00%	0.00%	50.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara

Project ID: 19-02046-004
Date: 7/5/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan Terrace Ln		El Capitan Terrace Ln		Calle Real		Calle Real		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	7:00 AM	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	2	0	2
	8:30 AM	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0
	9:00 AM	0	1	0	0	0	0	0	1
	9:15 AM	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	1	0	0	0	0	2	0	3
	0.00%	100.00%					100.00%	0.00%	

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	2	2
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	2	2
							0.00%	100.00%	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	2	0	0	0	0	0	0	2
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	1	0	0	0	0	0	0	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	1	3	0	0	0	0	0	0	4
	25.00%	75.00%							

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara
Control: No Control

Project ID: 19-02046-004
Date: 7/6/2019

Bikes

NS/EW Streets:	El Capitan Terrace Ln				El Capitan Terrace Ln				Calle Real				Calle Real				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	4
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	0	0	0	0	3	0	0	0	0	0	0	0	0	4	5	0	12
					100.00%	0.00%	0.00%	0.00%					0.00%	44.44%	55.56%	0.00%	
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
11:00 AM	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8
11:15 AM	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	2	0	5
12:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
12:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	8	0	9
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	0	0	0	0	21	0	1	2	0	3	0	0	0	0	10	0	37
					87.50%	0.00%	4.17%	8.33%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s:	0	0	0	0	0	0	0	1	0	0	0	0	0	0	9	0	10
					0.00%	0.00%	0.00%	100.00%					0.00%	0.00%	100.00%	0.00%	

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara

Project ID: 19-02046-004
Date: 7/6/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan Terrace Ln		El Capitan Terrace Ln		Calle Real		Calle Real		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
	7:00 AM	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 0

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara
Control: No Control

Project ID: 19-02046-004
Date: 7/7/2019

Bikes

NS/EW Streets:	El Capitan Terrace Ln				El Capitan Terrace Ln				Calle Real				Calle Real				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	1	4
					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	4	0	0	0	0	0	0	0	0	1	4	0	9
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	4	0	0	0	0	2	0	0	0	4	6	0	16
					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	40.00%	60.00%	0.00%	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0	3
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	2	0	0	0	0	1	0	0	0	2	3	0	8
					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	40.00%	60.00%	0.00%	

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara

Project ID: 19-02046-004
Date: 7/7/2019

Pedestrians (Crosswalks)

NS/EW Streets:		El Capitan Terrace Ln		El Capitan Terrace Ln		Calle Real		Calle Real		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
7:00 AM	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 0	

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara
Control: 0

Project ID: 19-02067-004
Date: 9/18/2019

Bikes

NS/EW Streets:	El Capitan Terrace Ln				El Capitan Terrace Ln				Calle Real				Calle Real				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 2	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 2
									0.00%	100.00%	0.00%	0.00%					
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
10:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
12:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 0	ST 0	SR 0	SU 0	EL 0	ET 2	ER 0	EU 0	WL 0	WT 2	WR 0	WU 0	TOTAL 4
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 1	ST 0	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 2	WR 0	WU 0	TOTAL 3
					100.00%	0.00%	0.00%	0.00%					0.00%	100.00%	0.00%	0.00%	

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara

Project ID: 19-02067-004
Date: 9/18/2019

Pedestrians (Crosswalks)

NS/EW Streets:		El Capitan Terrace Ln		El Capitan Terrace Ln		Calle Real		Calle Real		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
7:00 AM	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	1	1	
8:15 AM	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	
9:00 AM	0	0	0	0	0	0	0	0	0	
9:15 AM	0	0	0	0	0	0	0	0	0	
9:30 AM	0	0	0	0	0	0	0	0	0	
9:45 AM	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES : APPROACH %'s :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL	
	0	0	0	0	0	0	0	1	1	
							0.00%	100.00%		

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	1	0	0	0	0	0	0	0	1
	100.00%	0.00%							

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara
Control: 0

Project ID: 19-02067-004
Date: 9/19/2019

Bikes

NS/EW Streets:	El Capitan Terrace Ln				El Capitan Terrace Ln				Calle Real				Calle Real				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	100.00%	0.00%	0.00%	0.00%	0	0	0	0	0	0	0	0	3

NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	3
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	50.00%	0.00%	0.00%	50.00%	0	0	0	0	0.00%	0.00%	100.00%	0.00%	8

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%	100.00%	0.00%	3

Location: El Capitan Terrace Ln & Calle Real
City: Santa Barbara

Project ID: 19-02067-004
Date: 9/19/2019

Pedestrians (Crosswalks)

NS/EW Streets:	El Capitan Terrace Ln		El Capitan Terrace Ln		Calle Real		Calle Real		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	2	2
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	2	2
							0.00%	100.00%	0

NOON	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	0	0	0	0	0	0	0	0
1:30 PM	0	0	0	0	0	0	0	0	0
1:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
2:00 PM	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0

Appendix D.5

Summary of Refugio Bridge Replacement Project

A. Proposed Project

1. Replace the south and northbound bridges of US Highway 101 across Refugio Creek
2. Improve Refugio Creek habitat conditions for better fish passage
3. Upgrade existing pedestrian path between Refugio Road and Refugio Creek.

Bridge Alternatives

- a. Each bridge would be two-span with one support column and cap. Same design as current bridge.
- b. Each bridge would be single-span with no middle support columns (preferred Caltrans option).
- c. Each bridge would be three-spans (this was removed from consideration based upon NOP).

B. Construction Timing

- November 2023 – Issue construction contract.
- April 2024 – Start Work on Project
- Summer 2024– Construction work on Southbound bridge.
- Summer 2025 – Construction work on Northbound bridge.
- Summer 2026 – Finish up construction work.
- January 2027 – Work on project complete.
- Work on Northbound onramp would occur sometime between Summer 2024 and Summer of 2025. Exact timing to be determined by contractor.
- Work on Refugio Creek restoration would occur during bridge construction project. Timing to be determined by contractor. Work in the creek is expected to be done in phases during the summer months with the final creek restoration under the bridges being completed after the bridge construction is complete.

C. Road Closures and Lane Restrictions

1. For each bridge (southbound and northbound) Refugio Road between Highway 101 northbound entrance and the State Park would be closed as follows for the single span alternative.
 - One week for tear down of bridge.
 - One week for construction of false work
 - One week for removal of false work.

For the single span alternative, the total time Refugio Road would be closed would be approximately six weeks.

For the two-span alternative, Refugio Rd would be closed for 20 weeks per each bridge for a total of 40 weeks.

During these periods no traffic using the southbound exit could travel on Refugio Road to Calle Real.

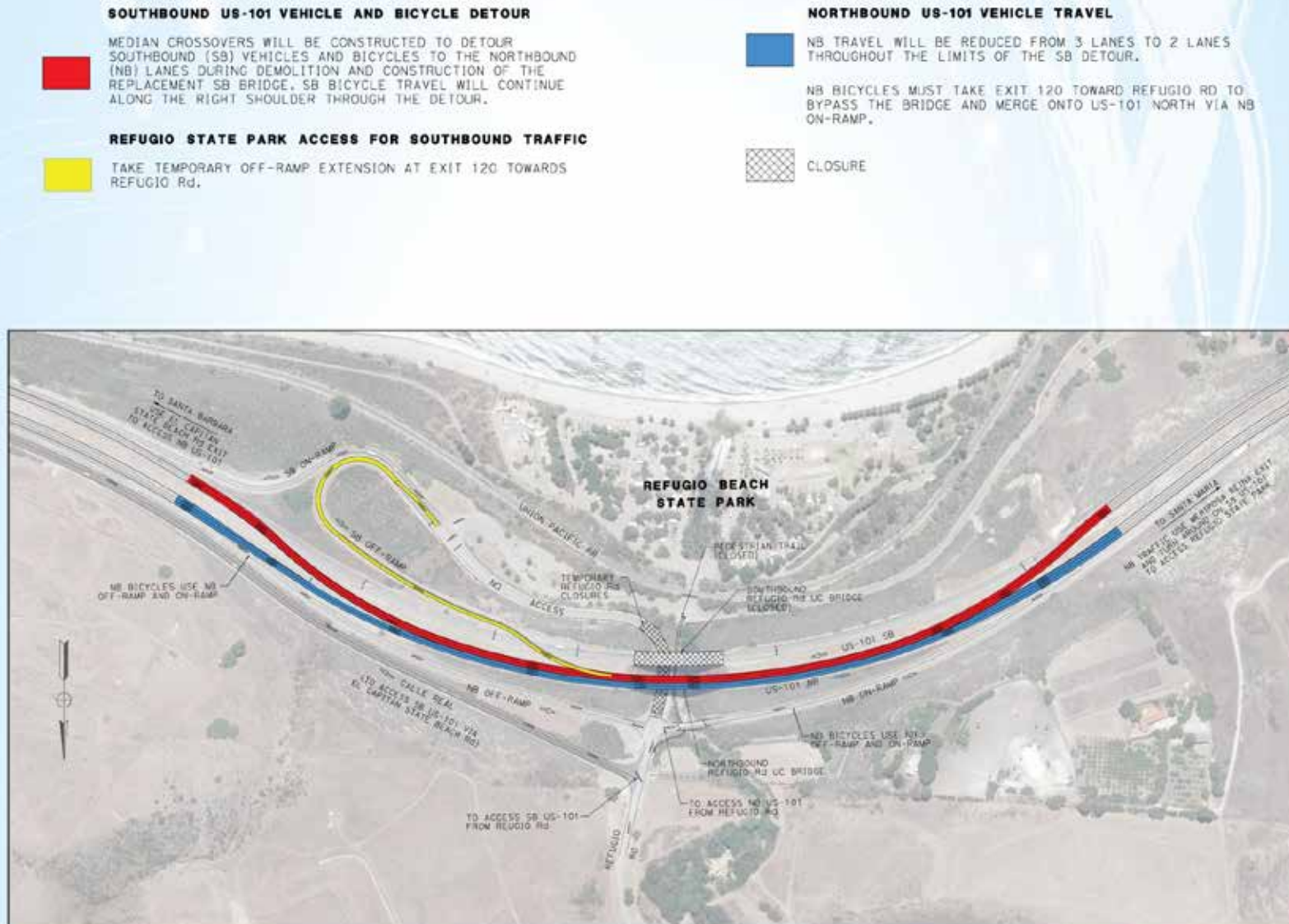
2. During other parts of the construction, Refugio Road would have only one lane open and would be under traffic control with up to 20 minute delays. This would apply to the portions of Refugio Road from the State Park to the Northbound ramp to Highway 101. This type of limited control could

Summary of Refugio Bridge Replacement Project

occur intermittently throughout the project life for various construction activities and worker safety. The need for lane closures on Refugio Road would likely be reduced if the no-span alternative is chosen.

3. During construction of the southbound bridge, a temporary southbound off ramp would be constructed from the northbound lanes that would have two short radius reversing curves. This would allow access to the State Park when Refugio Road is closed and to Calle Real when one or both lanes of Refugio Road under the bridge are open.
4. Currently Caltrans is not proposing any nighttime construction for the project.
5. Work on the area of the northbound on ramp to Highway 101 would involve the placement of a temporary K-rail that would narrow the width of the onramp to about 16-feet in order to replace the bridge rails on either side of the bridge. This narrowed on ramp would be in place for about eight months.
6. Two lanes of traffic would be maintained for north and southbound traffic on Highway 101. During construction of the southbound bridge all traffic would be routed to the existing northbound bridge. During construction of the northbound bridge, all traffic would be routed to the new southbound bridge. The northbound on and off ramps are not proposed to be closed. The southbound on ramp is not proposed to be closed. The southbound off ramp will have a temporary off ramp constructed when the southbound bridge is closed.

Summary of Refugio Bridge Replacement Project



Summary of Refugio Bridge Replacement Project

SOUTHBOUND US-101 VEHICLE AND BICYCLE TRAVEL

SOUTHBOUND (SB) VEHICLE AND BICYCLE TRAVEL IS NOT INTERRUPTED DURING THIS CONSTRUCTION STAGE.

REFUGIO STATE PARK ACCESS FOR SOUTHBOUND TRAFFIC

TAKE EXIT 120 TOWARD REFUGIO RD. CONTINUE ONTO REFUGIO RD TOWARD REFUGIO STATE BEACH.

NORTHBOUND US-101 VEHICLE DETOUR

MEDIAN CROSSOVERS WILL BE CONSTRUCTED TO DETOUR NORTHBOUND(NB) VEHICLES TO THE SB LANES DURING DEMOLITION AND CONSTRUCTION OF THE REPLACEMENT NB BRIDGE. NB TRAVEL WILL BE REDUCED FROM 3 LANES TO 2 LANES THROUGHOUT THE LIMITS OF THE SB DETOUR.

NB BICYCLES MUST TAKE EXIT 120 TOWARD REFUGIO RD TO BYPASS THE BRIDGE AND MERGE ONTO US-101 NORTH VIA NB ON-RAMP.

CLOSURE

