Addendum No. 2 to the
2008 La Paz Ranch
Final Environmental Impact Report
(SCH No. 2003011131)

La Paz Ranch
Coastal Development Permit Amendment (CDPA No. 17-009)
and Conditional Use Permit Amendment (CUPA 17-010)

Prepared by:

City of Malibu
23825 Stuart Ranch Road
Malibu, California 90265

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I. Introduction

This document is Addendum No. 2 to the La Paz Ranch Final Environmental Impact Report *(2008 EIR)* (State Clearinghouse No. 2003011131), which was certified by the Malibu City Council in November 2008. Addendum No. 1 to the 2008 EIR addressed environmental effects associated with Pacific Coast Highway and Cross Creek Road improvements which were approved by the Planning Commission on June 15, 2015. This Addendum addresses potential environmental impacts associated with Coastal Development Permit Amendment (CDPA) No. 17-009 and Conditional Use Permit Amendment (CUPA) No. 17-010, which propose to make modifications to the project that was approved on November 10, 2008 at 23465 Civic Center Way (*Approved Project*). The purpose of the Addendum is to determine whether project modifications would result in any new significant environmental impacts that were not identified in the 2008 EIR or whether the previously identified significant impacts would be substantially more severe under the alternatives.

Proposed changes to Parcels A and B of the La Paz Development Agreement Project are identified as the "*Revised Project*" in this Addendum. A slightly different *Revised Project*, the "*Alternative Revised Project,*" is also addressed in this Addendum to address an alternative project that would increase the proportion of restaurant space in the *Revised Project*. Neither project proposes increasing the Total Development Square Footage (TDSF) beyond the 112,058-square-foot maximum floor area approved in 2008. The *Revised Project* and *Alternative Revised Project* instead propose a modified design that includes one less building, a revised site layout and circulation pattern, updated architectural features, and other revisions. No changes to Parcel C, which is reserved for City use, are proposed nor are changes to the previously approved parcel boundaries.

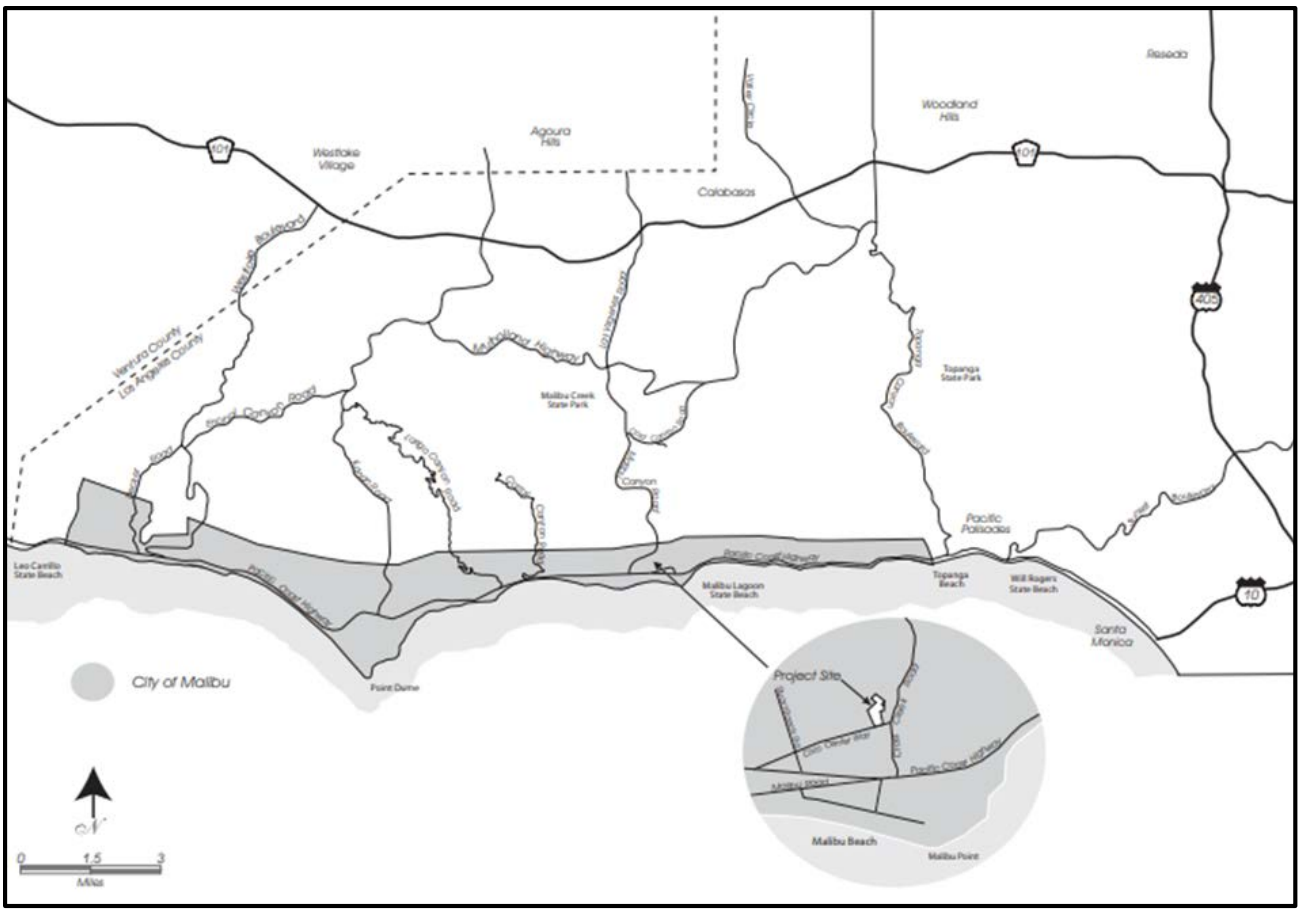
This Addendum has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the *CEQA Guidelines*. According to Section 15164 of the *CEQA Guidelines*, an Addendum to a previously certified EIR or Negative Declaration is the appropriate environmental document in instances when "only minor technical changes or additions are necessary" and when the new information does not require major revisions to the previous EIR, involve new or substantially increased significant environmental effects, or when mitigation measures previously determined to be infeasible are available, or new mitigation is identified which would substantially reduce one or more significant effects of the project. This Addendum describes the *Revised Project* and *Alternative Revised Project* and compares their impacts to those identified in the 2008 EIR for the *Approved Project*.

II. Background and Project Description

A. Project Site

The regional location of the project site is illustrated on Figure 1. The project site comprises approximately 15.2 acres of vacant land located at 23465 Civic Center Way in the Civic Center area of the City of Malibu. The project site is situated immediately north of Civic Center Way, east of the Malibu Library on the Los Angeles County Civic Center parcel, and west of the new Park at Cross Creek commercial center. Malibu Country Mart and other commercial uses are located across Civic Center Way south of the site. Open space and scattered residential homes are located to the north, northeast and northwest of the site.

Figure 1 ***– Regional Setting***



Source: La Paz Ranch 2008 EIR

Figure 2 ***– Project Location***



Source: City of Malibu GIS

The elevation of the project site ranges from approximately 20 feet above mean sea level (MSL) at the southern boundary of the site to 90 feet above MSL at the northern boundary of the site. The southern half of the site is relatively flat, while the northern half includes more sloping areas. The project site is vacant and includes little native vegetation. The site contains a variety of non-native weeds, shrubs and trees as well as a mature stand of California Sycamore trees, and small patches of native coastal sage scrub in the northern limit of the site. An existing private dirt road (La Paz Lane), that served a prior landscape/nursery use, provides access to the property from the south. Figures 3 and 4 include current representative photographs of the project site.

Figure 3 ***– View of Project Site from Civic Center Way Looking North***



Figure 4 ***– View from Central Project Site Looking North***



The project site currently consists of two irregular-shaped lots identified as Assessor Parcel Numbers 4458-022-023 and 4458-022-024, which include 6.43 acres and 8.82 acres, respectively. However, as part of the *Approved Project*, a lot line adjustment and land division were approved for the creation of three legal parcels as shown on Figure 5. These parcels are identified as Parcel A with 7.2 acres; Parcel B with 5.7 acres; and Parcel C with 2.3 acres. In addition, per the terms of the Development Agreement, Parcel C is to be transferred to the City together with a $500,000 payment to the City, construction of a pedestrian and bicycle path through the project site connecting to Civic Center Way, and dedication of a trail segment fronting Civic Center Way. On December 9, 2019, the City Council

authorized the acceptance of a Grant Deed conveying Parcel C to the City and the legal transfer of the property is in process at the time of preparation of this Addendum.

Figure 5 ***– Approved Parcel Map***



Source: La Paz Ranch Development Agreement FEIR, 2008

The project site is designated Community Commercial by the Malibu General Plan, the Local Coastal Program (LCP), and the Zoning Ordinance. In addition, the property is within the Town Center Overlay District, which establishes custom development criteria for the La Paz project site. The property is within the Coastal Zone but outside the Appealable Jurisdiction as depicted on the City of Malibu Post-LCP Certification Permit and Appeal Jurisdiction Map.

B. Background

On November 10, 2008, the City Council certified the La Paz Development Agreement Final EIR *(2008 EIR)* and approved two sets of development entitlements on the project site. The first set of entitlements included Coastal Development Permit (CDP) No. 05-106, Lot Line Adjustment No. 05-003, Site Plan Review Nos. 07-126, 07-127, 07-148 and 07-149, Minor Modification Nos. 07-044 and 07-045,

and Conditional Use Permits, 05-003, 07-018, 07-019 and 08-013 for a 0.15 floor area ratio (FAR) project for 99,117 square feet of commercial office and retail uses on Parcels A and B. The applicant allowed the 0.15 FAR entitlement to expire in 2016. The second set of entitlements included CDP No. 05-107, Development Agreement No. 07-001, LCP Amendment No. 06-003, Lot Line Adjustment 05-004 and CUP 05-004 which remain in effect for a 0.20 FAR Development Agreement project for construction of 112,058 square feet of commercial office and retail uses on Parcels A and B and three City buildings totaling 20,000-square-foot on Parcel C. The 0.20 FAR project provided the developer with an additional 12,941 square feet of commercial square footage compared to the 0.15 FAR project but it also included the conveyance of Parcel C to the City, a $500,000 payment to the City, construction of a pedestrian and bicycle path through the project connecting to Civic Center Way, and dedication of a trail segment fronting Civic Center Way.

The 0.20 FAR project included two legislative requests that required a Local Coastal Program Amendment (LCPA): 1) approval of a Development Agreement to allow the increase in allowable FAR from 0.15 to a 0.20; and 2) approval of a Town Center Overlay (TCO) to create specific development standards for the property. The Development Agreement assures the applicant that the rules in place at the time of approval remain in effect for the project in exchange for the public benefits outlined above. On March 10, 2010 the California Coastal Commission approved the Development Agreement and TCO with minor modifications. These actions were then approved by the City Council on April 12, 2010 and certified by the Coastal Commission on June 10, 2010.

In 2014, the La Paz applicant submitted an application for CDP No. 14-036 for intersection improvements to the Cross Creek Road / Pacific Coast Highway intersection. These improvements were required to implement Mitigation Measure K-2 of the 2008 EIR. An Addendum (Addendum No. 1) to the 2008 EIR was prepared which indicated there would be no new environmental impacts as a result of the roadway project beyond those outlined in the 2008 EIR. On June 15, 2015, the Planning Commission voted 5-0 to approve CDP No. 14-036 with the requirement that several mature trees and existing public street parking in the project area be preserved. The improvements were completed in 2018. In addition, improvements to the Webb Way and PCH intersection, and the Webb Way and Civic Center Way intersection required by Mitigation Measures K-1 and K-3 of the 2008 EIR have also been implemented.

In 2016, Malibu Development Company LLC acquired the La Paz Ranch project site intending to move forward with a slightly revised project on Parcels A and B. Because the modifications required approval by the City, the property owner submitted an application for a Coastal Development Permit Amendment (CDPA 17-009) and a Conditional Use Permit Amendment (CUPA 17-010) for the *Revised Project*. The CDPA allows for a modified development project, and the CUPA allows for the restaurant uses to be located anywhere within the proposed development on Parcel A and for establishments serving coffee and juice to open at 6:00 a.m. and for establishments serving breakfast to open at 7:00 a.m. The *Revised Project* would include the same land use mix and floor area (112,058 square feet) on Parcels A and B as the *Approved Project* with an updated design, one less building, slightly lowered building heights, reconfigured vehicular and pedestrian circulation, modified parking, and additional plazas.

In addition to the *Revised Project*, this EIR Addendum also addresses an *Alternative Revised Project*. The *Alternative Revised Project* would be identical to the *Revised Project* except that 10,000 square

feet of commercial retail space would be converted to restaurant use. The intent is to examine the environmental effects of a project with more restaurant space.

C. Summary of the *Approved Project*

Approved Project Overview

The *Approved Project* included the development of the 15.2-acre property into a commercial and municipal project with a total of 112,058 square feet of retail, restaurant and office space on Parcels A and B, and 20,000 square feet of additional floor area reserved for future City use on Parcel C (Figure 6).

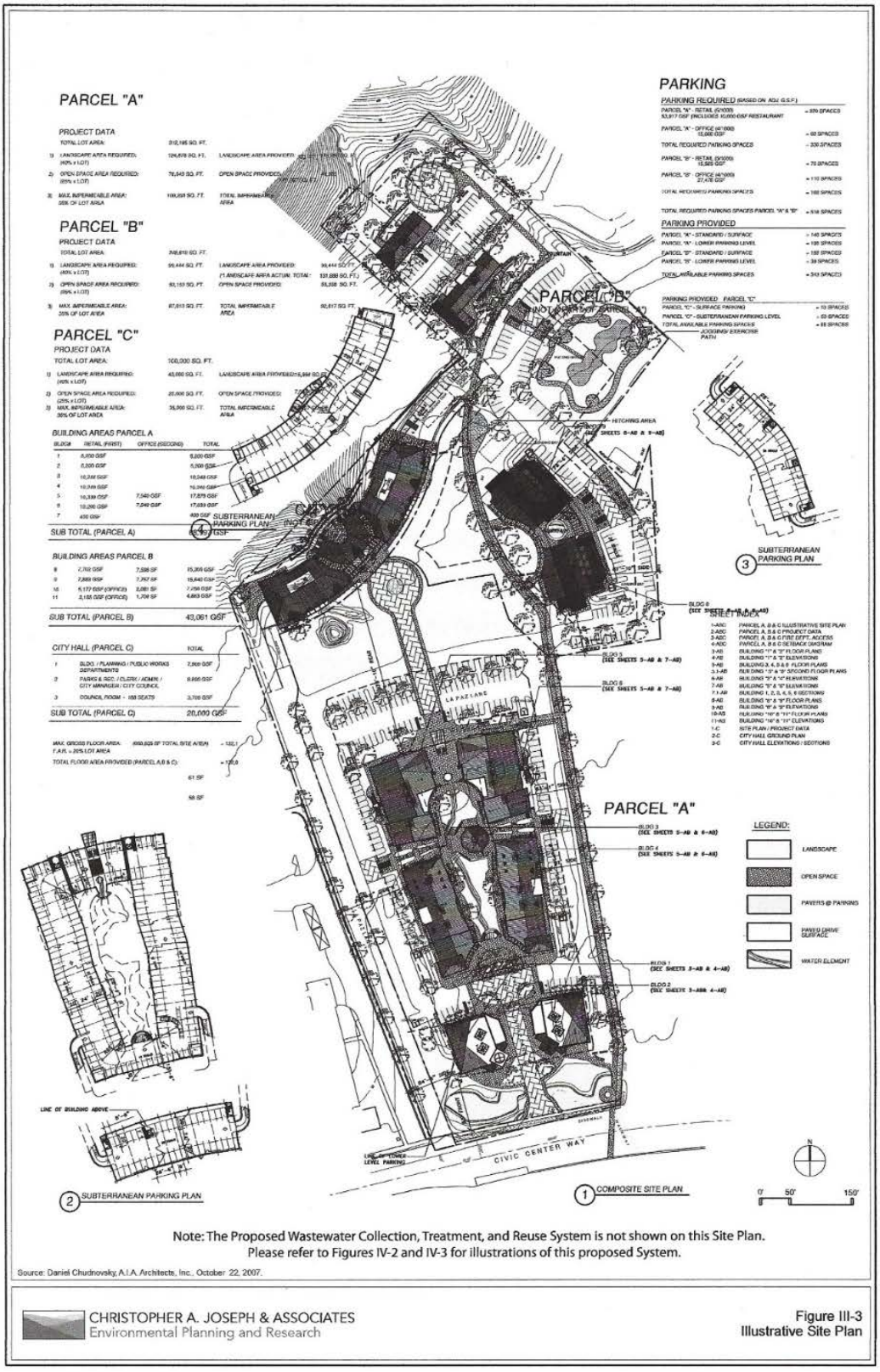
Vehicular access to Parcels A and B under the *Approved Project* would be via an ingress/egress driveway from Civic Center Way (identified as La Paz Lane). Parcel A would include 68,997 square feet of commercial office and retail space in seven buildings (identified as Buildings 1 through 7), including five single-story buildings and two 2-story buildings. Parcel B would include 43,061 square feet of commercial office and retail uses in four 2-story buildings (Buildings 8 through 11). The buildings would be a maximum of 32-feet in height, with floor areas ranging between 400 square feet and 17,879 square feet. The architecture was identified as Mediterranean including textured clay tile, wood trellises and exposed wood rafter tails.

The *Approved Project's* grading was designed to conform to the existing topography and minimize landform alteration to the greatest extent feasible. The estimated grading for Parcels A and B was 20,664 cubic yards (cy). Landscaping would utilize indigenous plant materials, water features, walkways, trails, plazas, and other hardscape components. In response to comments received on the 2008 EIR, additional landscaping was added along the northeastern property line to provide a landscaped buffer between the site and the adjacent residential property including a row of sycamore trees. Coast live oak trees, ornamental trees and ornamental flowering trees would also be planted within the commercial center to soften the building elevations and complement the nearby Malibu Creek corridor.

An On-Site Wastewater Treatment System (OWTS) was included in the *Approved Project*. The facility included a network of underground wastewater treatment tanks designed to remove solids, floatable oil and grease, and other water quality related constituents from the waste stream prior to discharging effluent on site. The effluent would be processed to tertiary treatment levels and would meet the requirements of the City of Malibu Uniform Plumbing Code and disposed into a system of leach fields and subsurface drip disposal areas.

Due to concerns about water pollution in Malibu Creek, Malibu Lagoon and Surfrider Beach, the Los Angeles Regional Water Quality Control Board approved a prohibition on septic systems in the Civic Center area in 2009. In response, the City constructed the Civic Center Water Treatment Facility which provides wastewater treatment in the area. The facility's Phase 1 improvements include a wastewater allocation of 11,945 gallons per day for the entire project site (including Parcels A, B and C) which is the anticipated wastewater generation of the *Approved Project*.

Figure 6 ***– Illustrative Site Plan - Approved Project***



Source: La Paz Ranch 2008 EIR

Table 1 **– Land Use Summary, *Approved Project***

PARCEL A		
Bldg. No.	Occupancy	Floor Area (Gross Sq. Ft.)
1	Retail	6,200
2	Retail	6,200
3	Retail	10,248
4	Retail	10,240
5	Retail/Office/Restaurant	17,879
6	Retail/Office/Restaurant	17,830
7	Retail	400
	Total Floor Area - Parcel A	68,997 (0.22 FAR)
PARCEL B		
Bldg. No.	Occupancy	Floor Area (Gross Sq. Ft.)
8	Office/Retail	15,300
9	Office/Retail	15,640
10	Office	7,258
11	Office	4,863
	Total Floor Area - Parcel B	43,061 (0.17 FAR)
PARCEL C		
Bldg. No.	Occupancy	Floor Area (Gross Sq. Ft.)
1	Bldg./Planning/Public Works Departments	7,500
2	Parks & Rec./Clerk/Admin./City Manager/City Council	8,800
3	Council Room- 188 seats	3,700
	Total Floor Area - Parcel C	20,000 (0.20 FAR)
	Overall Site Area Overall Floor Area	660,805 sf (15.2 acres) 132,058 sf (0.20 FAR)

Source: La Paz Ranch 2008 EIR

D. *Summary of the Revised Project* and *Alternative Revised Project*

Revised Project

The *Revised Project* involves revisions to the 0.20 FAR *Approved Project* and is not a reconsideration of the original project approval. The *Revised Project* site plan is illustrated in Figure 7. The *Revised Project* would maintain the overall size and scope of the *Approved Project* but make modifications to improve its design and functionality. Changes to Parcels A and B are proposed involving building layout, architecture and circulation within the approved size of 112,058 square feet of floor area. The 2.3-acre Parcel C would continue to be dedicated to the City of Malibu for a public benefit along with a $500,000 payment to the City to offset the cost of public improvements. Pedestrian paths would be provided to Parcel C along the western project boundary and through the main plaza area and a horse and bike trail would be provided along the eastern project boundary. In addition, a trail segment along Civic Center Way would be dedicated to the City. Table 2 below provides a comparison of land uses between the *Approved Project,* the *Revised Project* and the *Alternative Revised Project*.

Figure 7 ***– Illustrative Site Plan – Revised Project and Alternative Revised Project***



Source: Marmol Radziner, 2019

Table 2 – Development Summary: *Approved Project, Revised Project,* and *Alternative Revised Project*

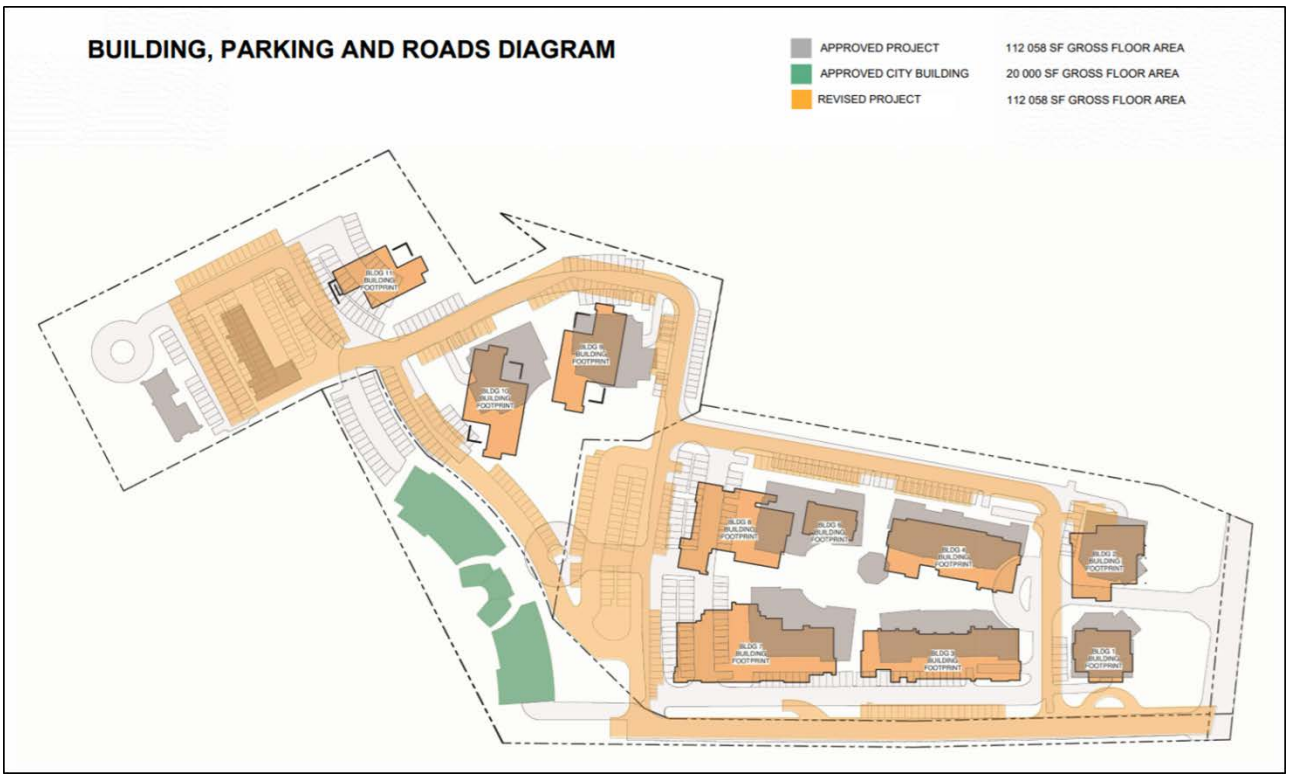
Parcels A & B	*Approved Project*	*Revised Project*		*Alternative Revised Project*	
		Proposed	Change	Proposed	Change
Land Area (sq. ft.)	560,805	566,002	5,197	566,002	5,197
Building Gross Floor Area (sq. ft.)	112,058	112,058	0	112,058	0
Building Footprint (sq. ft.)	74,367	93,913	19,546	93,913	19,546
Building Volume (cu. ft.)	1,809,412	1,860,602	51,190	1,860,602	51,190
Maximum Building Height (feet)	32	28	(4)	28	(4)
Number of Buildings	11	10	(1)	10	(1)
Building Gross Floor Area – Retail (sq. ft.)	59,502	59,502	0	49,502	(10,000)
Building Square Footage – Restaurant (sq. ft.)	10,000	10,000	0	20,000	10,000
Building Square Footage – Office (sq. ft.)	42,556	42,556	0	42,556	0
Landscaping Area (sq. ft.)	223,967	202,631	(21,336)	202,631	(21,336)
Open Space Area (sq. ft.)	89,553	112,725	23,172	112,725	23,172
Impermeable Area (sq. ft.)	247,285	288,102	40,817	288,102	40,817
Total Parking Spaces	518	519	1	519	1
Subterranean Parking Spaces	227	249	22	249	22
Surface Parking Spaces	291	270	(21)	270	(21)
Total Additional Optional Surface Parking Spaces	0	8	8	8	8
EV Parking Spaces	4	4	0	4	0
EV Ready Parking Spaces	0	28	28	28	28
Motorcycle Parking Spaces	0	8	8	8	8
Bicycle Parking Spaces	0	54	54	54	54
Grading (cu. yd.)	20,664	25,591	4,927	25,591	4,927

Source: Malibu Development Company LLC, 2019

Figure 8 provides a comparison of the building and road layout of the *Approved Project*, the *Revised Project* and the *Alternative Revised Project*. Under the *Approved Project*, Parcel A would be developed with retail, office and restaurant uses and would include seven single-story buildings with a total of 68,997 square feet around a main courtyard area. In the *Revised Project*, retail uses on Parcel B would be relocated to Parcel A while office uses from Parcel A would be relocated to Parcel B for a total floor area of 69,502 square feet of retail and restaurant uses on Parcel A with some of the floor area relocated to the ground floor which serves to reduce the height of the project and provides grade level access to each building.

Parcel B would be developed under the *Revised Project* with commercial office uses or other similar uses permitted in the Town Center Overlay Zone, such as gallery space. Parcel B would consolidate two of the buildings in the *Approved Project* and provide three instead of four buildings totaling 42,556 square feet. This would allow for a wider landscape buffer between the development and residential uses north of the project site.

Figure 9 ***– Comparison of the Approved Project and the Revised Project/Alternative Revised Project***



Source: Marmol Radziner 2019

Table 3 below provides a detailed summary of the uses and size of the proposed buildings for the *Revised Project* and *Alternative Revised Project*, compared with the *Approved Project*.

Table 3 – Land Use Comparison: *Approved Project, Revised Project*, and *Alternative Revised Project*

Approved Project			*Revised Project* and *Alternative Revised Project*		
Building No.	Occupancy	Floor Area (Gross Sq. Ft.)	Building No.	Occupancy	Floor Area (Gross Sq. Ft.)
Parcel A					
1	Retail	6,200	1	Retail / Restaurant	4,748
2	Retail	6,200	2	Retail / Restaurant	7,733
3	Retail	10,248	3	Retail / Restaurant	13,169
4	Retail	10,240	4	Retail / Restaurant	11,830
5	Retail / Office / Restaurant	17,879	7	Retail / Restaurant	17,413
6	Retail / Office / Restaurant	17,830	8	Retail / Restaurant	11,934
7	Retail / Restaurant	400	6	Retail / Restaurant	2,675
Subtotal Parcel A		68,997			69,502
Parcel B					
8	Office / Retail	15,300	9	Office / Gallery	15,818
9	Office / Retail	15,640	10	Office / Gallery	15,817
10	Office	7,528	11	Office / Gallery	10,921
11	Office	4,863	-	-	-
Subtotal Parcel B		43,061			42,556
Totals – Parcels A and B		112,058			112,058

Source: Malibu Development Company LLC, 2019

Restaurant Use

Like the *Approved Project*, the *Revised Project* would include 10,000 square feet of restaurant space. The applicant proposes a Conditional Use Permit Amendment (CUPA) to allow restaurant uses anywhere within the proposed development on Parcel A rather than being limited to the three buildings identified in the *Approved Project*. This is proposed to provide flexibility as tenants are identified and to allow an assortment of food service options ranging from sit-down restaurants to fast-casual/take-out dining and coffee and juice establishment throughout Parcel A. In addition, the *Approved Project* allowed food service from 9:00 a.m. to midnight Sunday through Thursday and 8:00 a.m. to 1:00 a.m. Friday and Saturday. The applicant is requesting that this condition be modified to allow coffee and juice establishments to open at 6:00 a.m. and dining establishments serving breakfast be permitted to open at 7:00 a.m., both seven days a week.

Architecture/Design

The *Revised Project* would include an updated design to what the applicant refers to as "Mediterranean Style with Modern Updates." Materials would include a mixture of wood siding, brick, stone veneer, and plaster in a natural palette of non-reflective finishes intended to blend in with the site's coastal setting. Roofs would consist of a mixture of low slope roofs, gable and shed-style roofs. Colors would be of a natural palette to blend in with the environment. Figure 10 below provides a rendering of the view to the main plaza area from La Paz Lane.

Figure 10 ***– Rendering Revised Project/Alternative Revised Project***



Source: Marmol Radziner

Grading

As outlined on Table 2, the *Revised Project* would involve 25,591 cubic yards of grading, which is 4,927 cubic yards more than the *Approved Project*. The additional grading is because the *Revised Project* would include substantially thicker concrete slab foundations in the subterranean parking garage which would necessitate additional excavation. Such understructure excavation is considered "exempt" from LCP and Zoning Code grading limitations.

Pedestrian Access

Pedestrian access would be separate and distinct from vehicular access, with dedicated pedestrian entrances at two locations along Civic Center Way. A sidewalk would be provided from Civic Center Way to Parcel C and several walkways would be provided in the central portion of the side in conjunction with pedestrian plazas, seating areas, sidewalks and pathways, a water feature and tot lot area. In addition, a multi-use trail would be provided along the eastern property boundary for biking, hiking and horse riding.

Vehicular Access/Parking

The *Revised Project* would consolidate the approved two entry points on Civic Center Way into one driveway at the southeastern corner of the project site. Other adjustments to access and driveways throughout the property would create greater separation of pedestrian and vehicular access. The former three separate subterranean parking garages would be consolidated into one central parking garage augmented by surface parking throughout the site. A total of 519 parking spaces would be provided including surface and subterranean spaces. Parking would include 4 electric vehicle charging stations and 28 electric vehicle ready spaces. Motorcycle and bicycle parking would also be provided.

Landscaping/Open Space

A comprehensive landscape plan would be implemented on-site including a mix of native species and drought-tolerant Mediterranean plants. The overall landscaping and open space square footage for the project would increase by approximately 695 square feet. Approximately 10 percent of the landscaping area has shifted to open space area to accommodate additional space for plazas, communal seating, and children's play areas/tot lots. In addition, the *Revised Project* would include landscape screening at the northeastern property line to provide additional privacy and screening to neighborhood residential uses.

Lighting/Signage/Fencing

Project lighting would include low level lighting along pathways and around the perimeter of the project with soft shielded landscape lighting in the central plaza. Pole mounted lighting would be provided along the vehicular roadways and within the parking areas of Parcel A and B and would be hooded to minimize light trespass in adjacent areas and the project has been conditioned to comply with the City's Dark Sky Ordinance.

The perimeter of the property would be secured by existing and new site walls and fencing. Existing site walls and fencing are currently located along the west side of Parcel A and the northeast area of Parcel B. The *Revised Project* would add and extend new sections of the site wall and fencing in these areas to blend with the existing conditions and secure these sections of the property. The perimeter to the north of Parcel B would be secured with 6-foot-high wrought iron fencing to discourage pedestrians from accessing the Malibu Knolls neighborhood on foot via the hillside, consistent with the *Approved Project*.

Wastewater Treatment

Unlike the *Approved Project*, which included an OWTS, *the Revised Project* would receive wastewater treatment from the new Civic Center Water Treatment Facility located approximately half a mile west

of the project site. The Treatment Facility is a centralized plant that treats, reuses and/or disposes of wastewater flows from properties in the Civic Center area. In addition, the Treatment Facility returns treated wastewater to the Civic Center area for use in irrigation systems and other gray water uses. Phase 1 of the facility has been designed to include 11,945 gallons per day in wastewater flows which is the anticipated flow from the *Revised Project*. In addition, the *Revised Project* would utilize some of the treated wastewater for irrigation and other gray water uses.

Revised Project - Required Approvals/Certifications

The *Revised Project* requires the following City of Malibu approvals/certifications:

1. Consideration of Addendum No. 2 to the La Paz Ranch 2008 EIR.
2. Approval of Coastal Development Permit Amendment (CDPA) No. 17-009.
3. Approval of Conditional Use Permit Amendment (CUPA) No. 17-010 to allow a) 10,000 square feet of restaurant space to be placed anywhere within the proposed development on Parcel A, and b) coffee and juice restaurants to begin operating at 6:00 a.m. and breakfast restaurants to begin operating at 7:00 a.m., seven days a week.

Alternative Revised Project

The *Alternative Revised Project* would be identical to the *Revised Project* in terms of size, number of buildings, design, architecture, landscaping, etc., except that it would convert an additional 10,000 square feet of retail space to restaurant use for a total of 20,000 square feet of restaurant space. The additional restaurant floor area is anticipated to be used for fast-casual restaurants and take-out restaurants, as well as coffee and juice establishments (or similar). Also, like the *Revised Project*, restaurant uses would be allowed to locate anywhere within the proposed development on Parcel A rather than being limited to the three buildings identified in the *Approved Project*. In addition, coffee and juice establishments would be allowed to open at 6:00 a.m. and dining establishments serving breakfast be permitted would be allowed to open at 7:00 a.m., both seven days a week.

The additional 10,000 square feet of restaurant space in the *Revised Alternative Project* would generate a need for additional 6,534 gallons per day of additional wastewater treatment capacity beyond what has been allocated to the site in Phase 1 of the Civic Center Water Treatment Facility. This Addendum assumes that the additional capacity would be acquired from another property with a Phase 1 allocation, or through a future expansion of the Civic Center Water Treatment Facility.

Alternative Revised Project - Required Approvals/Certifications

The *Alternative Revised Project* requires the following City of Malibu approvals/certifications:

1. Consideration of Addendum No. 2 to the La Paz Ranch 2008 EIR.
2. Approval of a Coastal Development Permit Amendment (CDPA).
3. Approval of a Conditional Use Permit Amendment (CUPA) to allow: a) the conversion of 10,000 square feet of commercial retail space to restaurant space, b) 20,000 square feet of restaurant space to be placed anywhere within the proposed development on Parcel A, and c) coffee and juice restaurants to begin operating at 6:00 a.m. and breakfast restaurants to begin operating at 7:00 a.m., seven days a week.

III. La Paz Ranch CEQA Process/EIR

The City of Malibu prepared the 2008 La Paz Ranch EIR (SCH No. 2003011131) in accordance with the requirements of CEQA and the CEQA Guidelines. The 2008 EIR analyzed environmental effects associated with the proposed 0.20 FAR *Approved Project* as well as a 0.15 FAR *Preferred Alternative* and the *No Project Alternative*. A Notice of Preparation (NOP) was filed with the California Office of Planning and Research and was distributed to involved public agencies and interested parties for a 30-day public review period on January 24, 2003. In addition, the Draft EIR was circulated for a 45-day public review period from September 28, 2006 to November 13, 2006. During the public review period, the City received comments from public agencies and private citizens. The comments letters and responses to comments, were included in the Final EIR, which was certified by the Malibu City Council on November 10, 2008.

The 2008 EIR determined that the 0.20 FAR *Approved Project* would have the following impacts:

Table 4 – *Approved Project* Summary of Impacts

Environmental Factor		Significance Level
A	Aesthetics/Views	Less than significant with mitigation.
B	Air Quality	Less than significant with mitigation.
C	Biological Resources/Open Space	*Potentially significant and unavoidable.*
D	Cultural Resources	Less than significant with mitigation.
E	Geology and Soils	Less than significant with mitigation.
F	Hydrology and Water Quality	Less than significant with mitigation.
G	Land Use and Planning	Less than significant with mitigation.
H	Noise (construction)	*Potentially significant and unavoidable.*
I	Public Utilities	Less than significant with mitigation.
J	Public Services	Less than significant with mitigation.
K	Transportation and Circulation	*Potentially significant and unavoidable.*
L	Environmental Hazards	Less than significant with mitigation

The 2008 EIR included a Mitigation Monitoring Program which outlines a number of mitigation measures needed to reduce the identified potentially significant effects. Implementation of the required mitigation measures would be effective in mitigating impacts in nine of the twelve environmental factors above to a level below significance. However, impacts related to *C. Biological Resources/Open Space; H. Construction Noise;* and *K. Transportation/Circulation* would remain potentially significant and unavoidable, as further described elsewhere in this Addendum. Therefore, the City Council adopted a Statement of Overriding Considerations (SOC) for the *Approved Project* as provided by CEQA. The SOC substantiated the City's decision to accept the unavoidable significant effects of the *Approved Project* when balanced against the significant positive benefits that would accrue from project development. Specifically, the SOC identified that the following overriding community benefits of the *Approved Project* would outweigh the significant impacts:

1. Provision of 2.3 acres in the Civic Center Area to the City of Malibu as the location of a future City Hall complex or other municipal use.
2. Donation of $500,000 to the City to help fund construction of the future City Hall complex or other municipal infrastructure.

3. Provision of a pedestrian and bike path from City Hall (Parcel C) throughout the project connecting to Civic Center Way.
4. Dedication of a trail segment fronting along Civic Center Way.
5. Preparation of architectural plans for the future City Hall complex at no cost to the City.
6. Provision of improvements to infrastructure including improvements to Pacific Coast Highway.
7. Fiscal benefits to the City's general fund.
8. Assistance in developing a "town center" that is geographically centrally located, provides interdependent uses thereby minimizing trips and enhances the existing Civic Center uses and permanently establish a City Hall in the Civic Center.

On November 10, 2008, the Malibu City Council voted certify the 2008 EIR for the 0.20 FAR *Approved Project* and adopted the SOC and MMRP.

IV. Environmental Impacts of the *Approved Project, Revised Project* and *Alternative Revised Project*

This section addresses each of the environmental issues discussed in the 2008 EIR to determine whether or not the proposed CDPA and CUPA have the potential to create new significant impacts or a substantial increase in the significance of a significant impact as compared to what was identified in the 2008 EIR. The discussion includes an assessment of Greenhouse Gas Emissions, which was previously not required to be addressed and therefore not included in the 2008 EIR. Table 5 below contains a summary of impacts comparing the *Approved Project* with the *Revised Project* and the *Alternative Revised Project*.

Table 5 - Comparison of Environmental Factors Between the *Approved Project*, *Revised Project* and *Alternative Revised Project*

Environmental Factor	*Approved Project*	*Revised Project*	*Alternative Revised Project*	Conclusion
A. Aesthetics/Views				
Scenic Views/Resources	LTS	LTS	LTS	No change
Visual Character/Quality	LTS	LTS	LTS	No change
Light and Glare	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
B. Air Quality				
Construction	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Operation	LTS	LTS	LTS	No change
Consistency with AQMP	NI	NI	NI	No change
C. Biological Resources				
Vegetation	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Wildlife	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
D. Cultural Resources				
Historic	NI	NI	NI	No change
Archaeological	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Paleontological	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Human Remains	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
E. Geology and Soils				
Grading/Geotechnical Hazards	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Groundshaking/Seismicity	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Secondary Effects of OWTS	LTS/Mitigation	Reduced Impact	Reduced Impact	Reduced impact
F. Greenhouse Gas Emissions				
Greenhouse Gas Emissions	N/A	LTS	LTS	No change
Consistency with Plans, Policies and Regulations	N/A	LTS	LTS	No change
G. Hydrology and Water Quality				
Hydrology/Flooding	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
On-Site Drainage	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Water Quality	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
H. Land Use and Planning				
General Plan Consistency	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Zoning Ordinance Consistency	LTS/Mitigation	LTS	LTS	No change
Local Coastal Plan Consistency	LTS	LTS	LTS	No change

Environmental Factor	*Approved Project*	*Revised Project*	*Alternative Revised Project*	Conclusion
I. Noise				
Construction Impacts	SA	SA	SA	No change
Operational Impacts	LTS	LTS	LTS	No change
J. Public Utilities				
Elect., Nat Gas & Solid Waste	LTS	LTS	LTS	No change
Water	LTS	LTS	LTS	No change
Wastewater	LTS	LTS	LTS	No change
K. Public Services				
Fire	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
Police	LTS/Mitigation	LTS/Mitigation	LTS/Mitigation	No change
L. Transportation and Circulation				
Temporary Impacts	LTS	LTS	LTS	No change
Intersection/Roadway Segments	SA	SA	SA	No change
Conflict with CMP	LTS	LTS	LTS	No change
Parking	LTS	LTS	LTS	No change
M. Environmental Hazards				
Create Public Hazard	LTS/Mitigation	LTS/Mitigation	LTS/mitigation	No change
Located on Hazardous Site	No Impact	No Impact	No Impact	No change

SA = Significant and Unavoidable
PSI = Potentially Significant Impact
LTS/Mitigation = Less than significant with mitigation
LTS = Less than significant
NI = No Impact

Table 5 above outlines that the *Revised Project* and the *Alternative Revised Project* would have the same or reduced environmental impacts as the *Approved Project*.

The following pages provide a discussion of the environmental impacts outlined in the 2008 EIR for the *Approved Project*, compared with those anticipated by the *Revised Project* and *Alternative Revised Project*.

A. Aesthetics/Views

Approved Project – Summary of Impacts

Scenic Views/Resources

The 2008 EIR identified that the *Approved Project* would be visible from local and distant viewing locations such as City streets and the Santa Monica Mountains, as well as nearby residential and commercial development in these areas. However, the *Approved Project* would not obstruct any public scenic views. The *Approved Project* would also be screened by existing trees and vegetation on the north and would not obstruct private views from these areas. Thus, the *Approved Project's* impact on scenic views would be less than significant. In addition, the project site is not located within a designated scenic highway and would not damage scenic resources along a scenic highway. Thus, the *Approved Project* would not have an impact on scenic resources.

Visual Character/Quality

The 2008 EIR for the *Approved Project* concluded that the project would be consistent with the size, design and height with surrounding development including existing commercial development which is of a similar height, bulk and scale. In addition, the *Approved Project* would be partially screened by topography, vegetation and existing development within the Civic Center area. As such, the 2008 EIR determined that the *Approved Project* would have a less than significant impact on visual character and quality.

Light and Glare

The 2008 EIR determined that the *Approved Project* could have a potentially significant impact on light and glare. Nighttime lighting of the commercial center could negatively affect surrounding properties and some of the building materials and automobile windshields could be a source of new daytime glare. In order to mitigate potential light and glare impacts, the *Approved Project* incorporated Mitigation Measures A-1, A-2 and A-3 which require extensive landscaping, the use of non-reflective building materials and low-level lighting as well as lighting directional shields. In addition, Mitigation Measure A-1 was amended following the 2008 EIR Public Review Period to require the applicant to plant a row of sycamore trees 15 feet apart on center at the northeastern property boundary and Australian willow and coast live oak around buildings 10 and 11, west of the road. With the incorporation of Mitigation Measures A-1 through A-3, as amended, the *Approved Project*'s impact on light and glare would be less than significant.

Revised Project – Summary of Impacts

The *Revised Project* would maintain the overall floor area of the *Approved Project* with an updated architectural design, minor modifications to the site plan, slightly lowered building heights, the addition of open space and plaza areas and other minor modifications. The overall development footprint would be reduced, and the landscaping and open space area would be increased by approximately 1,836 square feet. Like the original *Approved Project*, the alternative would have a less than significant impact on scenic vistas and visual character. In addition, as there are no scenic resources on or near the project site, the *Revised Project* would not adversely impact scenic resources.

Regarding light and glare, the *Revised Project* would incorporate Mitigation Measures A-1 through A-3 identified in the 2008 EIR which include extensive landscaping, the use of non-reflective building materials, low-level lighting and directional shields. In addition, the applicant has agreed to a condition requiring compliance with the City's recent Dark Sky Ordinance to reduce nighttime light pollution and preserve dark skies. With the incorporation of this condition and Mitigation Measures A-1 through A-3, impacts related to light and glare would remain less than significant.

Alternative Revised Project – Summary of Impacts

Same as the *Revised Project*. The *Alternative Revised Project* would have the same physical site design, layout and buildings as the *Revised Project*. As such, potential impacts would be the same and a condition requiring compliance with the Dark Sky Ordinance and Mitigation Measures A-1 through A-3 would be applied to ensure that impacts related to light and glare would remain less than significant.

B. Air Quality

Approved Project – Summary of Impacts

Construction

The 2008 EIR identified that the *Approved Project* would generate pollutant emissions from: 1) grading and excavation, 2) construction workers traveling to and from the project site, 3) delivery and hauling of construction supplies and debris to and from the project site, 4) the fuel combustion by on-site construction equipment, and 5) architectural coatings. These activities would create emissions of dust, fumes, equipment exhaust and other air contaminants, of which particulate matter (PM_{10}) related to fugitive dust emissions was considered to be the most significant source of air pollution related to construction.

The 2008 EIR concluded that impacts related to construction emissions would be less than significant. However, to ensure proper implementation of the South Coast Air Quality Management District's (SCAQMD) Rule 403 regarding fugitive dust abatement, the 2008 EIR included Mitigation Measures B-1 through B-10 requiring the utilization of various dust abatement techniques during construction. With the incorporation of Mitigation Measures B-1 through B-10, the 2008 EIR concluded that impacts related to construction emissions would be less than significant.

Operation

The Approved Project would also generate pollutant emissions during operation of the project, primarily related to the use of motor vehicles. The 2008 EIR determined that mobile emissions would not exceed any of the SCAQMD significant thresholds for criteria pollutants. In addition, the localized Carbon Monoxide (CO) emissions associated with the *Approved Project* would not exceed applicable standards or adversely affect sensitive receptors. Thus, impacts related to operational emissions associated with the *Approved Project* were determined to be less than significant.

Consistency with Air Quality Management Plan (AQMP)

The City of Malibu is subject to the SCAQMD Air Quality Management Plan (AQMP). The *Approved Project* would not result in an increase in frequency or severity of existing air quality violations, cause new violations or delay the attainment of air quality standards. In addition, the *Approved Project* would not exceed the land use and build-out assumptions contained within the AQMP. Thus, the 2008 EIR determined that the *Approved Project* would be consistent with the AQMP and no impacts would result.

Revised Project – Summary of Impacts

The *Revised Project* would include the same floor area and land use mix as the *Approved Project* with a slightly modified layout and design and slightly increased grading quantities. To ensure the *Revised Project* would not have an adverse air quality impact, an updated air quality analysis was conducted by Eyestone Environmental in 2019 (Attachment C). The analysis included updated projected emissions for the site using the updated model recommended by SCAQMD (CalEEMod) as well as a change in buildout year which assumes that emissions decrease as vehicles become cleaner over time. In

addition, the analysis looked at localized significance thresholds (LSTs) which were recommended for analysis subsequent to preparation of the 2008 EIR.

The updated air quality analysis identified that the *Revised Project*, like the *Approved Project*, would generate dust, fume equipment exhaust and other air contaminants during construction. Of these, PM_{10}, (a small size particulate matter) would remain the most significant source of air pollution, particularly during site preparation and grading. Although construction emissions would remain less than significant, Mitigation Measures B-1 through B-10 would remain in effect and ensure that SCAQMD Rule 403 regarding fugitive dust abatement would be properly implemented.

Regarding the operational phase of the *Revised Project*, air quality emissions resulting from the project would not exceed any SCAQMD regional air pollutant emission threshold or exacerbate any existing violations of the State one- and eight-hour CO concentration standards. In addition, the *Revised Project* would not create new violations or delay attainment of air quality standards or exceed the land use/build-out assumptions of the AQMP. Thus, air quality impacts related to the operational phase of the *Revised Project* would be less than significant.

Alternative Revised Project – Summary of Impacts

The *Alternative Revised Project* would include the same floor area and the same slightly modified design as the *Revised Project* except that 10,000 square feet of commercial retail space would be converted to restaurant use. The updated air quality analysis conducted in 2019 analyzed the air quality impacts related to increasing restaurant space on the site. The analysis determined that during construction, the *Alternative Revised Project* would not increase the intensity of proposed construction activities and thus would not increase construction-related pollutant emissions. However, Mitigation Measures B-1 through B-10 would remain in effect and ensure that construction-related air quality impacts would be less than significant.

During operation, the *Alternative Revised Project* would not result in any new impacts, increase the severity of any previously identified impacts, or delay attainment of air quality standards. In addition, the *Alternative Revised Project* would not exceed the land use or build-out assumptions of the AQMP. EIR. The *Alternative Revised Project* would result in slight changes (increases and decreases) to some of the peak hour traffic volumes on local streets; however, these would not exceed or exacerbate any air quality standards.

C. Biological Resources

Approved Project – Summary of Impacts

Vegetation

As identified in the 2008 EIR, there were no sensitive flora, wetlands or other jurisdictional features on the project site and no impacts to these resources would result. The *Approved Project* would remove all non-native Eucalyptus trees and non-native annual grasslands. The removal of Eucalyptus trees was considered a beneficial result of the project and the loss of non-native grasslands would be offset by project landscaping in the undeveloped areas of the site.

The 2008 EIR identified that the *Approved Project* would remove all native hillside coastal sage scrub habitat on-site. The loss of coastal sage scrub was considered a potentially adverse

significant impact due to the limited extent of that habitat on-site. Mitigation Measure C-7 required contribution to a coastal sage scrub restoration program in the Santa Monica Mountains on a 1:1 creation or 2:1 enhancement (per acre) basis. Mitigation Measure C-8 required contribution to an established conservation organization or governmental agency in the Santa Monica Mountains to assist with purchase and set-aside of existing coastal sage scrub habitat on a 2:1 per acre basis. With the incorporation of Mitigation Measures C-7 and C-8, the impact related to coastal sage scrub habitat was determined to be temporary and less than significant.

The *Approved Project* would also remove all native sycamore woodland relic cells (six trees) from the site which constitutes a potentially significant impact to native protected tree species. However, Mitigation Measure C-6 required that all sycamores removed on-site be replaced at a 10:1 ratio in accordance with the City's LCP Native Tree Mitigation Plan. With the incorporation of Mitigation Measure C-6, impacts to native protected trees would be temporary and less than significant.

Wildlife

No endangered or threatened wildlife species were observed on the La Paz Ranch project site, therefore, no impacts to protected species would occur. The presence of nesting birds was not observed at the time of the field surveys completed for the La Paz Project. However, the absence of nesting birds at the time of observation did not preclude the possibility that nesting birds would be present at the time of construction activities. As such, any inadvertent destruction of active bird nests during the construction period would result in a significant and adverse environmental impact and would be in conflict with the Migratory Bird Treaty Act and the Fish and Game Code. In addition, the *Approved Project* could adversely impact low mobility organisms (burrowing mammals, reptiles, etc.) during construction. These potential impacts would be reduced to less than significant levels by Mitigation Measures C-1 through C-5 which would restrict construction during the bird nesting season and require monitoring by a qualified biologist and the use of native vegetation, among other measures.

***Revised Project* – Summary of Impacts**

The *Revised Project* would include the same floor area as the *Approved Project* with one less building and a slightly reduced development footprint. Like the *Approved Project*, the *Revised Project* would remove all non-native Eucalyptus trees, non-native annual grasslands, coastal sage scrub habitat and native sycamore woodland relic cells and have the same potentially significant impacts as the *Approved Project* due to loss of coastal sage scrub habitat and sycamores affecting nesting birds if they are present at the time of construction, as well as low mobility organisms. However, the incorporation of Mitigation Measures C-1 through C-8 requiring the replacement of sycamores, contributions to coastal sage scrub preservation programs, biologic monitoring, the use of native plants in landscaping and implementation of low level lighting would reduce potential impacts to vegetation and wildlife to less than significant levels.

***Alternative Revised Project* – Summary of Impacts**

Same as the *Revised Project*. The *Alternative Revised Project* would be identical to *Revised Project* except that 10,000 square feet of commercial retail space would be converted to restaurant use. Thus,

impacts related to biological resources would be the same and would remain less than significant with the incorporation of Mitigation Measures C-1 through C-8.

D. Cultural Resources

Approved Project – Summary of Impacts

Historic Resources

The 2008 EIR indicated there are no Historic Resources on the project site. Thus, the *Approved Project* would have no impact on historic resources.

Archaeological Resources

Archeological field investigations and a cultural research record search conducted on the project site in conjunction with the preparation of the 2008 EIR concluded there were no observable or recorded cultural resources known to exist on the site. Thus, the 2008 EIR concluded that damage to, or destruction of, archeological resources would not occur. However, as there is the potential to uncover archaeological remains during excavation and/or surface grading activities, the *Approved Project* included Mitigation Measure D-1 which states: "In the event that archaeological resources are encountered during the course of grading or construction, all development must temporarily cease in these areas until the resources are properly assessed and subsequent recommendations are determined by a qualified consultant." Therefore, with the incorporation of Mitigation Measure D-1, the 2008 EIR concluded that impacts to archaeological resources would be less than significant.

Paleontological Resources

The 2008 EIR indicated there are no paleontological resources known to exist on the project site. However, in the event that prehistoric artifacts are discovered during excavation and/or surface grading activities, the 2008 EIR included Mitigation Measure D-2 requiring that construction activities in the affected area cease until written authorization is granted by the City of Malibu Planning Manager.

Human Remains

Archeological field investigations and record searches conducted on the project site indicated there are no known human remains on the property. However, because there is the potential to uncover human remains during excavation and/or surface grading activities, 2008 EIR included Mitigation Measure D-2 which requires that in the event that human remains are discovered, they shall not be moved until the County Coroner and Native American Heritage Commission are notified and determine the appropriate disposition in accordance with State law any affected Native American Tribe(s). With the incorporation of Mitigation Measure D-2, potential impacts to human remains would be less than significant.

Revised Project – Summary of Impacts

As outlined above, there are no historic resources on the project site. Therefore, the *Revised Project* would have no impact on historic resources. Regarding cultural, paleontological and human remain resources, in order to confirm the that no resources have been identified on the site since the prior

studies were conducted, a new record search was conducted in 2019. The record search confirmed that no cultural resources are known to exist on the site. However, in the event that cultural, paleontological, or human remain resources are discovered during excavation and grading activities, Mitigation Measures D-1 and D-2 would remain in effect and require the appropriate handling and disposition of the resources. With the incorporation of Mitigation Measures D-1 and D-2, the *Revised Project's* impacts related to cultural and paleontological resources and human remains would be less than significant.

Alternative Revised Project – Summary of Impacts

Same as the *Revised Project*, the *Alternative Revised Project* would not adversely impact any known historic, cultural, paleontological, or human remain resources. Mitigation Measures D-1 and D-2 would remain in effect and ensure that any resources discovered during grading activities would be appropriately handled and impacts would be less than significant.

E. Geology and Soils

Approved Project – Summary of Impacts

Grading/Geotechnical Hazards

The *Approved Project* would involve approximately 20,664 cubic yards (cy) of grading on Parcels A and B. The majority of the grading would be for three subterranean parking structures which would also require shoring and dewatering during the construction process. In addition, substantial remedial grading would be required to address ground settlement and flood hazards. The *Approved Project* was designed in accordance with current geotechnical standards and the 2008 EIR included Mitigation Measures E-1 through E-8 which required the incorporation of certain geotechnical techniques as well as documentation and development in accordance with acceptable geologic standards. Implementation of these mitigation measures will ensure that impacts related to grading and geotechnical hazards would be less than significant.

Groundshaking/Seismicity

The project site is underlain by native soil and bedrock deposits. The site is not located within a designated Alquist-Priolo Special Study Fault. However, the Malibu Coast Fault has been mapped in the area. Geotechnical investigations conducted in conjunction with preparation of the 2008 EIR determined there is no evidence that the Malibu Coast Fault extends onto the project site. Nonetheless, Southern California is a seismically active area and groundshaking at the project site resulting from a moderate to major earthquake (magnitude 6.0 or greater) can be expected during the life span of *the Approved Project*. Surface rupture potential is considered low to moderate and potential adverse impacts from ground rupture would be minimized with adequate setbacks and geotechnical engineering techniques. In addition, Mitigation Measure E-5 requires that the structural engineer certify that the buildings can tolerate the anticipated total and differential movements. Also, Mitigation Measures E-1 through E-4 and E-6 and E-7 require the incorporation of specific geotechnical techniques and documentation, as well as development in accordance with acceptable geologic standards. With the implementation of these measures, impacts related to groundshaking and seismicity would be less than significant.

Secondary Effects of the Proposed On-Site Wastewater Treatment System (OWTS)

The *Approved Project* included an OWTS for the site including wastewater collection, treatment, and non-potable wastewater reuse in toilets and within landscaped areas. 100% of the wastewater effluent would be treated to a tertiary quality resulting in a net zero discharge to groundwater. The proposed system was designed in accordance with local regulations and the City's Geologist approved the proposal in concept. Mitigation Measure E-9 requires that the applicant obtain a final construction plan approval for the proposed OWTS and meet local state and regional requirements. With the incorporation of Mitigation Measure E-9, potential impacts would be less than significant.

It should be noted that since approval of the *Approved Project*, the State has imposed a prohibition on septic systems in the Civic Center area and the OWTS is no longer allowed. Thus, connection to the Civic Center Water Treatment Facility is required and the Facility includes adequate treatment capacity for the *Approved Project*.

***Revised Project* – Summary of Impacts**

The *Revised Project* would include the same land use mix and floor area as the *Approved Project* with a slightly modified layout and design as well as 10 buildings instead of 11. Grading would include 25,591 cu. yd. on Parcels A and B which would be 4,927 cu. yd. more than the *Approved Project*. The additional grading relates to the fact that the proposed parking garage would have a thicker concrete slab foundation than the approved garages and would require additional excavation. However, no geological impacts are expected to result from the additional grading. In addition, like the *Approved Project*, the proposed subterranean garage would require shoring and temporary dewatering during construction and would adhere to all geotechnical standards. In addition, Mitigation Measures E-1 through E-8 would remain in effect and require that specific geotechnical recommendations are incorporated into the *Revised Project*. With the incorporation of these measures, impacts related to grading and geotechnical hazards would be less than significant.

The *Revised Project* would be similarly affected by groundshaking and seismicity as the *Approved Project.* Mitigation Measures E-1 through E-8 would remain in effect requiring the incorporation of certain geotechnical techniques and documentation, including a requirement that the structural engineer certify that the buildings can tolerate the anticipated total and differential movements. With the incorporation of these measures, impacts related to groundshaking and seismicity would be less than significant.

Unlike the *Approved Project,* the *Revised Project* would not include an OWTS and would have no impacts related to this issue. Instead, wastewater generated on the project site would be treated by the new Civic Center Water Treatment Facility, located approximately half a mile to the west. As such, the *Revised Project* would not have any secondary effects related to the construction and operation of an OWTS on the site. In addition, Mitigation Measure E-9 in the 2008 EIR requiring approval of a construction plan for the on-site facility would not be applicable.

***Alternative Revised Project* – Summary of Impacts**

The *Alternative Revised Project* would be identical to *Revised Project* except that 10,000 square feet of commercial retail space would be converted to restaurant use. As such, the *Alternative Revised Project*

would have the same, less than significant impacts related to grading, geotechnical hazards and groundshaking/seismicity with the incorporation of Mitigation Measures E-1 through E-8.

F. Greenhouse Gas Emissions

Approved Project – Summary of Impacts

The earth's atmosphere is a collection of atmospheric gases, known as greenhouse gases (GHGs) that trap a sufficient amount of solar energy to keep the global average temperature in a suitable range. These gases, mainly water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3) and chlorofluorocarbons (CFCs) all act as effective global insulators, reflecting back to earth visible light and infrared radiation. Human activities such as producing electricity and driving vehicles have contributed to the elevated concentration of these gases in the atmosphere. This, in turn, is causing the earth's temperature to rise. A warmer earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

The 2008 EIR did not address GHG emissions as they were not a required topic of analysis under CEQA at the time. GHG impacts were added to the required list of issues to be evaluated under CEQA subsequent to preparation of the EIR.

Revised Project – Summary of Impacts

As previously identified, the *Revised Project* includes the same development intensity and land use mix as the *Approved Project*. Additional grading associated with the *Revised Project* would have a negligible effect on GHG emissions. As such, the *Revised Project* would generate roughly the same amount of GHG emissions as the *Approved Project* and would not significantly increase GHG emissions generated by the site. In addition, the *Revised Project* would include a number of design features that would further reduce GHG generation, including the incorporation of energy-efficient equipment, appliances and lighting; provisions allowing for the future installation of photovoltaic panels; the provision of parking for alternative-fuel vehicles; and the installation electric vehicle charging stations.

Although the *Revised Project* would not increase GHG emissions from the site when compared to the *Approved Project*, a GHG Analysis was conducted by Eyestone Environmental in 2019 to evaluate the effect of GHG emissions generated by the *Revised Project* on the environment, and whether the *Revised Project* would conflict with any applicable plans, policies or regulations adopted for the purpose of reducing GHG emissions. CEQA does not include levels of significance for GHG emissions, rather it encourages local agencies to adopt their own significance thresholds. No thresholds have been adopted by the State, SCAQMD, or the City of Malibu that would apply to the project site. However, SCAQMD did release draft guidelines regarding interim CEQA GHG significance thresholds for mixed-use residential/commercial development projects. These guidelines state that projects that emit less than 3,000 metric tons of GHGs ("$MTCO_2e$") per year are assumed to have a less than significant GHG impact. Although not directly applicable to the proposed commercial development project, in the absence of other thresholds, these guidelines were applied to the site. The analysis concluded that with the design features outlined above, the *Revised Project* would generate emissions of 2,903 $MTCO_2e$ per year which is less than the 3,000 $MTCO_2e$ per year SCAQMD screening level. Thus, the *Revised Project* would have a less than significant impact related to GHG thresholds.

Regarding applicable plans, policies and regulations adopted for the purpose of reducing GHG emissions, the *Revised Project* was evaluated for consistency with the California Air Resources Board's (CARB) Climate Change Scoping Plan; the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy; and the City of Malibu General Plan Conservation Element. The analysis determined that the *Revised Project* would comply with the GHG emission reduction goals and objectives of all these documents and would therefore have a less than significant impact related to conformance with GHG plans, policies and regulations.

***Alternative Revised Project* – Summary of Impacts**

The incremental changes in projected peak-hour trip generation resulting from *Alternative Revised Project* would result in a negligible changes in GHG emissions compared with the *Revised Project*. Therefore, like the *Revised Project*, the *Alternative Revised Project* would have less than significant GHG impacts. In addition, the *Alternative Revised Project* would include the same energy efficient project design features as the *Revised Project* which would further serve to reduce GHG emissions.

G. Hydrology and Water Quality

Approved Project – Summary of Impacts

Hydrology/Flooding

As outlined in the 2008 EIR, Parcel A is located in FEMA Flood Zone A0 which means that it is prone to flooding up to depths of two feet while Parcel B is prone to flooding up to depths of one foot. The *Approved Project* was designed so that finished floor heights would be raised well above the FEMA flood levels which would avoid any potential flooding impacts. In addition, the parking garage walls would be installed with subdrain pipes connected to a sump system that would collect any accumulated water as well as flood waters in the unlikely event of an emergency. With the incorporation of these measures, impacts related to hydrology and flooding would be less than significant.

On-Site Drainage

The *Approved Project* would include a storm drain system to handle runoff and stormwater from the site. The system would include reinforced concrete pipes (RCP) along the east and west sides of the project site which would carry runoff from box culverts and inlets throughout the site to a drainage basin with man-made treatment wetlands in the southern portion of the project site. The system was designed to accommodate water flow and debris from the watershed area north of the project site during a 50-year storm. The *Approved Project* incorporated Mitigation Measures F-1 through F-3 and F-5 through F-8 which require compliance with local, regional and state stormwater regulations, preparation of a Water Quality Management Plan (WQMP), the incorporation of best management practices (BMPs) related to stormwater and the long-term maintenance of the water treatment wetlands. With the incorporation of these measures, impacts related to on-site drainage would be less than significant.

Water Quality

Construction

During grading and construction, the *Approved Project* has the potential to carry sediment and pollutants, such as vehicle fluids and solvents, into the storm water system. Mitigation Measure F-1 was applied to the *Approved Project* requiring compliance with all requirements of the National Pollution Discharge Elimination System (NPDES) including development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), conducting regular inspections of the stormwater system and installation of BMPs to prevent downstream impairment during grading and construction. These measures would monitor and ensure that the *Approved Project* would not adversely affect downstream water quality during construction and impacts would be less than significant.

Operation

The *Approved Project* has the potential to contribute pollutants to the storm water system, and ultimately the ocean, during operation of the project as well as construction. As outlined in the 2008 EIR, the Environmental Protection Agency considers parking lots to be the primary source of storm water pollution in urban areas. The *Approved Project* would incorporate Mitigation Measures F-1 through F-8 requiring that the project comply with the post-construction water quality requirements of the LCP including development and implementation of a Water Quality Management Plan (WQMP) and best management practices. With these requirements, the 2008 EIR concluded that impacts related to water quality during operation of the *Approved Project* would be less than significant.

As previously identified, the *Approved Project* included a private OWTS to collect, treat and reuse wastewater generated on the site. However, the OWTS is no longer allowed as part of the project dues to the State's prohibition on septic systems in the Civic Center Area. Nonetheless, the original OWTS system was designed to provide no net discharge to the groundwater system. However, in the event the system operated outside of its specifications, the 2008 EIR examined a scenario where "off-spec" wastewater was discharged through the drip irrigation system for a period of 20 days. The applicant was required to provide a Title 22 Engineering Report to the State of California demonstrating that the OWTS has been appropriately designed commensurate with the anticipated wastewater generation and that the distribution and use of treated wastewater would not create a health hazard. With compliance with all applicable regulations, the EIR determined that impacts related to the discharge of "off-spec" water would be less than significant.

***Revised Project* – Summary of Impacts**

Like the *Approved Project*, the *Revised Project* would include raised finished floor heights, a parking garage subdrain/sump system and overall storm drain system to handle runoff and stormwater from the site. In order to address Water Quality, a revised WQMP was prepared for the *Revised Project* by Psomas in 2017 (Appendix D). The primary purpose of the WQMP was to demonstrate that the *Revised Project* would meet the requirements of the City of Malibu's current Stormwater Sewer System (MS4) permit. As outlined in the WQMP, the *Revised Project* would incorporate several best management practices (BMPs) including site design, source control and treatment control BMPs,

similar to the *Approved Project*. These include a system of detention basins throughout the site to capture and filter storm water. The WQMP determined the *Revised Project* would not impact the City's ability to meet the City's MS4 requirements and thus would result in a less than significant water quality impact. In addition, Mitigation Measures F-1 through F-8 would remain in effect for the *Revised Project* to ensure compliance with applicable stormwater regulations and incorporation of best management practices have been revised to reference the 2017 Psomas WQMP. Also, with the incorporation of Mitigation Measures F-1 through F-8, impacts related to hydrology and water quality would be less than significant.

The *Revised Project* would not include an OWTS as wastewater generated by the project would be conveyed to, and treated by, the new Civic Center Water Treatment Facility located west of the site. As such, Mitigation Measures F-9, F-11 and F-12 related to the OWTS would not apply to the *Revised Project*. However, the *Revised Project* would reuse treated wastewater from the Civic Center Water Treatment Facility for landscaping which would be conveyed back to the site through a series of pipes in Civic Center Way. Mitigation Measures F-10 would remain in effect for the *Revised Project* to ensure that treated wastewater used for irrigation would not adversely affect surface water runoff or ground water supplies.

Alternative Revised Project – Summary of Impacts

The *Alternative Revised Project* would be the same as the *Revised Project* regarding hydrology/ flooding, on-site drainage and water quality.

H. Land Use and Planning

Approved Project – Summary of Impacts

General Plan Consistency

The 2008 EIR concluded that land use consistency impacts would be less than significant. The *Approved Project* was considered substantially consistent with the Community Commercial land use designation of the General Plan Land Use Element. The *Approved Project* would have an overall Floor Area Ratio (FAR) of 0.20:1, which is the maximum allowed by the CC zone provided that public benefits and amenities are included as part of the project. In addition, in order to ensure the project would be consistent with the Land Use Element of the General Plan, the *Approved Project* included Mitigation Measures G-1 through G-3 relating to grading and drainage, wastewater and geology/hydrology. With the incorporation of Mitigation Measures G-1 through G-3, the 2008 EIR concluded the *Approved Project* would be consistent with the General Plan and impacts would be less than significant.

Zoning Ordinance Consistency

The 2008 EIR concluded that Malibu Zoning Ordinance consistency impacts would be less than significant. The *Approved Project* was determined to be mostly consistent with the Community Commercial Zoning designation. In addition, project approvals included adoption of a Zoning Ordinance amendment to establish the Town Center Overlay District which included specific development regulations for the *Approved Project*. Mitigation Measure G-4 required approval of a Zoning Text Amendment for the new overlay which has since been accomplished. Thus, the

Approved Project would be consistent with the new overlay and impacts would be less than significant.

Malibu Local Coastal Program Consistency

The 2008 EIR concluded that Malibu Local Coastal Program consistency impacts would be less than significant. The Malibu LCP includes numerous basic goals and policies to ensure that development within the City that falls within the Coastal Zone is consistent and compatible with the unique characteristics of coastal resources. The *Approved Project* would be substantially consistent with the basic policies and goals of the LCP. Specifically, the project would not interfere with the public's access to the sea, significantly interfere with the traffic circulation system, affect marine resources, or affect environmentally sensitive habitat area. In addition, the *Approved Project* would not have a significant impact on the scenic and visual qualities of the coast.

Revised Project – Summary of Impacts

The *Revised Project* would develop the same square footage and uses as the *Approved Project* with a slightly modified layout and design. One less building would be constructed and buildings would generally be lower in height. The *Revised Project* would conform with all objectives, policies and regulations of the General Plan, Zoning Ordinance and Local Coastal Program and would include Mitigation Measures G-1 and G-3 requiring development in accordance with City-approved, drainage, hydrologic and geologic studies. Mitigation Measure G-2 requires the treatment of wastewater on-site to meet General Plan Land Use Policies 2.2.8 and 4.5.1 requiring adequate wastewater treatment for new development. However, the wastewater from the *Revised Project* would be treated by the Civic Center Water Treatment Facility and Mitigation Measure G-2 would not apply. In addition, Mitigation Measure G-4 requiring approval of a Coastal Development Permit, Zone Text Amendment and Development Agreement for the *Approved Project* have already been accomplished and would not apply to the *Revised Project*.

Alternative Revised Project – Summary of Impacts

Like the *Revised Project*, the *Alternative Revised Project* would be consistent with the applicable policies and regulations of the Malibu General Plan, Zoning Ordinance and Local Coastal Program. Mitigation Measures G-1 and G-3 would remain in effect requiring adherence with City-approved technical studies. Mitigation Measure G-2 related to an OWTS, and Mitigation G-4 related to actions that have been completed, would not apply.

I. Noise

Approved Project – Summary of Impacts

Construction Impacts

Construction activities associated with the development of the *Approved Project* would require the use of noise generating equipment such as jack hammers, pneumatic impact equipment, saws and backhoes. Construction activities would result in temporary increases in ambient noise levels in the project area on an intermittent basis. Based on generally accepted noise thresholds, construction activities would have a significant noise impact if they would add 5

dBA (A-weighted decibels) to the ambient noise environment at an existing sensitive receptor. Sensitive receptors are those land uses considered more sensitive to increased noise levels, such as residences, community facilities and schools. The 2008 EIR identified that sensitive noise receptors in the vicinity of the project site included single-family residences to the north, the Malibu Public Library to the west, Colin McEwan High School (now closed) to the south/southeast and St. John's Malibu Urgent Care to the southwest.

Based on a noise analysis conducted in conjunction with the 2008 EIR, construction activities would generate an increase of over 5 dBA at three of the four sensitive receptor locations: single-family residences to the north, the Malibu Public Library to the east and the former Colin McEwan High School to the south/southeast. Mitigation Measures H-1 through H-4 were incorporated into the *Approved Project* and would require conformance with the City's Noise Ordinance, the utilization of mufflers, the notification of sensitive receptors in advance of noise-producing activities and the designation of a 'Noise Disturbance Coordinator' who would respond to any complaints about construction noise. However, although these measures would incrementally reduce construction noise, they would not reduce the noise below the 5 dBA significance level. Thus, the EIR determined that construction noise would remain a significant and unavoidable impact associated with *Approved Project*. In certifying the 2008 EIR, the City Council adopted an SOC stating that benefits of the project would outweigh significant impacts related to construction noise.

Operational Impacts

During operation of the *Approved Project*, the primary noise generator would be vehicles traveling to, from and within the project site. The 2008 EIR determined that although weekday and weekend vehicular traffic associated with the *Approved Project* would incrementally increase ambient noise levels at sensitive receptors near the site, it would not exceed significance levels at any of these locations. Thus, the EIR concluded that operational noise impacts would be less than significant.

Revised Project – Summary of Impacts

As previously identified, the *Revised Project* would have the same land uses floor area and substantially the same construction activities as the *Approved Project*. Thus, construction activities and vehicular traffic associated with the *Revised Project* would be essentially the same as the *Approved Project*. Therefore, the *Revised Project* would also have a significant and unavoidable construction noise impact on nearby sensitive receptors and a less than significant operational noise impact. Mitigation Measures H-1 through H-4 would remain in effect for the *Revised Project* but would not reduce construction noise impacts to below a level of significance. However, the City Council adopted an SOC for the *Approved Project* for construction noise, and the *Revised Project* would not substantially increase the level of impact or create a new significant impact and no additional measures are required.

Alternative Revised Project – Summary of Impacts

Same as the *Revised Project, c*onstruction of the *Alternative Revised Project* with 10,000 square feet of additional restaurant space converted from retail use would not alter the overall construction program for the project, nor would it increase construction noise emanated by the site. Mitigation Measures H-

1 through H-4 would remain in effect but would not reduce construction-related noise to below a level of significance.

J. Public Utilities

Approved Project – Summary of Impacts

Electrical Service

The 2008 EIR concluded that impacts to electrical service would be less than significant. According to the Southern California Edison Company, infrastructure in place at the time of project approval was available to serve the *Approved Project*. However, the *Approved Project* included Mitigation Measures I-1 and I-2 to ensure that any disruption to local electrical service due to project implementation would be temporary and minimal, and Mitigation Measures I-3 through I-17 to ensure the project incorporates energy efficient features. With the incorporation of Mitigation Measures I-1 through I-17, the *Approved Project* would have a less than significant impact on electrical service.

Natural Gas Services

The 2008 EIR concluded that impacts to natural gas service would be less than significant. According to the Southern California Gas Company at the time, natural gas service to the *Approved Project* could be provided without any significant impact on the environment.

Water Service

The 2008 EIR concluded that water demand impacts would be potentially significant but mitigable. The *Approved Project* was expected to generate a demand of approximately 43,370 gallons per day (gpd) of water. While adequate water supply in the project area exists, the EIR stated that existing distribution infrastructure was not adequate to serve the project. Water mains for the *Approved Project* did not exist, and therefore would need to be constructed. The 2008 EIR included Mitigation Measures I-18 through I-24 related to providing adequate water infrastructure, contributing fees for infrastructure, incorporating drought-tolerant landscaping, and utilizing recycled water for irrigation. With the incorporation of these measures, the EIR determined that impacts related to water service would be less than significant.

Wastewater Service

The 2008 EIR concluded that impacts to wastewater service would be less than significant. Although OWTS systems are no longer allowed in the Civic Center area, the *Approved Project* included an OWTS as well as Mitigation Measures I-23 through I-26 addressing how the system would be operated to ensure no impacts would result. As such, the EIR concluded that the *Approved Project* would handle all of its wastewater needs onsite and would not result in any impacts upon local public wastewater treatment utility providers.

Solid Waste

The 2008 EIR concluded that impacts to solid waste disposal during construction and operation would be less than significant. Much of the solid waste generated during construction would be recycled and salvaged to the maximum feasible extent. Materials not recycled would be disposed

of at local landfills, and possibly a Class III landfill for any hazardous materials. During operation of the *Approved Project*, solid waste generated on-site would be disposed of in accordance with all applicable federal, State, and local regulations. During operation, the *Approved Project* would utilize a waste pick-up service three times a week, and a recycling pick up service two times a week which would be adequate to handle solid waste disposal. The *Approved Project* included Mitigation Measures I-27 through I-29 related to the recycling of solid waste and the EIR concluded that impacts related to solid waste during construction and operation of the *Approved Project* would thus be less than significant.

Revised Project – Summary of Impacts

The *Revised Project* includes the same land uses and development intensity as the *Approved Project*. As such, the project would generate the same need for electrical, natural gas and solid waste services as the *Approved Project*. Adequate utilities are available to serve the site and Mitigation Measures I-1 through I-17 and I-27 through I-29 would remain in effect to ensure that less than significant impacts would result with regard to electrical, natural gas and solid waste services and facilities.

Regarding water, on May 30, 2018, the applicant signed an agreement with LA Waterworks District No. 29 to provide water to the project site provided the applicant contributes its pro rata share for the cost of improvements needed to provide adequate water infrastructure to the area including 5,000 feet of 12-inch water main, pump station upgrades, a regulating station and an approximately 800,000 gallon water storage tank. With these improvements, LA Waterworks District No. 29 has indicated there be adequate water facilities to serve the *Revised Project* and a less than significant impact would result. Mitigation Measures I-18 through I-29 would remain in effect regarding water consumption/supply.

As previously identified, the City of Malibu has constructed the Civic Center Water Treatment Facility at Civic Center Way and Vista Pacifica to treat wastewater and provide recycled water in the Civic Center area. Environmental impacts associated with the Civic Center Water Treatment Facility were considered by Malibu Civic Center Wastewater Treatment Facility Final Environmental Impact Report (SCH No. 2013111075). Phase 1 of the Treatment Facility includes an allocation of 11,945 gallons per day for the project site which is the projected wastewater generation of both the *Approved Project* and the *Revised Project.* As adequate wastewater service capacity is available to serve the *Revised Project,* a less than significant impact would result. Mitigation Measures I-23 through I-26 would not apply to the *Revised Project*.

Alternative Revised Project – Summary of Impacts

As previously identified, the *Alternative Revised Project* would have the same land uses and intensities as the *Revised Project* except that 10,000 square feet of commercial retail space would be converted to restaurant use. Electrical, natural gas, solid waste, storm water, and water services and facilities are anticipated to be able to serve the *Alternative Revised Project* and less than significant impacts would result. Mitigation Measures I-1 through I-22 and I-27 through I-29 would remain in effect.

The Civic Center Water Treatment Facility has been designed to accommodate wastewater from the La Paz Ranch Project at the amounts anticipated to be generated by the *Approved Project* and the *Revised Project*. However, the *Alternative Revised Project*, with its increased restaurant use, is anticipated to require 6,534 gallons per day of additional wastewater treatment capacity beyond the current allocation for the project site. This Addendum assumes that the additional wastewater capacity would

be obtained from another property with a Phase 1 allocation, or through a future expansion of the Water Treatment Facility, and a less than significant impact would result.

K. Public Services

Approved Project – Summary of Impacts

The 2008 EIR Public Services Section evaluated impacts related to fire and police protection services. The County of Los Angeles Fire Department provides fire protection and emergency medical services to the City of Malibu and would serve the site. As outlined in the EIR, the *Approved Project* would increase the level of human occupancy and activity on the subject site, and therefore increase the number of emergency calls received. The 2008 EIR identified that the additional calls would exacerbate already insufficient service ratios and standards and thus the *Approved Project* would have a potentially significant impact on fire protection services. Mitigation Measures J-1 through J-9 were incorporated into the *Approved Project* which would require conformance with applicable fire codes and requirements, the payment of development fees, provision of adequate fire flows and fire hydrants, and the incorporation of fuel modification techniques. With the incorporation of Mitigation Measures J-1 through J-9, the 2008 EIR concluded that impacts to Fire Protection Services would be less than significant.

Police protection services would be provided to the *Approved Project* by the Los Angeles County Sheriff's Department. At the time of EIR preparation, the Sheriff's Department had adequate capacity to serve the *Approved Project*. However, the 2008 EIR identified that over time, the project could have a cumulative impact on police protection as calls for service increased on the project site and in the area overall. Therefore, in order to ensure that impacts to police protection would remain less than significant, the 2008 EIR included Mitigation Measures J-10 and J-11 requiring implementation of security personnel and a security system, as well as installation of perimeter fencing. With the incorporation of Mitigation Measures J-10 and J-11, impacts to police protection services would be less than significant.

Revised Project – Summary of Impacts

The *Revised Project* would include the same land uses at the same intensity as the *Approved Project*. In addition, the site layout would be similar to the *Approved Project*. Like the *Approved Project*, the *Revised Project* would result in an intensification of activity on the site which would likely result in additional calls for service and a potentially cumulative impact to fire and police protection services. However, the *Revised Project* would include Mitigation Measures J-1 through J-11 which would reduce potential impacts to fire and police protection services to less than significant levels.

Alternative Revised Project – Summary of Impacts

Same as the *Revised Project,* the conversion of 10,000 square feet of commercial space to restaurant use is not expected to significantly affect calls for fire and police services on the site. *The Alternative Revised Project* would include Mitigation Measures J-1 through J-11 which would reduce potential impacts to below a level of significance.

L. Transportation and Circulation

Approved Project – Summary of Impacts

Temporary Impacts

The 2008 EIR concluded that during construction, the *Approved Project* may require temporary lane closures and/or detours in the vicinity of the project site. However, impacts would be temporary and would be conducted in accordance with the City of Malibu's guidelines which would ensure that fire and emergency access are provided at all times. Thus, the EIR concluded that construction impacts would be less than significant.

Intersection/Roadway Segment Impacts

Based on traffic impact studies prepared by Kaku & Associates (2005) and Priority Engineering (2007), the 2008 EIR determined that the *Approved Project* would generate a net increase of 2,863 weekday trips and 2,241 weekend daily trips in the area. The 2008 EIR determined that the *Approved Project* would have significant intersection/roadway segment impacts on the following five intersections based on traffic counts taken during the school year:

- Webb Way & PCH (weekday afternoon peak hour)
- Cross Creek Road & PCH (both weekday peak hours and Saturday peak hour)
- Webb Way & Civic Center Way (weekday afternoon peak hour)
- Malibu Canyon Road & Pacific Coast Highway (PCH) (both weekday peak hours)
- Cross Creek Road & Civic Center Way (weekday afternoon peak hour)

The impacts outlined above would be partially reduced by Mitigation Measures K-1 through K-3 of the Mitigation Monitoring Program which have been constructed in the last few years at Webb Way/PCH, Civic Center Way/PCH and Webb Way/Civic Center Way (Appendix B). These measures would reduce the *Approved Project's* impacts at Webb Way/PCH, Cross Creek Road/PCH, and Webb Way/Civic Center Way to less than significant levels. However, significant and unavoidable impacts would remain at the intersections of Malibu Canyon Road & PCH (weekday a.m./p.m.), and the intersection of Cross Creek Road and Civic Center Way (weekday p.m.) and no feasible mitigation measures were available to reduce these impacts to a level of insignificance. Thus, in approving the La Paz Project and certifying EIR, the Malibu City Council adopted an SOC indicating that the benefits of the *Approved Project* would outweigh any adverse unmitigable traffic effects. Specifically, the Council indicated that the remaining traffic impacts would be acceptable given the benefits associated with the development of a commercial town center with infrastructure, a City complex, a trail and other public amenities and benefits.

Congestion Management Program

The 2008 EIR also evaluated the consistency of the *Approved Project* with the Los Angeles County 2004 Congestion Management Program (CMP). The *Approved Project* was evaluated based on its effect on CMP intersection monitoring locations. It was determined that all intersection locations would continue to operate at Level of Service (LOS) 'E' or better with the addition of the *Approved Project* and no impacts would result. In addition, the project would not adversely affect any CMP freeways and would result in an insignificant increase in the number of bus riders who would not adversely impact local transit service.

Parking

The *Approved Project* would include 518 parking spaces on Parcels A and B. This amount met the requirement of 1 space per 200 square feet for shopping centers and 1 space per 250 square feet for office uses in effect at the time. In addition, a Joint Use Agreement was included to allow parking to be shared between Parcels A and B. As the *Approved Project* met the required parking standards, the 2008 EIR determined that parking related impacts would be less than significant.

***Revised Project* – Summary of Impacts**

As previously identified, the *Revised Project* would include the same floor area and land uses as the *Approved Project*. The *Revised Project* would have one less building and would slightly modify the building layout, site plan and architecture of the project. In addition, the *Revised Project* would consolidate two driveways from Civic Center Way into the site into a single driveway at the southwest quadrant of the site. Like the *Approved Project*, the *Revised Project* would conduct any needed traffic detours or road closures in accordance with City guidelines and regulations and would not have any significant temporary traffic impacts. In addition, the *Revised Project* would not result in any adverse effects related to the CMP.

A traffic impact study prepared by Linscott, Law and Greenspan in 2019 evaluated traffic impacts associated with the *Revised Project*. The study was based on summertime traffic counts which are generally higher than school time counts and were not previously conducted for the *Approved Project*. Nonetheless, the 2019 traffic impact study showed an overall reduction of intersections impacted and a reduction in seconds of delay due to the following:

- Updated intersection counts
- Updated information regarding related projects
- Updated edition of the Trip Generation Manual (6th vs 10th)
- Changes in travel lane configurations
- Updated traffic analysis software (HCM)

Based on this information, the 2019 traffic study determined calculated that the *Revised Project* would have the following changes in trip generation compared to what was evaluated in the 2008 EIR for the *Approved Project*:

- 58 fewer weekday daily trips as compared to the 2008 *Approved Project*
- 414 additional Saturday daily trips as compared to the 2008 *Approved Project*
- 34 fewer weekday AM peak hour trips as compared to the 2008 *Approved Project*
- 9 additional weekday PM peak hour trips as compared to the 2008 *Approved Project*
- 77 additional Saturday MD peak hour trips as compared to the 2008 *Approved Project*

Regarding intersection impacts, the 2019 traffic study confirms the 2008 EIR's determination that the *Approved Project* would have a significant impact on Webb Way/PCH and Cross Creek Road/PCH intersections which would be mitigated to less than significant through implementation of Mitigation Measures K-1 through K-3. This impact assessment would be the same for the *Revised Project* which

would have the same land use mix and floor area as the *Approved Project.* Mitigation Measures K-1 through K-3 were completed in fulfillment of this requirement in 2018.

The 2019 traffic study indicates that the *Approved Project* and the *Revised Project* would have a less than significant impact on the Webb Way/Civic Center Way intersection which the 2008 EIR identified as significant but mitigable. However, Mitigation Measures K-1 through K-3 have already been implemented to improve the functionality of this intersection.

The 2019 traffic study indicates that the *Approved Project* and the *Revised Project* would have a less than significant impact on the Malibu Canyon Road/PCH intersection which the 2008 identified as significant and unmitigable.

The 2019 traffic study indicates that during school time conditions, the *Approved Project* would not have a significant unmitigable impact on the weekday p.m. peak hour at the Cross Creek Road/Civic Center Way intersection that was identified in the 2008 EIR. However, the *Approved Project* and the *Revised Project* would have a significant impact this location during summertime conditions. In addition, the 2019 study indicates that both the *Approved Project* and the *Revised Project* would have a significant impact at this intersection during the weekend midday peak hour during summertime conditions. In accepting the *Approved Project*, the City Council adopted an SOC stating that benefits of the project would outweigh impacts at this intersection. Thus, a significant impact at this location was already identified at this location and the *Revised Project* would not increase the severity of a previously identified impact.

The *Revised Project* would include a total of 519 surface and subterranean parking spaces on Parcels A and B which meet the Town Center Overlay parking requirements of one space per 200 square feet of retail/restaurant/shopping center and one space per 250 square feet of office space. Of these, four electric vehicle spaces would be provided as well as and 28 electric vehicle ready spaces. In addition, 54 bicycle spaces and eight motorcycle spaces would be provided by the *Revised Project.* The applicant has also provided a shared parking analysis which identifies the practical parking demand between the proposed retail, office and restaurant uses. Based on this analysis, the peak demand for parking would be 467 spaces during the week and 332 spaces on the weekends. Thus, the *Revised Project* would provide adequate parking to meet the intended uses and no parking impacts would result.

Alternative Revised Project – Summary of Impacts

The *Alternative Revised Project* would be identical to the *Revised Project* except that 10,000 square feet of retail space would be converted to restaurant use. During construction, the *Alternative Revised Project* would implement any traffic detours and road closures in accordance with City of Malibu regulations and no significant temporary traffic impacts would result.

To 2019 traffic impact study determined that the *Alternative Revised Project* would have essentially the same effect on traffic as the *Revised Project*. This is because the ITE trip generation factors for retail and restaurant uses are the same and thus the trip generation would be the same for both projects. However, the forecasted delay at the intersection at the Cross Creek Road and Civic Center Way intersection would be slightly less under the *Alternative Revised Project* but still significant. In accepting the *Approved Project*, the City Council adopted an SOC stating that benefits of the project would outweigh impacts at this intersection. Thus, a significant impact at this location was already

identified at this location and the *Alternative Revised Project* would not increase the severity of a previously identified impact.

The Town Center Overlay parking requirements would be the same for *Alternative Revised Project* as *Revised Project* because the parking rate for retail and restaurant uses are the same. *The Alternative Revised Project* would include the same amount of parking as the *Revised Project* and a shared parking analysis has demonstrated that more than adequate parking would be provided to serve the anticipated need.

M. Environmental Hazards

Approved Project – Summary of Impacts

A review of hazardous waste records conducted in conjunction with the preparation of the 2008 EIR indicated that there are no hazardous waste issues on the site. The site was not listed on any federal, State, or local databases compiled in accordance with Government Code §65962.5. In addition, although there were potentially hazardous facilities within one mile of the project site (cleaners, underground gasoline/oil tanks), there was no evidence that any contamination had spread to the project site.

At the time of EIR preparation, there were a few small, unpermitted structures on the project site. The 2008 EIR identified that the structures may contain asbestos, lead (paint) or PCBs (fluorescent lights). Therefore, mitigation measures L-2 through L-4 required techniques to reduce potential impacts to below a level of significance. These mitigation measures required careful handling of building materials during construction to ensure the release of asbestos, lead or PCBs would not occur.

Mitigation Measure L-1 requires the applicant to obtain all necessary permits from RWQCB prior to the installation of any temporary and/or permanent dewatering system to ensure these and any other hazardous materials to not enter the storm drain infrastructure and contaminate groundwater.

Revised Project – Summary of Impacts

The project site is not known to contain any toxic wastes or hazardous substances. In addition, the few structures that existed on the site in 2008 have been removed. Thus, no impacts related to the accidental release of asbestos, lead or PCBs during demolition would result and Mitigation Measures L-2 through L-4 would not apply. Nonetheless, Mitigation Measure L-1 related to securing necessary permits from RWQCB for dewatering activities would remain in effect to ensure that no hazardous waste impacts to water quality would result. With the incorporation of Mitigation Measure L-1, impacts related to environmental hazards would be less than significant.

Alternative Revised Project – Summary of Impacts

Same as the *Revised Project*.

V. Conclusion

The *Revised Project* and the *Alternative Revised Project* would not create any new significant impacts or increase the severity of any impacts as compared to those identified in the 2008 EIR. In addition, no mitigation measures previously deemed infeasible are now available which would reduce significant

impacts, and no new mitigation measures have been identified which would reduce significant impacts. Therefore, in accordance with CEQA Guidelines Section 15164 and Section 15162, this Addendum is the appropriate environmental document under CEQA for the *Revised Project* and the *Alternative Revised Project.*

VI. References

City of Malibu. Addendum to the Final La Paz Development Agreement Environmental Impact Report, Cross Creek Road/Pacific Coast Highway Intersection Improvements (Coastal Development Permit No. 14-036). 2015.

City of Malibu. General Plan. November 1995.

City of Malibu. La Paz Development Agreement Project Final Environmental Impact Report. 2008.

City of Malibu. Local Coastal Program Land Use Plan and Local Implementation Plan. September 13, 2002.

City of Malibu, Zoning Ordinance.

Eyestone Environmental. Air Quality and Greenhouse Gas Analysis in Support of an Addendum to the La Paz Ranch Revised Final Environmental Impact Report. May 16, 2019.

Kaku Associates. Traffic Circulation Study for the Malibu La Paz Project. December 2004.

Linscott, Law & Greenspan. Addendum Traffic Impact Study, La Paz Ranch Project. October 30, 2019.

Los Angeles Waterworks District 29. Agreement to Provide Water Service to La Paz Ranch. May 30, 2018.

Psomas. Water Quality Mitigation Plan (WQMP). September 19, 2017.

VCS Environmental. Confidential Cultural Resources Literature Review Summary. January 24, 2019.

APPENDIX A

Mitigation Monitoring Program

APPENDIX A
ADDENDUM NO. 2
TO THE
LA PAZ RANCH FINAL EIR
MITIGATION MONITORING PROGRAM

INTRODUCTION

This section reflects the Mitigation Monitoring Program requirements of Public Resources Code Section 21081.6. CEQA Guidelines Section 15097 states:

> *"…In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program."*

ENFORCEMENT

In accordance with CEQA, the primary responsibility for making a determination with respect to potential environmental effects rests with the lead agency rather than the Monitor or preparer of the EIR. As such, the City of Malibu is identified as the enforcement agency for this Mitigation Monitoring and Reporting Program.

PROGRAM MODIFICATION

After review and approval by the lead agency, minor changes to the MMRP are permitted but can only be made by the City of Malibu. No deviations from this program shall be permitted unless the MMRP continues to satisfy the requirements of Section 21081.6 of the California Environmental Quality Act (CEQA), as determined by the Lead Agency.

MITIGATION MONITORING AND REPORTING PROGRAM

The organization of the MMRP follows the subsection formatting style as presented within the La Paz Ranch EIR (2008 EIR). Subsections of all of the environmental chapters presented in the EIR are provided below in Table X-1. For environmental issue areas where no mitigation measures were required, the MMRP is noted accordingly.

Table MMRP-1

Mitigation Monitoring and Reporting Program

Mitigation Measure/Condition of Approval	Action Required	Monitoring Phase	Responsible Agency or Party	Compliance Verification		
				Initial	Date	Comments
V.A Aesthetics/Views						
(A-1) All open areas not used for buildings, driveways, parking areas, or walkways shall be attractively landscaped and maintained in accordance with a landscape plan, with native plant species, to the satisfaction of the City Planning Department. The final Landscape Plan shall be in substantial compliance with the Conceptual Landscaping Plan illustrated in Figure V.A-6 and shall include a row of sycamore trees, which shall be planted 15 feet apart trunk to trunk on center along the northeasterly property boundary and Australian willow and coast live oak around buildings 10 and 11, west of the road.	• Plan approval	• Prior to construction	City of Malibu Environmental and Community Development Department			
(A-2) Outdoor lighting shall incorporate low-level lighting fixtures and shall be designed and installed with directional shields so that the light source cannot be seen from adjacent land uses.	• Plan approval	• Prior to construction	City of Malibu Environmental and Community Development Department			

(A-3)	The exterior of the proposed buildings shall be constructed of non-reflective building materials.	• Plan approval	• Prior to construction	City of Malibu Environmental and Community Development Department			
V.B Air Quality							
(B-1)	The construction area and vicinity (500-foot radius) shall be swept (preferably with water sweepers) and watered at least twice daily.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-2)	All unpaved roads, parking and staging areas shall be watered at least once every two hours of active operations.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-3)	Site access points shall be swept/washed of visible dirt deposition at the end of each workday	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-4)	On-site stockpiles of debris, dirt or rusty material shall be covered or watered at least twice daily.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			

(B-5)	All haul trucks hauling soil, sand, and other loose materials shall either be covered or maintain two feet of freeboard.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-6)	All haul trucks shall have a capacity of no less than twelve and three-quarter (12.75) cubic yard.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-7)	At least 80 percent of all inactive disturbed surface areas shall be watered on a daily basis when there is evidence of wind-driven fugitive dust.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-8)	Operations on any unpaved surfaces shall be suspended when winds exceed 25 mph.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-9)	Traffic speeds on unpaved roads shall be limited to 15 miles per hour.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			
(B-10)	Operations on any unpaved surfaces shall be suspended during first and second stage smog alerts.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of			

			Engineering Services			
V.C Biological Resources						
(C-1) Nesting birds are protected by both the California Department of Fish and Game (CDFG) Code and the federal Migratory Bird Treaty Act (MBTA). Removal of, or encroachment into existing on-site vegetation, should be restricted to off-peak bird nesting season, which typically occurs between February 1 and August 30. Should vegetation/tree removal be required during this period, the Applicant shall obtain the services of a qualified biologist, approved by the City, to conduct a series of nesting bird surveys consistent with CDFG recommended nesting bird surveys protocol methods in effect at the time. Any active nests shall be marked and exclusionary fencing shall be placed at a 10-foot radius around the nest (300 feet for raptors). The exclusionary fencing shall remain in place until such time that the biologist determines that the nest is no longer active. All equipment and human activity shall be excluded from these areas during active nesting without exception. Should the actual construction of nests be observed by the project biologist, he/she may, with direction from the regional CDFG wildlife biologist, remove the nesting materials	• Grading permit approval	• Prior to site grading/tree removal	City of Malibu Department of Environmental and Community Development			

	and/or dissuade further construction of the nest provided no egg-laying has begun.						
(C-2)	All disturbed and non-vegetated areas of the site must be watered daily during vegetation clearance and grading to minimize the generation of fugitive dust.	• Field check to confirm measures are implemented	• During site preparation and grading	City of Malibu Department of Engineering Services			
(C-3)	Prior to the initiation of vegetation clearance and grading, a qualified biologist or ecologist shall monitor the site and attempt to clear the proposed grading area of wildlife. The monitor will be present while all vegetation is removed, and shall direct the equipment operator to avoid impacts to wildlife through normal minimization techniques.	• Field check to confirm measures are implemented	• Prior to/during site preparation and grading	City of Malibu Department of Environmental and Community Development			
(C-4)	Native vegetation shall be used in the landscaping pallet to the greatest extent feasible as required by the City of Malibu in the project's landscaping plan pursuant to mitigation measure A-1 at page V.A-14.	• Plan approval	• Prior to construction	City of Malibu Department of Environmental and Community Development			
(C-5)	The lighting plan should be designed in consultation with the City Biologist or a qualified ecologist familiar with best management building practices. All lighting should be of low luminescence, directed downward or toward structures, and shielded to the extent necessary to protect nocturnal biological	• Plan approval	• Prior to construction	City of Malibu Department of Environmental and Community Development			

	resources, pursuant to mitigation measure A-2 at page V.A-15.						
(C-6)	Native protected tree species (i.e., sycamore) removed on-site shall be replaced in accordance with the Tree Mitigation Plan approved by the City Biologist. The approved plan includes the removal of 6 trees and a replacement on-site at a better than 10:1 ratio.	• Plan approval	• Prior to construction	City of Malibu Department of Environmental and Community Development			
(C-7)	Contribution to a restoration program for CSS in the Santa Monica Mountains to an established conservation organization or governmental agency on a 1:1 creation (2:1 enhancement) per/acre basis; or	• Plan approval	• Prior to construction	City of Malibu Department of Environmental and Community Development			
(C-8)	Contribution to an established conservation organization or governmental agency in the Santa Monica Mountains to assist with purchase and set-aside of existing CSS habitat in the Santa Monica Mountains on a 2:1 per/acre basis.	• Plan approval	• Prior to construction	City of Malibu Department of Environmental and Community Development			
V.D Cultural Resources							
(D-1)	In the event that archaeological resources are encountered during the course of grading or construction, all development must temporarily cease in these areas until the resources are properly assessed and subsequent recommendations are determined by a qualified consultant.	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Environmental and Community Development			

(D-2)	In the event that human remains are discovered, there shall be no disposition of such human remains, other than in accordance with the procedures and requirements set forth in California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98. These code provisions require notification of the County Coroner and the Native American Heritage Commission, who in turn must notify those persons believed to be most likely descended from the deceased Native American for appropriate disposition of the remains. Excavation or disturbance may continue in other areas of the Project Site that are not reasonably suspected to overlie adjacent remains or cultural resources. If undiscovered evidence of prehistoric artifacts is discovered construction activities in the affected areas shall not proceed until written authorization is granted by the City of Malibu Planning Manager.	• Field check to confirm measures are implemented	• During site preparation, grading and soils excavation	City of Malibu Department of Environmental and Community Development			
V.E Geology and Soils							
(E-1)	The proposed project shall be constructed in accordance with the geotechnical engineering recom-mendations as presented in the Engineering Geological and Geotechnical Engineering Reports (and subsequent Responses to City Comments), for the Proposed Malibu-La Paz Ranch, LLC, Civic	• Field check to confirm measures are implemented	• During construction	City of Malibu Department of Engineering Services			

	Center Way, City of Malibu California, by Gold Coast GeoServices, Inc.						
(E-2)	All uncertified fill material placed within the fault trenches shall be removed and replaced as 90 percent compacted fill during the planned site preparations and rough grading.	• Field check to confirm measures are implemented	• During site preparation and grading	City of Malibu Department of Engineering Services			
(E-3)	Temporary dewatering and discharge activities shall be monitored by the dewatering contractor and conducted in strict accordance with the Los Angeles Regional Water Quality Control Board's Order No. R4-2003-0111 (Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties (General Permit No. CAG994004).	• Field check to confirm measures are implemented	• During grading, soils excavation and construction	City of Malibu Department of Engineering Services			
(E-4)	As recommended by the Project Geotechnical Engineer, all structures located within the "moderate and high" risk surface manifestation hazard areas that are not situated atop parking structures shall be provided with a minimum 10-foot thick 90% compacted fill blanket It is recommended that the compacted fill blanket be reinforced with Tensar BX1200 geogrid or equivalent placed at two-foot vertical intervals up to two feet below the planned finish rough grade pad. Recommendations addressing over-excavation, installation of geogrid and backfilling of these areas	• Plan approval; Field check to confirm measures are implemented	• Prior to construction; During construction	City of Malibu Department of Engineering Services			

	shall be provided during the plan check approval process that addresses temporary stability of construction excavations and bottoms.						
(E-5)	The structural engineer shall provide a letter along with supporting information, prior to plan check approval, indicating that the proposed buildings can tolerate the anticipated total and differential movements, or that site-specific geotechnical recommendations will be required	• Plan approval	• Prior to construction	City of Malibu Department of Engineering Services			
(E-6)	The proposed structures should be constructed utilizing post-tensioned foundation systems and post-tensioned slabs-on-grade designed by the project structural engineer.	• Plan approval	• Prior to construction	City of Malibu Department of Engineering Services			
(E-7)	The Project Geotechnical Consultant shall provide appropriate geotechnical recommendations for restrained walls and include recommendations for damp-proofing or waterproofing and means for removing any water collected (e.g., sump pump), in accordance with the City's Geotechnical Guidelines.	• Plan approval	• Prior to construction	City of Malibu Department of Engineering Services			
(E-8)	Complete grading plans that include the existing and proposed grades, grading yardages, proposed subterranean parking, the limits and depths of removals under the structures and flatwork areas, and grading cross-sections have been submitted to City Geotechnical staff for review. Remedial grading to mitigate liquefaction and	• Plan approval	• Prior to construction	City of Malibu Department of Engineering Services			

	other geotechnical hazards must be clearly defined in grading yardages, and illustrated on the Plans. Such plans submitted during final plan check shall reflect the concept plans in this EIR					
~~(E-9)~~	~~The Applicant shall obtain final construction plan approval (CDP) for the proposed onsite wastewater treatment systems (OWTS) from the City Environmental Health Administrator. Final approval of construction plans is subject to the conditions enumerated in the October 4, 2006 Conformance Review by the City's Environmental Health Administrator. The Environmental Health Administrator found that the OWTS is feasible and meets the City's requirements. The final design must be engineered to meet the effluent limits specified in WDRs, taking into account the Malibu Lagoon bacteria and nutrient total maximum daily load (TMDL) requirements of the Regional Water Quality Control Board (RWQCB) and the United States Environmental Protection Agency (USEPA).~~	~~• Plan approval~~	~~• During construction.~~	~~City of Malibu Department of Engineering Services~~			
V.F Hydrology/Water Quality						
(F-1)	The project shall comply with all requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit.	• Plan approval; Field check to confirm measures are implemented	• Prior to construction	City of Malibu Department of Engineering Services		

(F-2)	The contractor shall contact the local California State Water Resources Board with any questions concerning Resolution No 2001-046 and to determine if the Project Site will require storm water sampling during construction activities.	• Contact WRB; Field check to confirm measures are implemented	• During construction	Applicant; City of Malibu Department of Engineering Services			
(F-3)	The Proposed Project shall conform to its WQMP as reviewed by the City of Malibu in concept and comply with the BMPs in the Jensen Design and Survey and the October 2006 approval of the City's Environmental Health Coordinator.	• Field check to confirm measures are implemented	• Prior to and during construction	City of Malibu Department of Engineering Services			
(F-4)	The Proposed Project shall meet the requirements of the City of Malibu's Flood Plain Management Ordinance, Ordinance No. 110.	• Plan approval	• Prior to construction.	City of Malibu Department of Engineering Services			

(F-5)	A Water Quality Mitigation Plan is required to reduce pollutants from the sites. Best Management Practices (BMPs) are required and may include, but are not limited to, the following. Additionally BMPs can be found in the California Storm Water Best Management Practice Handbooks for Municipal and Commercial Activities, dated March 1993. a. Public education b. Good housekeeping practices c. Storm drain stenciling and signs d. Catch basin/storm drain cleaning e. Sweep/vacuum parking and drive areas f. Material storage control. The drainage plan in the WQMP shall substantially conform to the concept grading and drainage plan in Figures V.F-2 and V.F-3. The WQMP shall be implemented through a maintenance covenant and submitted to the City for review on an annual basis for the life of the project.	• Field check to confirm measures are implemented; Annual submittal of a maintenance covenant to the City of Malibu	• Post-Construction	City of Malibu Department of Engineering Services			
(F-6)	A detention basin shall be provided that is properly designed and maintained to meet both County SUSMP requirements and City Ordinance 157 to retain or filter initial rainfall.	• Plan approval	• Prior to construction	City of Malibu Department of Engineering Services			

(F-7)	Ongoing BMPs outlined in the approved Water Quality Mitigation Plan shall be implemented by owners and tenants.	• Notification to owners/tenants regarding obligation to implement BMPs	• Post-construction	City of Malibu Department of Engineering Services			
(F-8)	Long-term, regular maintenance of treatment wetlands shall be required indefinitely. Maintenance should include cleaning of pretreatment areas (dredging of sediment forebays, trash removal, backwashing of sand filters, etc.), harvesting of plant biomass, removal of exotic species and replanting of desired species. All maintenance work shall be scheduled to avoid critical breeding and nesting periods for wetlands species.	• Annual review of a maintenance covenant	• Post-construction	City of Malibu Department of Engineering Services			
~~(F-9)~~	~~The Applicant has obtained final feasibility approval for the proposed onsite wastewater treatment systems (OWTS) for Parcel A, Parcel B, and the City Hall Projects from the City Environmental Health Specialist. In accordance with Chapter 18.4(D) of the City's Local Coastal Plan- Local Implementation Plan (LCP-LIP) the proposed OWTS shall be engineered to meet the effluent limits specified in WDRs, taking into account the Malibu Lagoon bacteria and total maximum daily load requirements (TDMLs) of the RQWCB and the USEPA.~~	~~• Plan approval~~	~~• Pre-construction.~~	~~City of Malibu Department of Engineering Services~~			

(F-10) The applicant shall apply recycled wastewater for irrigation purposes within landscape areas consistent with the State Water Resources Control Board Draft Recycled Water Policy.	• Field check to confirm measures are implemented; Annual submittal of a maintenance covenant to the City of Malibu	• Pre-construction	City of Malibu Department of Engineering Services			
~~(F-11) A salt management plan shall be prepared and approved as a part of the final wastewater system design consistent with applicable requirements, guidelines and policies identified in Section 2.12 of the Wastewater Management System Master Plan prepared by Lombardo Associates, Inc. dated July 7, 2008.~~	~~• Plan approval~~	~~• Pre-construction~~	~~City of Malibu Department of Engineering Services~~			
~~(F-12) The applicant shall obtain a Waste Discharge Requirement (WDR) and a Water Reclamation Requirements (WRR) from the Los Angeles Regional Water Quality Control Board. Prior to reuse or discharge, the effluent shall be processed to meet the requirements of the City of Malibu Plumbing Code, and the WDR/WRR of the RWQCB.~~	~~• Plan approval~~	~~• Preconstruction~~	~~City of Malibu Department of Engineering Services~~			

~~(F-13)~~	~~Approval(s) to operate the proposed wastewater reuse system shall be obtained from the California Department of Public Health and the Los Angeles Regional Water Quality Control Board pursuant to the provisions of Title 22 of the California Code of Regulations. The required Engineering Report shall be prepared and submitted to the satisfaction of the California Department of Public Health and the Los Angeles Regional Water Quality Control Board. Waste discharged into the wastewater treatment plant shall be limited to discharges from commercial and retail business, and City Hall. No water softener regeneration brines, industrial wastewaters, or volatile organic compounds shall be allowed to be discharged into the system.~~	~~• Plan approval~~	~~• Pre-construction~~	~~City of Malibu Department of Engineering Services~~			
V.G Land Use and Planning							
(G-1)	Grading and Drainage Plans shall be submitted to the Environmental Building and Safety Division for approval with the final Site Plan and Building Plans. No grading permits shall be issued until final building plans have been approved.	• Plan approval	• Pre-construction	City of Malibu Department of Environmental and Community Development			
~~(G-2)~~	~~All wastewater shall be treated and managed on-site by the project operators in accordance with all applicable rules and regulations of the County of Los Angeles Health~~	~~• Plan approval~~	~~• Pre-construction~~	~~City of Malibu Department of~~			

	~~Department. The location of all proposed and abandoned wastewater treatment systems shall be depicted on the final building plans for the City's approval.~~			~~Engineering Services t~~			
(G-3)	The project shall be developed in accordance with all site-specific hydrologic, geologic studies and final recommendations from the City Geologist or City Engineer.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(G-4)	Approval of the Proposed Project shall be contingent on approval of a Coastal Development Permit from the City of Malibu, approval of a Zone Text Amendment, and upon effective certification of the Development Agreement by the CCC.	• CDP approval; Development Agreement certification.	• Pre-construction	City of Malibu Department of Environmental and Community Development	√	√	
V.H Noise							
(H-1)	Construction contracts shall specify that all construction equipment shall be equipped with mufflers and other suitable noise attenuation devices.	• Include requirement for noise attenuation in all construction contracts	• Pre-construction	Applicant			
(H-2)	All residential units located within 700 feet of the construction site shall be sent a notice regarding the construction schedule of the Proposed Project. A sign, legible at a distance of 50 feet shall also be posted at the construction site. All notices and the signs shall indicate the dates and duration of construction activities, as well as provide a telephone number where residents can inquire about the	• Notification of construction schedule to adjacent residents	• Pre-construction	City of Malibu Department of Environmental and Community Development			

	construction process and register complaints.						
(H-3)	The Project Developer shall designate a "noise disturbance coordinator" who shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and would be required to implement reasonable measures such that the complaint is resolved. All notices that are sent to residential units within 700 feet of the construction site and all signs posted at the construction site shall list the telephone number for the disturbance coordinator.	• Designation of a noise disturbance coordinator	• Pre-construction	Applicant			
(H-4)	Consistent with the City of Malibu Noise Ordinance (Section 4204 G), construction shall be limited to the hours of 7:00 a.m. to 7:00 p.m. on weekdays and 8:00 a.m. to 5:00 p.m. on Saturdays, and prohibited on Sundays and holidays. Special circumstances may arise where construction activities are permitted during prohibited hours by expressed written permission of the City Manager, or if construction is necessary to preserve life or property when such necessity arises (Section 4205 D).	• Limit hours of construction	• During construction	City of Malibu Department of Environmental and Community Development			
V.I-1 Public Utilities (Electricity)							
(I-1)	If connection of electricity services will result in a service disruption to	• Schedule service disruptions	• During construction	Applicant			

	surrounding properties, this connection must be done at a time of day that is the least inconvenient.						
(I-2)	If a disruption to electricity services must occur, notice shall be provided to all affected properties of the service disruption.	• Provide notice	• During construction	Applicant			
(I-3)	High-efficiency air conditioning controlled by a computerized energy-management system shall be installed.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-4)	Built-in appliances and space-conditioning equipment should exceed the minimum efficiency levels mandated by Title 24.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-5)	Air shall be cascade ventilated from high-priority areas before being exhausted, thereby decreasing the volume of ventilation air required.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-6)	Lighting system heat shall be recycled for space heating during cool weather.	• Plan approval	• Pre-construction				
(I-7)	Low and medium static-pressure terminal units and ductwork shall be installed, and buildings shall be well sealed, to reduce energy consumption by air-distribution systems.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			

(I-8)	A performance check of the installed space conditioning system shall be completed prior to the issuance of a certificate of occupancy.	• Building Inspector sign-off	• Construction	City of Malibu Department of Engineering Services			
(I-9)	Exterior walls shall be finished with light-colored materials and high-emissivity characteristics to reduce cooling loads.	• Plan approval	• Pre-construction	City of Malibu Department of Environmental and Community Development			
(I-10)	White reflective roofing material shall be used to meet standards and reflect heat.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-11)	Thermal installation shall be installed in walls and ceilings which exceeds Title 24 regulations.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-12)	Window systems shall be designed to reduce thermal gain and loss, and shall be fitted with heat-rejecting window treatments, thus reducing cooling loads during warm weather and heating loads during cool weather.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-13)	Fluorescent and high-intensity-discharge (HID) lamps shall be installed inside as well as outside.	• Plan approval	• Pre-construction	City of Malibu Department of			

			Engineering Services			
(I-14) Photo sensitive controls and dimmable electronic ballasts shall be installed to maximize the use of natural daylight and thus reduce the artificial lighting load.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-15) Occupant controlled light switches and thermostats shall be installed.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-16) Time controlled interior and exterior lighting shall be installed.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-17) Passive solar inset of windows or windowless walls shall be incorporated	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
V.I-2 Public Utilities (Natural Gas)						
No mitigation measures are required.	N/A	N/A	N/A	N/A	N/A	N/A
V.I-3 Public Utilities (Water)						

(I-18)	The Applicant shall comply with the requirements of Water District 29 and the LACFD by providing the infrastructure needed to connect to the existing 12-inch water main located in the centerline of Civic Center Way, "T" off from that main and extend new water mains onto and within the project site to serve hydrants throughout the project in accordance with the provisions of the LACFD Code (Title 32) and the specifications listed in the Existing Fire Department Fire Flow/Hydrant Location and Access approvals (see Figure V.J-2 Fire Accessibility Site Plan) and any applicable regulations of the Water District 29.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services			
(I-19)	The Project Applicant shall be responsible for any fees adopted by the City of Malibu and generally and uniformly imposed by the City of Malibu's Environmental and Building Safety Department for construction of new water supply and distribution facilities.	• Plan approval	• Pre-construction	City of Malibu Department of Engineering Services; Los Angeles County Waterworks District 29, and the Los Angeles County Fire Department.			
(I-20)	Automatic sprinkler systems shall be set to irrigate landscaping during early morning hours or during the evening to reduce water loss from evaporation.	• Irrigation management	• Operation	Property Owner			

	Care must be taken to reset sprinklers to water less often in cooler months and during the rainfall season to avoid wasting water by excessive landscape irrigation.						
(I-21)	Selection of native, drought-tolerant, low water consuming plant varieties shall be used to reduce irrigation water consumption to the maximum extent feasible, as reflected in the project's landscape plan; Mitigation Measure A-1, at page V.A-14.	• Plan approval	• Pre-construction	City of Malibu Department of Environmental and Community Development			
(I-22)	Reclaimed irrigation via the ~~OWTS~~ Civic Center Water Treatment Facility and/or recycled water shall be used where possible for irrigation of landscaping.	• Plan approval	• Pre-construction	City of Malibu Department of Environmental and Community Development			
V.I-4 Public Utilities (Wastewater)							
~~(I-23)~~	~~Detailed plans for the OWTS shall be submitted to the City of Malibu Environmental and Building Safety Department for review and approval.~~	~~• Plan approval~~	~~• Pre-construction~~	~~City of Malibu Environmental and Building Safety Department~~			
~~(I-24)~~	~~The project Applicant shall obtain a Waste Discharge Permit from the Los Angeles Regional Water Quality Control Board (LARWQCB) prior to building permit issuance.~~	~~• Obtain permit~~	~~• Pre-construction~~	~~Los Angeles Regional Water Quality Control~~			

			~~Board (LARWQCB)~~			
~~(I-25) The project Applicant shall obtain an Operating Permit from the City of Malibu Environmental and Building Safety Department prior to construction.~~	~~• Obtain permit~~	~~• Pre-construction~~	~~City of Malibu Environmental and Building Safety Department~~			
~~(I-26) Effluent for gray water/re-use irrigation in designated areas on-site shall at all times be a disinfected, high quality, filtered reclaimed water and shall not exceed the effluent quality limits of the RWQCB's Total Daily Maximum Load (TDML) requirements for the Malibu Creek Watershed.~~	~~• Comply with requirements of RWQCB for reclaimed water~~	~~• Operation~~	~~Los Angeles Regional Water Quality Control Board (LARWQCB)~~			
V.I-5 Public Utilities (Solid Waste)						
(I-27) The Proposed Project shall recycle all construction debris in a practical, available, and accessible manner, to the maximum extent feasible, during the demolition and construction phases.	• Recycle	• Pre-construction and Construction	City of Malibu Department of Environmental and Community Development			
(I-28) Where economically feasible, the Proposed Project shall incorporate the use of recycled materials in building materials, furnishing operations and building maintenance	• Plan Approval; Permit Approval	• Construction and Operation	City of Malibu Department of Environmental and Community Development			

(I-29)	The design of the Proposed Project shall allocate space for a recycling collection area for use by both on-site employees and visitors.	• Plan Approval	• Pre-construction	City of Malibu Department of Environmental and Community Development			
V.J-1 Public Services (Fire Protection)							
(J-1)	The Project shall comply with all applicable code and ordinance requirements for construction, emergency access, water main fire flows and fire hydrants.	• Plan Approval	• Pre-construction	Los Angeles County Fire Department			
(J-2)	The Applicant shall pay a uniformly applied developer fee or an in-kind consideration in lieu of developer fees, to provide funds for fire protection facilities which are required by new commercial, industrial or residential development in an amount proportionate to the demand created by the Proposed Project. Currently, the developer fee is a set amount per square foot of building space, adjusted annually, and is due and payable at the time a building permit is issued.	• Pay fee	• Pre-construction	City of Malibu Environmental and Building Safety Department			
(J-3)	Development may require fire flows up to 2,625 gallons per minute at 20 pounds per square inch residual pressure for up to a two-hour duration, and as specified by the Los Angeles County Fire Department. Final fire flows will be based on the size of the buildings, their relationships to other	• Plan Approval	• Pre-construction	Los Angeles County Fire Department			

	structures, property lines, and types of construction used.						
(J-4)	Fire hydrant spacing shall be 300 feet and shall meet the following requirements: a) No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant. a) No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant. Additional hydrants will be required if hydrant spacing exceeds specified distances.	• Plan Approval	• Pre-construction	Los Angeles County Fire Department			
(J-5)	Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. All on site driveways shall provide a minimum unobstructed width of 26 feet, clear-to-sky. The 26 foot width will be increased to: a) 34 feet in width when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure. b) 42 feet in width when parallel parking is allowed on each side of the access roadway/driveway.	• Plan Approval	• Pre-construction	Los Angeles County Fire Department			

(J-6)	"Fire Lanes" are any ingress/egress, roadway/driveway with paving less than 34 feet in width, and will be clear-to-sky. All "Fire Lanes" will be depicted on the final map.	• Plan Approval	• Pre-construction	Los Angeles County Fire Department			
(J-7)	For streets and driveways with parking restrictions, the entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING – FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure Fire Department access.	• Plan approval	• Pre-construction	City of Malibu Environmental and Building Safety Department			
(J-8)	All proposals for traffic calming measures (speed humps/bumps, traffic circles, roundabouts, etc.) shall be submitted to the Fire Department for review prior to implementation.	• Plan approval	• Pre-construction	Los Angeles County Fire Department			
(J-9)	As required by Section 1117.2.1 of the County Fire Code, a Fuel Modification Plan, a landscape plan and an irrigation plan shall be submitted to the LACFD prior to construction. Said plans shall be reviewed and approved by the Forestry Division of the County of Los Angeles Fire Department for reasonable fire safety.	• Plan approval	• Pre-construction	Los Angeles County Fire Department			
V.J-2 Public Services (Police Protection)							
(J-10)	During construction, the Proposed Project shall: (1) implement a security system; (2) hire private security personnel; and (3) erect perimeter fencing.	• Plan approval	• Pre-construction	City of Malibu Environmental and Building			

				Safety Department			
(J-11)	A 6-foot high wrought iron fence shall be constructed along the northern perimeter of the property sufficient to prevent or discourage pedestrians from accessing the Malibu Knolls neighborhood on foot via the hillside.	• Plan approval	• Pre-construction	City of Malibu Department of Environmental and Community Development			
V.K. Transportation and Circulation							
(K-1)	Webb Way & PCH - Mitigating project impacts at the intersection of Webb Way & PCH would entail re-striping/widening Webb Way between PCH and Civic Center Way to provide a six-lane cross-section with three lanes in each direction. The northbound departure currently provides two travel lanes and widening along the east side of Webb Way north of PCH would be necessary to accommodate the additional northbound lane. The widening of Webb Way to provide a six-lane cross-section would increase the storage capacity on Webb Way in an effort to minimize the potential for overflow conditions. The addition of dual left turn lanes to the eastbound approach on PCH is also recommended; this would entail narrowing the raised center median. The existing travel lanes on PCH at this	• Plan approval	• Pre-construction	Los Angeles County Department of Transportation	√	√	

	intersection are substandard (i.e., less than 12 feet wide). This mitigation can fit within the existing traveled way with substandard lane widths (less than 12 feet); the resulting lane configuration would consist of a raised median, an 11- and 10-foot left turn lane, one 11-foot through lane, two 10-foot through lanes, and one 11-foot right-turn lane. Shifting the east and west legs of the intersection (approach and departure) several feet to the north would allow the standard width lanes with this mitigation. Additionally, a guide sign shall be posted facing the eastbound dual left turns from PCH onto Webb Way, so that motorists who wish to make a subsequent right turn onto east bound Civic Center Way would be directed to the "Number 2" left turn lane. The sign may have to be mounted overhead.						
(K-2)	Cross Creek Road & PCH - The impact of project traffic on the intersection of Cross Creek Road & PCH could be mitigated by the addition of a right-turn lane westbound on PCH. This mitigation would improve the traffic movement along westbound PCH. If Caltrans does not approve of non-standard narrower lane widths, then roadway widening on the south side of PCH on the approach and departure legs would allow the standard width lanes for this mitigation measure.	• Plan approval	• Pre-construction	Los Angeles County Department of Transportation; Caltrans	√	√	

(K-3)	Webb Way & Civic Center Way – Mitigating the project impact would entail installing a new traffic signal and widening Webb Way to a six-lane cross section south of the intersection of Civic Center Way. The northbound approach and the eastbound approach would each be re-striped to include one left-turn lane, one through lane, and one right-turn lane. The southbound approach would be widened to provide one left-turn lane and one shared through/right lane. Widening the east side of Webb Way between PCH and Civic Center Way would be necessary for the proposed six-lane cross section. Results of this signal warrant are provided in the project traffic study (see Appendix G).	• Plan approval	• Pre-construction	Los Angeles County Department of Transportation	√	√	
V.L. Environmental Hazards							

(L-1)	The Project Developer shall obtain all necessary permits from the RWQCB prior to the installation of any temporary and/or permanent dewatering systems. Procurement of all applicable RWQCB permits will ensure the water quality of groundwater discharge into the storm drain infrastructure.	• Obtain permit	• Pre-construction	RWQCB			
~~(L-2)~~	~~A demolition-level asbestos survey by a licensed contractor shall be conducted for the existing on-site structures. If the survey reveals that these structures contain ACMs, the structures shall be stabilized, removed, and disposed of in accordance with applicable regulations, including but not limited to, SCAQMD Rule 1403 and Cal/OSHA requirements.~~	• Obtain permit	• Pre-demolition	SCAQMD; City of Malibu Environmental and Building Safety Department			
~~(L-3)~~	~~During the demolition of existing structures, building materials shall be handled and disposed of in accordance with applicable local, State, and federal regulations regarding lead-containing materials.~~	• Obtain permit	• Pre-demolition	City of Malibu Environmental and Building Safety Department			
~~(L-4)~~	~~Fluorescent light ballasts not specifically labeled as not to contain PCBs shall be presumed to contain them and shall be disposed of in accordance with applicable regulations, including but not limited to, Cal/OSHA requirements.~~	• Obtain permit	• Pre-demolition	City of Malibu Environmental and Building Safety Department			

APPENDIX B

Addendum Traffic Impact Study

LINSCOTT LAW & GREENSPAN engineers

ADDENDUM TRAFFIC IMPACT STUDY

LA PAZ RANCH PROJECT

City of Malibu, California
October 30, 2019

Prepared for:

Malibu Development Company LLC
1460 Fourth Street, Suite 308
Santa Monica, CA 90401

LLG Ref. 5-16-0246-1



Prepared by:

Jason A. Shender
Transportation Planner II

Under the Supervision of:

David S. Shender, P.E.
Principal

Linscott, Law & Greenspan, Engineers

20931 Burbank Boulevard
Suite C
Woodland Hills, CA 91367

818.835.8648 T
818.835.8649 F

www.llgengineers.com

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ADDENDUM TRAFFIC IMPACT STUDY

LA PAZ RANCH PROJECT

City of Malibu, California
October 30, 2019

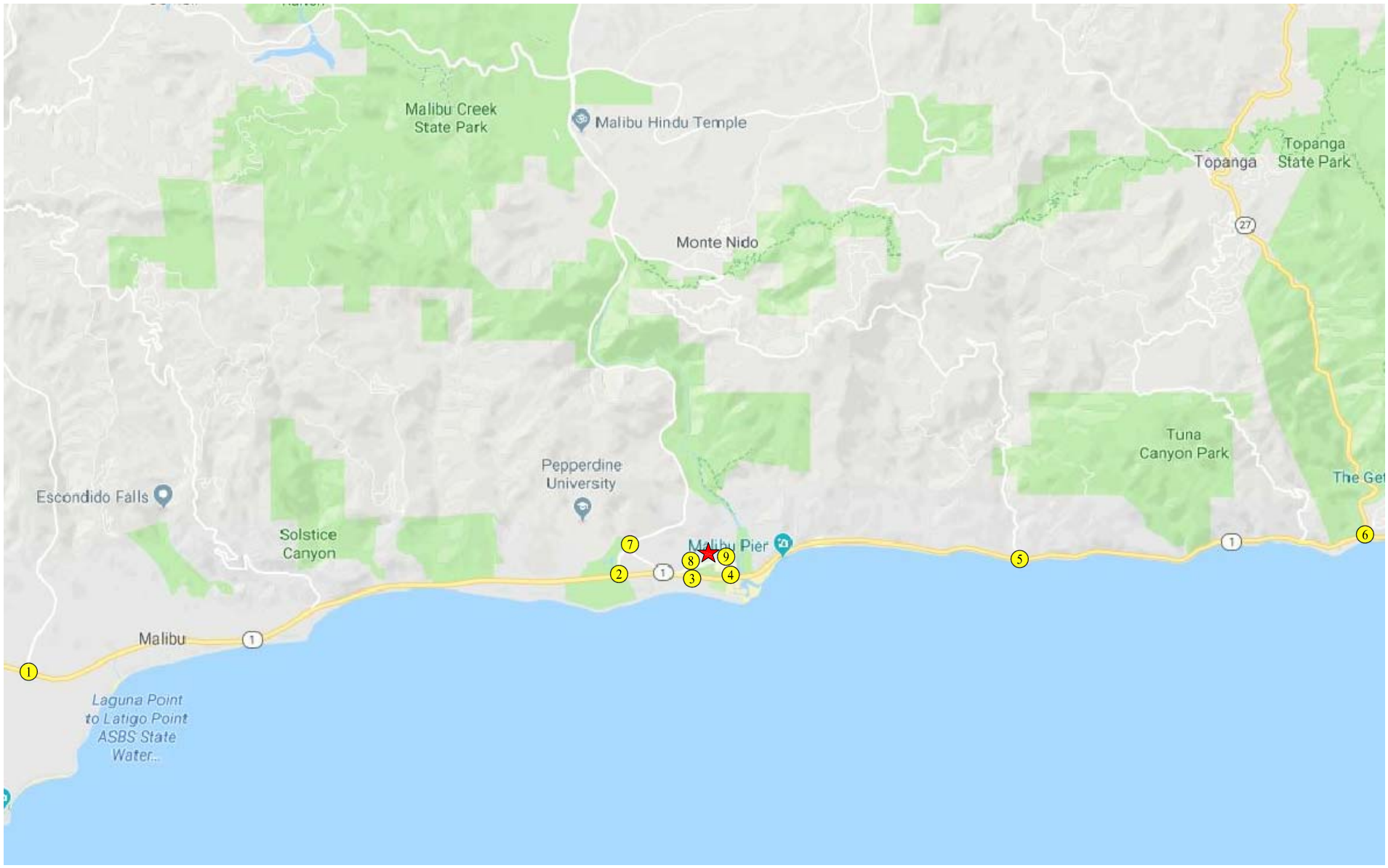
1.0 INTRODUCTION

This addendum traffic analysis has been conducted to identify and evaluate the potential traffic impacts of the proposed modified La Paz Ranch Project (the "2019 Project Modifications") located at 23465 Civic Center Way in the City of Malibu (the "Project site"). In 2008, the City of Malibu (City) approved the La Paz Ranch Project, which includes 62,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area (the retail and restaurant uses total 69,502 square feet of shopping center floor area) ("2008 Approved Project"). Malibu Development Company (MDC or Applicant) seeks to develop the 2008 Approved Project with the 2019 Project Modifications.[1] The Project site is bounded by vacant land to the north and east, Civic Center Way to the south, and La Paz Lane to the west. The Project site location and general vicinity are shown in ***Figure 1–1***.

The traffic analysis follows City traffic study guidelines and is consistent with traffic impact assessment guidelines set forth in the Los Angeles County Congestion Management Program[2]. This traffic analysis evaluates potential traffic impacts of the 2019 Project Modifications at nine key intersections in the vicinity of the Project site. The study intersections were determined in consultation with City staff. The Intersection Capacity Utilization (ICU) method was used to determine Volume-to-Capacity (*v/c*) ratios and corresponding Levels of Service (LOS) at the seven signalized study intersections. The Highway Capacity Manual (HCM) method was used to determine delay values and corresponding LOS for the two stop-controlled intersections. A review also was conducted of Los Angeles County Metropolitan Transportation Authority (Metro) freeway and intersection monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the 2019 Project Modifications.

This study (i) presents existing traffic volumes, (ii) includes existing traffic volumes with the forecast net new traffic volumes from the proposed 2019 Project Modifications, (iii) recommends mitigation measures, where necessary, (iv) forecasts future cumulative baseline traffic volumes, (v) forecasts future traffic volumes with the proposed 2019 Project Modifications, (vi) determines future impacts due to the 2019 Project Modifications, and (vii) recommends mitigation measures, where necessary.

[1] 20,000 square feet of the 62,556 square feet of office floor area approved by the City in the 2008 Approved Project is for municipal uses on Parcel C, a 2.3-acre parcel to be dedicated to the City. The Applicant does not propose to develop the 20,000 square feet on Parcel C; however, this square footage is included in the traffic analysis.
[2] *2010 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, 2010.



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MAP SOURCE: GOOGLE MAPS

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

LA PAZ RANCH PROJECT

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Since the Applicant seeks to develop the 2008 Approved Project with the 2019 Project Modifications, there is no change in the City's previously approved project-related traffic as a result of the 2019 Project Modifications; accordingly, this addendum traffic study is provided for informational purposes.

While the Applicant seeks to develop 42,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area, to provide for the future possibility of reducing retail square footage for additional restaurant square footage, this addendum traffic analysis evaluates the potential traffic impacts of 62,556 square feet of office floor area (inclusive of the 20,000 square feet of municipal use), 49,502 square feet of retail floor area, and 20,000 square feet of restaurant floor area. As with the 2008 Approved Project and 2019 Project Modifications, the retail and restaurant uses total 69,502 square feet of shopping center floor area. Under the ITE *Trip Generation Manual*, retail and restaurant uses are combined for trip generation purposes when evaluating shopping centers. Accordingly, for purposes of this addendum traffic study, the analysis of the 2019 Project Modifications assumes 62,556 square feet of office floor area and 69,502 square feet of shopping center floor area (either the square footage the Applicant currently seeks to develop of 59,502 square feet of retail floor area and 10,000 square feet of restaurant floor area, or the future possibility of 49,502 square feet of retail floor area and 20,000 square feet of restaurant floor area).

1.1 Project Background and Kaku Traffic Study

A traffic study[3] was prepared by Kaku Associates (the "Kaku traffic study") for the previously proposed La Paz Ranch Project (the "2005 Analyzed Project"). The development analyzed in the Kaku traffic study consisted of 53,825 square feet of office floor area, 67,110 square feet of retail floor area, and 10,000 square feet of restaurant floor area. The Kaku traffic study was incorporated into an Environmental Impact Report prepared and certified for the La Paz Ranch Project. The Malibu City Council approved a development program (the 2008 Approved Project) consisting of 62,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area, which represents a slight modification to the development description evaluated in the Kaku traffic study.

The Kaku traffic study evaluated the potential traffic impacts of the 2005 Analyzed Project. Among other elements, the Kaku traffic study relied on:

- Traffic counts conducted at nine study intersections during the weekday morning (AM), weekday afternoon (PM), and Saturday midday (MD) peak periods in April and May, 2003;

- Trip generation forecasts of the 2005 Analyzed Project using trip generation rates provided in the 6th Edition of the *Trip Generation Manual* published by the Institute of Transportation Engineers;

[3] *Traffic and Circulation Study for the Malibu La Paz Project*, Kaku Associates, April 2005.

- Analysis of the cumulative traffic effects of the 2005 Analyzed Project based on review and analysis of other proposed development projects known at that time; and

- Assessment of potential traffic impacts of the 2005 Analyzed Project based on the thresholds of significance in effect at the time of the preparation of the Kaku traffic study.

The Kaku traffic study determined that the 2005 Analyzed Project would result in significant traffic impacts at the following five study intersections:

- Webb Way / Pacific Coast Highway

- Cross Creek Road / Pacific Coast Highway

- Webb Way / Civic Center Way

- Malibu Canyon Road / Pacific Coast Highway

- Cross Creek Road / Civic Center Way

The Kaku traffic study identified feasible traffic mitigation measures at three of the adversely affected intersections: Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway, and Webb Way / Civic Center Way. Further, the Kaku traffic study determined that no feasible mitigation measures were available at two of the affected intersections: Malibu Canyon Road / Pacific Coast Highway and Cross Creek Road / Civic Center Way. It is noted that the Applicant for the 2019 Project Modifications has completed construction of the mitigation measures at Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway, and Webb Way / Civic Center Way as outlined in the Kaku traffic study.

The City has determined that an addendum traffic study is required for purposes of evaluating the traffic effects of the 2019 Project Modifications. The addendum traffic study is to include:

- Updated traffic counts during the AM, PM, and MD peak periods[4] at the same nine study intersections evaluated in the Kaku traffic study;

- Trip generation forecasts of the 2019 Project Modifications using trip generation rates provided in the current edition of the ITE *Trip Generation Manual* (i.e., the 10th Edition);

- Analysis of the cumulative traffic effects of the 2019 Project Modifications based on a current review and analysis of other proposed development projects in the area;

[4] It is noted that the Kaku traffic study included traffic counts conducted while local schools were in session. As required by the City of Malibu, the addendum traffic analysis includes traffic counts at the study intersections during both school time conditions, as well as during summertime conditions. See Section 5.0 for additional discussion regarding the intersection traffic counts.

- An assessment of potential traffic impacts of the 2019 Project Modifications based on the current thresholds of significance used by the City of Malibu for purposes of evaluating the relative significance of traffic impacts of development projects in environmental documents;

- A comparison of the relative traffic effects of the 2019 Project Modifications to the 2005 Analyzed Project; and

- A comparison of the relative traffic effects of the 2019 Project Modifications to the 2008 Approved Project.

1.2 Study Area

Upon coordination with City staff, nine study intersections have been identified for evaluation during the weekday morning (7:00 AM to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak hours, as well as the Saturday midday peak hours (12:00 PM to 2:00 PM). The nine study intersections provide local access to the study area and define the extent of the boundaries for this traffic impact analysis. As previously noted, these nine intersections are consistent with the study intersections evaluated in the Kaku traffic study. Further discussion of the existing street system and study area is provided in Section 4.0.

1.3 Summary of Findings

As noted above, the Kaku traffic study concluded the 2005 Analyzed Project would result in significant traffic impacts at five intersections: Webb Way / Pacific Coast Highway, Cross Creek Road / Civic Center Way, Cross Creek Road / Civic Center Way, Webb Way / Civic Center Way, and Malibu Canyon Road / Pacific Coast Highway. This addendum traffic study concludes that the 2019 Project Modifications is forecast to result in significant traffic impacts at three of the five study intersections significantly impacted by the 2005 Analyzed Project: Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway and Cross Creek Road / Civic Center Way. Traffic mitigation measures previously identified for the 2008 Approved Project (and funded for construction by the Applicant of the 2019 Project Modifications) would completely mitigate the significant traffic impacts at two of the intersections as described below:

- Webb Way / Pacific Coast Highway. As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at this intersection. A traffic mitigation measure previously identified in the Kaku traffic study – and funded for construction by the Applicant of the 2019 Project Modifications – was determined to completely mitigate the significant traffic impact due to the 2019 Project Modifications.

- Cross Creek Road / Pacific Coast Highway. As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at this intersection. A traffic mitigation measure previously identified in the Kaku traffic study – and funded for construction by the Applicant of the 2019 Project Modifications – was determined to completely mitigate the significant traffic impact due to the 2019 Project Modifications.

As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at the Cross Creek Road / Civic Center Way intersection. Consistent with the findings of the Kaku traffic study for the 2005 Analyzed Project, it is concluded that no feasible mitigation measures are available.

At the Webb Way / Civic Center Way intersection, the 2019 Project Modifications is not expected to cause a significant traffic impact at this intersection. However, the 2005 Analyzed Project was identified to have a significant traffic impact at the Webb Way / Civic Center Way intersection. The traffic mitigation measure identified in the Kaku traffic study for this intersection has been funded for construction by the Applicant of the 2019 Project Modifications.

At the Malibu Canyon Road / Pacific Coast Highway intersection, the 2019 Project Modifications is not expected to cause a significant traffic impact at this intersection. The 2005 Analyzed Project was identified to have a significant traffic impact at the intersection, however, the Kaku traffic study determined that no feasible mitigation measures were available.

In summary, it is concluded in this addendum traffic study that the 2019 Project Modifications would not cause any new traffic impacts on the local street system that were not previously identified for the 2005 Analyzed Project in the Kaku traffic study. Further, the 2019 Project Modifications would result in reduced traffic impacts as compared to the 2005 Analyzed Project based on the reduced number of intersections significantly impacted by the 2019 Project Modifications.

As noted above, the 2008 Approved Project provides a slightly modified development program as compared to the 2005 Analyzed Project. The Kaku traffic study did not directly evaluate the potential traffic impacts of the 2008 Approved Project. However, because of the relatively minor changes in trip generation potential between the 2005 Analyzed Project and 2008 Approved Project, the relative traffic impacts of the 2008 Approved Project would be the same as the 2005 Analyzed Project. Accordingly, the 2019 Project Modifications would result in reduced traffic impacts as compared to the 2005 Analyzed Project and the 2008 Approved Project based on the expected reduced number of intersections significantly impacted by the 2019 Project Modifications.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The Project site is located at 23465 Civic Center Way in the City of Malibu. The Project site is bounded by vacant land to the north and east, Civic Center Way to the south, and La Paz Lane to the west. The Project site location and general vicinity are shown in *Figure 1–1*.

2.2 Existing Project Site

The existing Project site is currently vacant, and the perimeter of the site is currently fenced off.

2.3 Proposed Project Description

As approved by the City in the 2008 Approved Project, the Applicant of the 2019 Project Modifications seeks to develop 42,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area.[5]

While the Applicant seeks to develop 42,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area, to provide for the future possibility of reducing retail square footage for additional restaurant square footage, this addendum traffic analysis evaluates the potential traffic impacts of 62,556 square feet of office floor area (inclusive of the 20,000 square feet of municipal use), 49,502 square feet of retail floor area, and 20,000 square feet of restaurant floor area. As with the 2008 Approved Project and 2019 Project Modifications, the retail and restaurant uses total 69,502 square feet of shopping center floor area. Under the ITE *Trip Generation Manual*, retail and restaurant uses are combined for trip generation purposes when evaluating shopping centers. Accordingly, for purposes of this addendum traffic study, the analysis of the 2019 Project Modifications assumes 62,556 square feet of office floor area and 69,502 square feet of shopping center floor area (either the square footage the Applicant currently seeks to develop of 59,502 square feet of retail floor area and 10,000 square feet of restaurant floor area, or the future possibility of 49,502 square feet of retail floor area and 20,000 square feet of restaurant floor area).

Construction and occupancy of the proposed 2019 Project Modifications is planned to be completed by the year 2022. The site plan for the proposed 2019 Project Modifications is illustrated in ***Figure 2–1***.

Vehicular access to the Project site will be provided via La Paz Lane along the Project site's westerly frontage, which is proposed to intersect with Civic Center Way. Further discussion of the Project site access and circulation scheme is provided in Section 3.0.

[5] The 2008 Approved Project also included 20,000 square feet of municipal uses on Parcel C, a 2.3-acre parcel to be dedicated to the City. The Applicant does not propose to develop the 20,000 square feet on Parcel C; however, this square footage is included in the traffic analysis.



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MAP SOURCE: MARMOL RADZINER

FIGURE 2-1
PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

LA PAZ RANCH PROJECT

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3.0 SITE ACCESS AND CIRCULATION

The proposed site access scheme for the 2019 Project Modifications is displayed in *Figure 2–1*. A description of the proposed site access and circulation scheme is provided in the following subsections.

Vehicular access to the Project site will be provided via one driveway along the west side of La Paz Lane at its intersection with Civic Center Way. The driveway will provide access to the 2019 Project Modifications' subterranean and surface-level parking areas. The driveway is proposed to accommodate full vehicular access (i.e., left-turn and right-turn ingress and egress movements).

4.0 EXISTING STREET SYSTEM

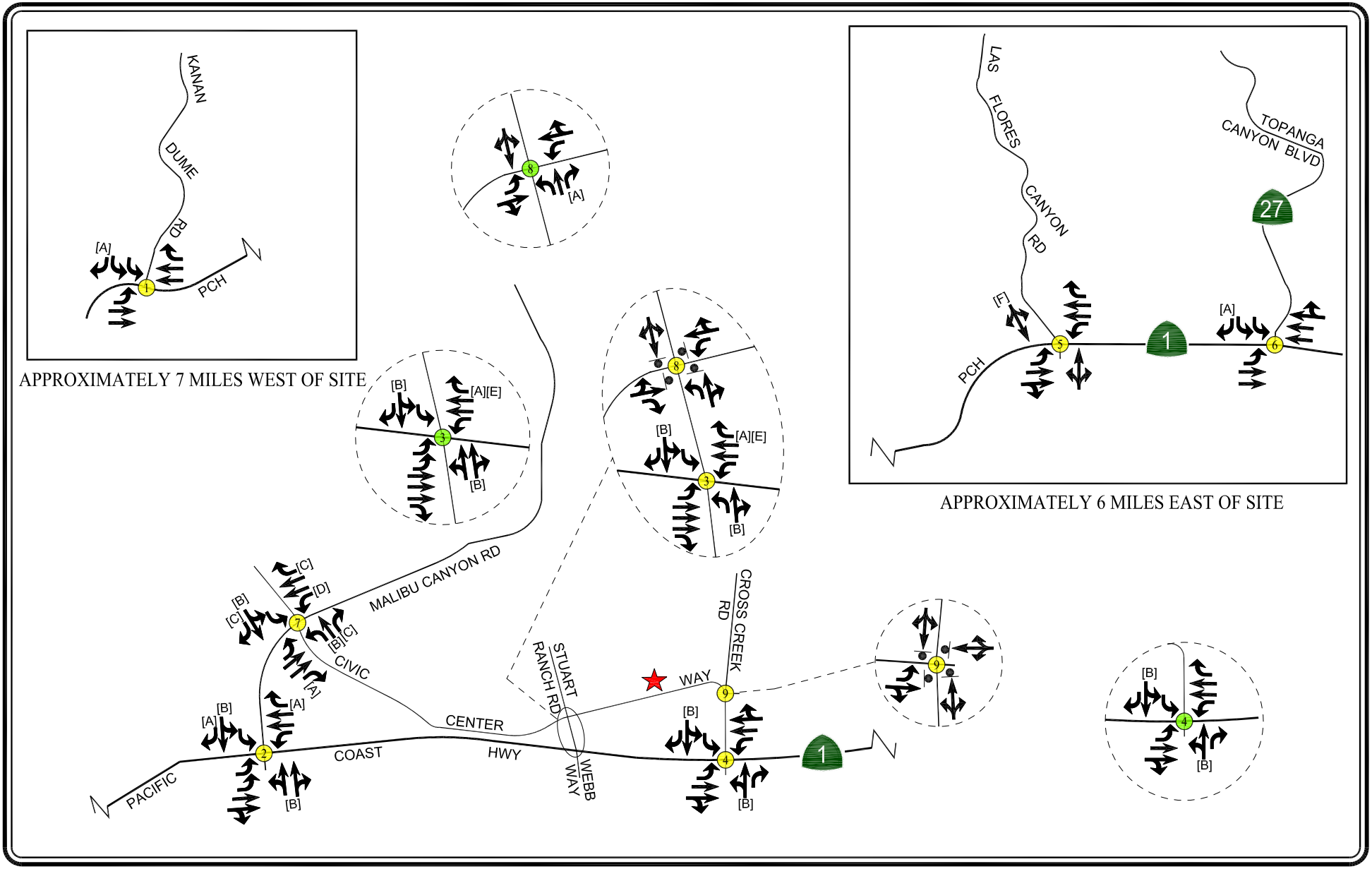
4.1 Local Roadway System

Immediate access to the Project site is provided via La Paz Lane and Civic Center Way. The following nine study intersections were selected in consultation with City staff in order to determine potential impacts related to the proposed 2019 Project Modifications:

1. Kanan Dume Road / Pacific Coast Highway (SR-1)
2. Malibu Canyon Road / Pacific Coast Highway (SR-1)
3. Webb Way / Pacific Coast Highway (SR-1)
4. Cross Creek Road / Pacific Coast Highway (SR-1)
5. Las Flores Canyon Road / Pacific Coast Highway (SR-1)
6. Topanga Canyon Boulevard / Pacific Coast Highway (SR-1)
7. Malibu Canyon Road / Civic Center Way
8. Stuart Ranch Road-Webb Way / Civic Center Way
9. Cross Creek Road / Civic Center Way

As previously noted, these nine intersections were analyzed in the Kaku traffic study to evaluate the potential traffic impacts of the 2005 Analyzed Project. Seven of the nine intersections selected for analysis are presently controlled by traffic signals. The Stuart Ranch Road-Webb Way / Civic Center Way intersection was controlled by all-way stop signs at the time of the traffic counts (described below in Section 5.0). The Cross Creek Road / Civic Center Way intersection is presently controlled by all-way stop signs.

As previously noted, the Applicant of the 2019 Project Modifications has constructed improvements at three of the study intersections (Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway, and Stuart Ranch Road-Webb Way / Civic Center Way), consistent with the traffic mitigation measures identified in the Kaku traffic study. The travel future lane configurations at the study intersections at the time of the intersection traffic counts are displayed in ***Figure 4–1***. Also provided in *Figure 4–1* are the current lane configurations at the three intersections where traffic improvements have recently been constructed.



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- PROJECT SITE
- XX STUDY INTERSECTION
- XX CONDITIONS WITH MITIGATION
- STOP SIGN

[A] RIGHT-TURN OVERLAP
[B] SPLIT PHASING
[C] FREE-FLOW RIGHT-TURN
[D] NO LEFT-TURN 6-9 AM, M-F
[E] NO RIGHT-TURN ON RED 4-7 PM, M-F
[F] NO RIGHT-TURN ON RED

FIGURE 4-1
INTERSECTION LANE CONFIGURATIONS AT TIME OF TRAFFIC COUNTS

LINSCOTT, LAW & GREENSPAN, engineers

LA PAZ RANCH PROJECT

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4.2 Roadway Descriptions

A brief description of the roadways in the vicinity Project site is provided in the following paragraphs.

Kanan Dume Road is a north-south oriented roadway that is located approximately seven miles west of the Project site. Within the Project site study area, Kanan Dume Road is classified as a Major Arterial in the Circulation Element of the City of Malibu General Plan. Two through travel lanes are generally provided in each direction on Kanan Dume Road within the Project site study area, except near the Pacific Coast Highway intersection, where only one through travel lane is provided in each direction. An exclusive right-turn lane and dual left-turn lanes are provided in the southbound direction on Kanan Dume Road at the Pacific Coast Highway intersection. A truck arrestor located within the center median is provided in the southbound direction at the Pacific Coast Highway intersection. Kanan Dume Road is posted for a speed limit of 50 miles per hour within the Project site study area near Pacific Coast Highway.

Malibu Canyon Road is a north-south oriented roadway that is located west of the Project site. Within the Project site study area, Malibu Canyon Road is classified as a Major Arterial in the Circulation Element of the City of Malibu General Plan. One through travel lane is provided in each direction north of Civic Center Way within the Project site study area, while two through travel lanes are provided in each direction between Civic Center Way and Pacific Coast Highway. An exclusive right-turn lane, one left-turn/through lane, and one exclusive left-turn lane is provided in the southbound direction on Malibu Canyon Road at the Pacific Coast Highway intersection. One right-turn/through lane and one left-turn/through lane are provided in the northbound direction on Malibu Canyon Road at the Pacific Coast Highway intersection. Exclusive left-turn lanes are also provided in both directions on Malibu Canyon Road at the Civic Center Way intersection. Malibu Canyon Road is posted for a speed limit of 45 miles per hour within the Project site study area.

Webb Way is a north-south oriented roadway that extends between Civic Center Way and Pacific Coast Highway and is located west of the Project site. Within the Project site study area, Webb Way is classified as a Collector roadway in the Circulation Element of the City of Malibu General Plan. One through travel lane is provided in each direction within the Project site study area. One exclusive left-turn lane is provided in both directions on the roadway at the Pacific Coast Highway intersection. One exclusive right-turn lane is also provided in the southbound direction at the Pacific Coast Highway intersection and in the northbound direction at the Civic Center Way intersection. There is no posted speed limit on Webb Way in the Project site study area, thus it is assumed to be a prima-facie speed limit of 25 miles per hour, consistent with the State of California Vehicle Code.

Cross Creek Road is a north-south oriented roadway that is located east of the Project site. Within the Project site study area, Cross Creek Road is designated as a Collector roadway in the Circulation Element of the City of Malibu General Plan between Pacific Coast Highway and Civic Center Way, while it is designated as a Local roadway north of Civic Center Way. One through travel lane is provided in each direction within the Project site study area. One exclusive left-turn lane and one exclusive right-turn lane are provided in the southbound direction at the Pacific Coast Highway intersection. One exclusive right-turn lane is also provided in the northbound direction at the Pacific Coast Highway intersection. Cross Creek Road is posted for a speed limit of 25 miles per hour within the Project site study area.

Las Flores Canyon Road is a north-south oriented roadway that is located east of the Project site. Within the Project site study area, Las Flores Canyon Road is designated as a Local roadway in the Circulation Element of the City of Malibu General Plan. One through travel lane is provided in each direction on Las Flores Canyon Road within the Project site vicinity. Las Flores Canyon Road is posted for a speed limit of 25 miles per hour within the Project site study area.

Topanga Canyon Boulevard (SR-27) is a north-south oriented roadway that is located approximately six miles east of the Project site. Within the Project site study area, Topanga Canyon Boulevard is classified as a Secondary Highway in the County of Los Angeles Highway Plan. One through travel lane is generally provided in each direction on Topanga Canyon Boulevard within the Project study area, except near the Pacific Coast Highway intersection, where two through travel lanes are provided in the southbound direction. An exclusive right-turn lane and dual left-turn lanes are provided in the southbound direction on Topanga Canyon Boulevard at the Pacific Coast Highway intersection. Topanga Canyon Boulevard is posted for a speed limit of 45 miles per hour within the Project site study area near Pacific Coast Highway.

Pacific Coast Highway (SR-1) is an east-west oriented roadway that is located south of the Project site. Within the Project study area, Pacific Coast Highway is designated as a Modified Major Arterial in the Circulation Element of the City of Malibu General Plan and an Eligible Scenic Highway by the California Department of Transportation. Two through travel lanes are provided in each direction within the Project site study area. It should be noted that a third eastbound through travel lane is provided at the eastbound approach on Pacific Coast Highway at Webb Way. Exclusive left-turn lanes are provided in both directions at major intersections in the Project site vicinity. Dual left-turn lanes are provided in the eastbound direction at the Malibu Canyon Road intersection. Exclusive right-turn only lanes are provided in the westbound direction at the Kanan Dume Road, Malibu Canyon Road, Webb Way, and Las Flores Canyon Road intersections. An exclusive right-turn only lane is also provided in the eastbound direction on Pacific Coast Highway at Webb Way. Pacific Coast Highway is posted for speed limits of 50 miles per hour west of Malibu Canyon Road and 45 miles per hour east of Malibu Canyon Road within the Project site study area.

Civic Center Way is an east-west oriented roadway that borders the Project site to the south. Within the Project site study area, Civic Center Way is classified as a Collector roadway in the Circulation Element of the City of Malibu General Plan. One through travel lane is provided in each direction within the Project site study area. A free-flow right-turn lane is provided in the westbound direction at the Malibu Canyon Road intersection, and an exclusive right-turn lane is provided in the eastbound direction at the Webb Way intersection. Civic Center Way is posted for a speed limit of 40 miles per hour within the Project site study area.

4.3 Public Transit Services

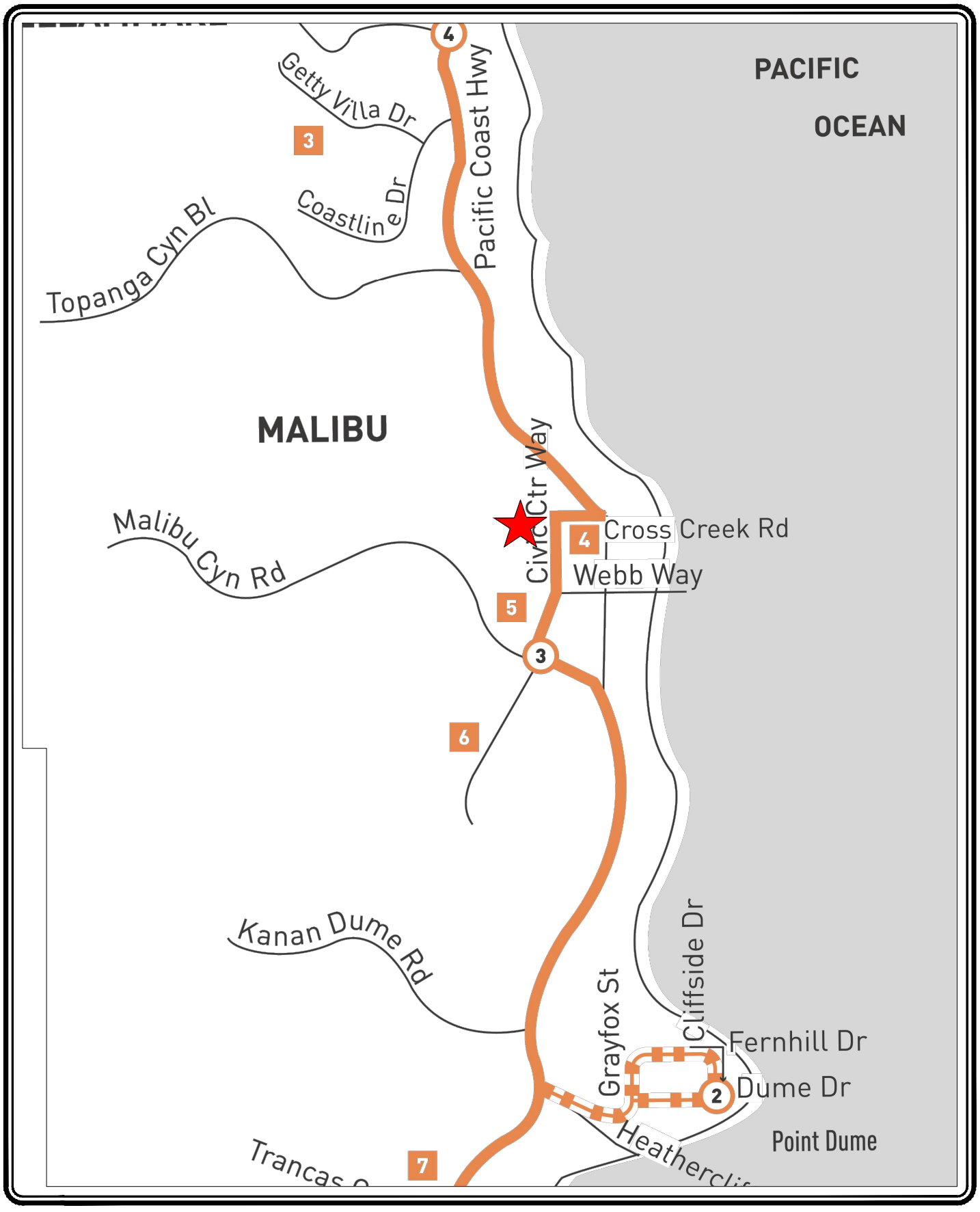
Public transit service within the Project site study area is currently provided by the Los Angeles County Metropolitan Transit Authority (Metro). A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 4–1***. The existing public transit routes in the Project site vicinity are illustrated in ***Figure 4–2***.

Table 4-1
EXISTING TRANSIT ROUTES [1]

22-Jan-19

ROUTE	DESTINATIONS	ROADWAY(S) NEAR SITE	NO. OF BUSES DURING PEAK HOUR			
			DIR	AM	PM	SAT
Metro 534	Downtown Santa Monica to Malibu (via Pacific Coast Highway)	Pacific Coast Highway, Malibu Canyon Road, Civic Center Way, Cross Creek Road	EB WB	5 8	7 4	2 3
			Total	**13**	**11**	**5**

[1] Sources: Los Angeles County Metropolitan Transportation Authority (Metro) website, 2018.



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MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY (METRO)
PROJECT SITE

FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

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LA PAZ RANCH PROJECT

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5.0 TRAFFIC COUNTS

Manual traffic counts of vehicular turning movements were conducted in April and May 2018 (school time), as well as July and August 2018 (summertime) at each of the study intersections during the weekday morning and afternoon commuter periods, as well as the Saturday mid-day commuter period to determine the peak hour traffic volumes. As previously noted, the Kaku traffic study included traffic counts conducted at the study intersections while local schools were in session. As required by the City of Malibu, the addendum traffic analysis includes traffic counts at the study intersections during both school time conditions, as well as during summertime conditions.

The manual traffic counts at the study intersections were conducted from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on a weekday to determine the respective weekday peak commuter hours. The manual traffic counts at the study intersections were also conducted from 12:00 PM to 2:00 PM on a Saturday to determine the midday MD peak commuter hour.

The manual counts of vehicle movements at the study intersections conducted during the weekday AM and PM peak periods, as well as the Saturday MD peak period for school-time and summertime conditions are summarized in ***Tables 5–1*** and ***5–2***, respectively. The existing school-time traffic volumes at the study intersections during the weekday AM and PM peak hours and Saturday MD peak hour are shown in ***Figures 5–1***, ***5–2***, and ***5–3***, respectively. The existing summertime traffic volumes at the study intersections during the weekday AM and PM peak hours and Saturday MD peak hour are shown in ***Figures 5–4***, ***5–5***, and ***5–6***, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix A***.

Table 5-1
EXISTING SCHOOL TIME TRAFFIC VOLUMES [1]

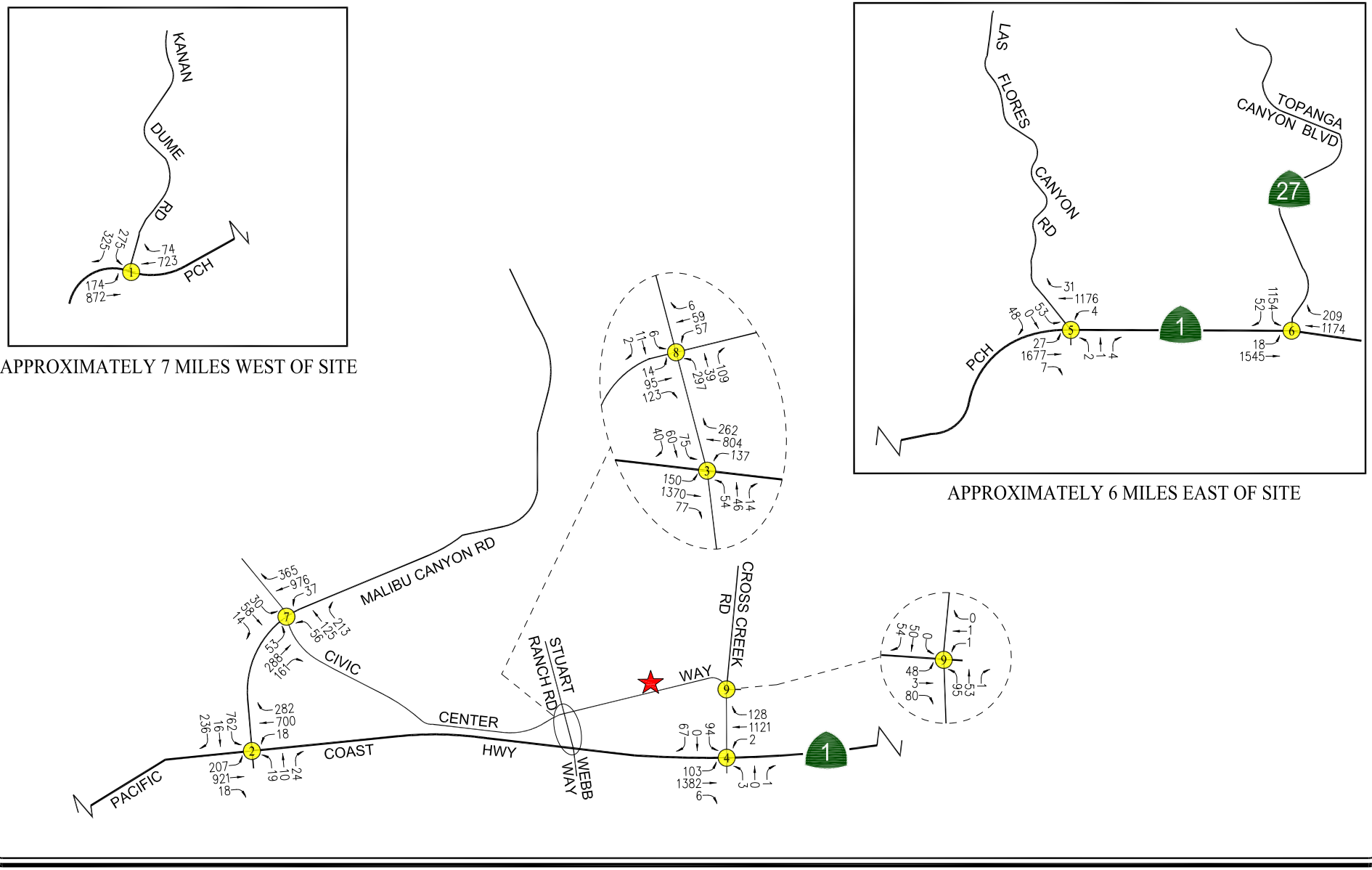
NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR		SAT MID-DAY PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME	BEGAN	VOLUME
1	Kanan Dume Road /	04/10/2018	NB	7:15	0	4:00	0	1:00	0
	Pacific Coast Highway (SR-1)	04/14/2018	SB		600		405		888
			EB		1,046		1,147		1,286
			WB		797		1,297		1,379
2	Malibu Canyon Road /	04/10/2018	NB	8:00	53	4:00	47	12:30	96
	Pacific Coast Highway (SR-1)	04/14/2018	SB		1,014		557		911
			EB		1,146		1,418		1,466
			WB		1,000		1,466		1,525
3	Webb Way /	05/22/2018	NB	8:00	114	4:15	195	12:45	218
	Pacific Coast Highway (SR-1)	05/19/2018	SB		175		245		233
			EB		1,597		1,436		1,589
			WB		1,203		1,818		1,693
4	Cross Creek Road /	05/22/2018	NB	8:00	4	4:30	27	1:00	46
	Pacific Coast Highway (SR-1)	05/19/2018	SB		161		250		355
			EB		1,491		1,667		1,612
			WB		1,251		1,812		1,698
5	Las Flores Canyon Road /	04/10/2018	NB	7:00	7	4:15	30	12:15	63
	Pacific Coast Highway (SR-1)	04/14/2018	SB		101		75		47
			EB		1,711		1,744		1,632
			WB		1,211		1,693		1,948
6	Topanga Canyon Boulevard (SR-27) /	04/10/2018	NB	7:00	0	4:15	0	12:45	0
	Pacific Coast Highway (SR-1)	04/14/2018	SB		1,206		304		661
			EB		1,563		1,899		1,733
			WB		1,383		2,669		2,209
7	Malibu Canyon Road /	04/10/2018	NB	7:45	502	5:00	571	1:00	438
	Civic Center Way	04/14/2018	SB		1,378		757		1,084
			EB		102		478		168
			WB		394		680		331
8	Stuart Ranch Road-Webb Way /	05/22/2018	NB	8:00	445	4:15	485	1:00	329
	Civic Center Way	05/19/2018	SB		19		55		25
			EB		232		223		211
			WB		122		279		221
9	Cross Creek Road /	05/22/2018	NB	8:00	149	4:15	212	12:45	197
	Civic Center Way	05/19/2018	SB		104		93		63
			EB		131		163		196
			WB		2		9		9

[1] Counts conducted by National Data & Surveying Services.

Table 5-2
EXISTING SUMMERTIME TRAFFIC VOLUMES [1]

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR		SAT MID-DAY PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME	BEGAN	VOLUME
1	Kanan Dume Road /	07/31/2018	NB	8:00	0	4:15	0	1:00	0
	Pacific Coast Highway (SR-1)	08/04/2018	SB		532		451		943
			EB		946		1,391		1,373
			WB		692		1,338		1,342
2	Malibu Canyon Road /	07/31/2018	NB	8:00	46	4:00	44	1:00	63
	Pacific Coast Highway (SR-1)	08/04/2018	SB		1,070		589		712
			EB		1,005		1,544		1,369
			WB		880		1,522		1,588
3	Webb Way /	07/31/2018	NB	7:45	76	4:00	235	12:15	68
	Pacific Coast Highway (SR-1)	08/04/2018	SB		109		274		331
			EB		1,696		1,532		1,599
			WB		1,118		1,790		1,748
4	Cross Creek Road /	07/31/2018	NB	7:30	3	4:00	44	1:00	46
	Pacific Coast Highway (SR-1)	08/04/2018	SB		136		304		355
			EB		1,614		1,672		1,612
			WB		1,147		1,810		1,698
5	Las Flores Canyon Road /	07/31/2018	NB	7:15	5	4:00	48	12:15	65
	Pacific Coast Highway (SR-1)	08/04/2018	SB		56		70		70
			EB		1,549		1,858		1,471
			WB		1,297		1,714		1,914
6	Topanga Canyon Boulevard (SR-27) /	07/31/2018	NB	7:15	0	4:45	0	12:30	0
	Pacific Coast Highway (SR-1)	08/04/2018	SB		1,124		330		697
			EB		1,587		1,979		1,584
			WB		1,475		2,699		2,204
7	Malibu Canyon Road /	07/31/2018	NB	7:45	317	4:45	594	1:00	431
	Civic Center Way	08/04/2018	SB		1,323		706		922
			EB		57		339		75
			WB		271		631		284
8	Stuart Ranch Road-Webb Way /	07/31/2018	NB	8:00	355	4:45	512	1:00	329
	Civic Center Way	08/04/2018	SB		22		108		42
			EB		131		219		270
			WB		120		270		237
9	Cross Creek Road /	07/31/2018	NB	8:00	129	4:00	212	1:00	263
	Civic Center Way	08/04/2018	SB		106		119		83
			EB		145		187		295
			WB		3		12		14

[1] Counts conducted by National Data & Surveying Services.



PROJECT SITE
XX STUDY INTERSECTION

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FIGURE 5-1
EXISTING (SCHOOL TIME) TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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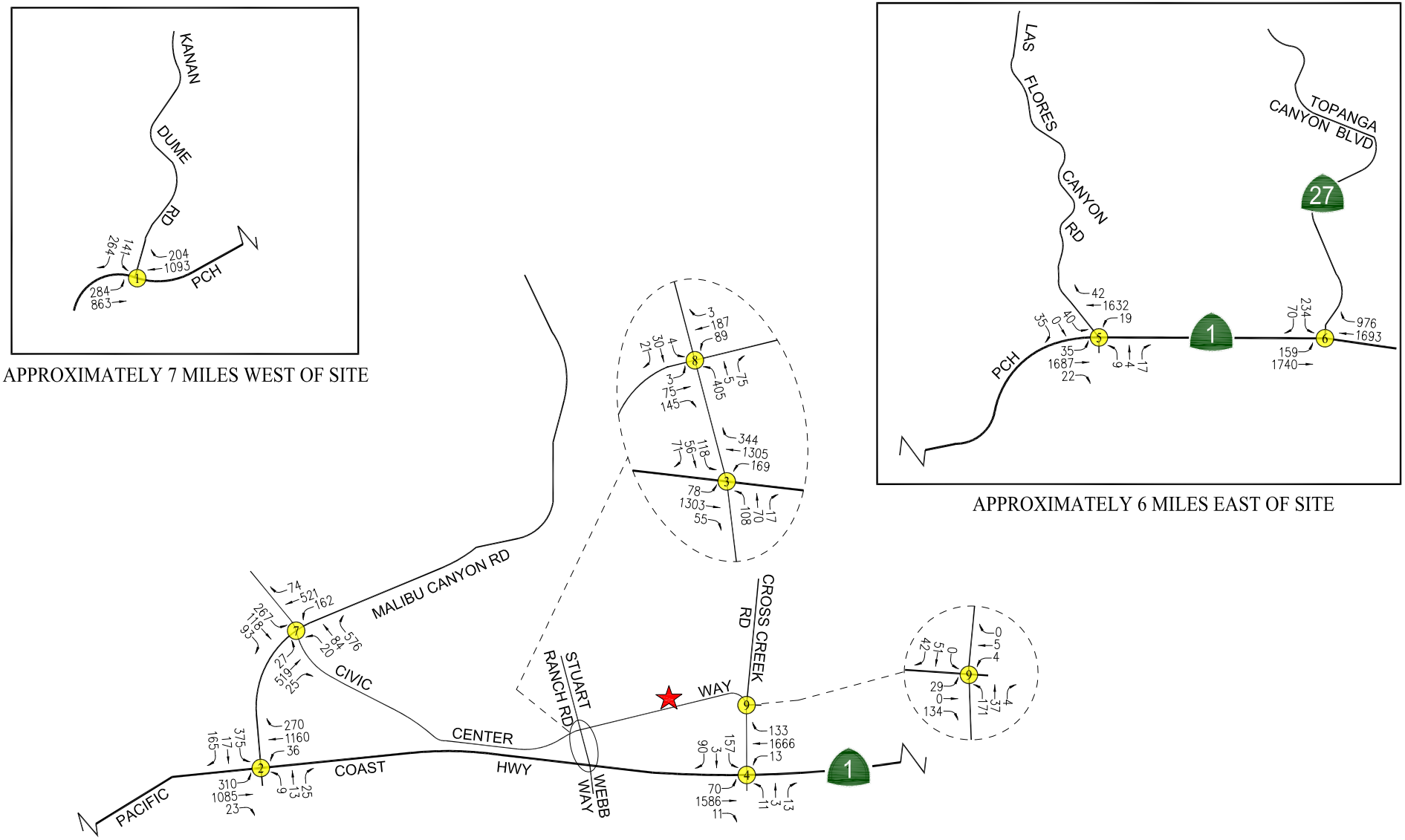

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PROJECT SITE
STUDY INTERSECTION

FIGURE 5-2
EXISTING (SCHOOL TIME) TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LA PAZ RANCH PROJECT

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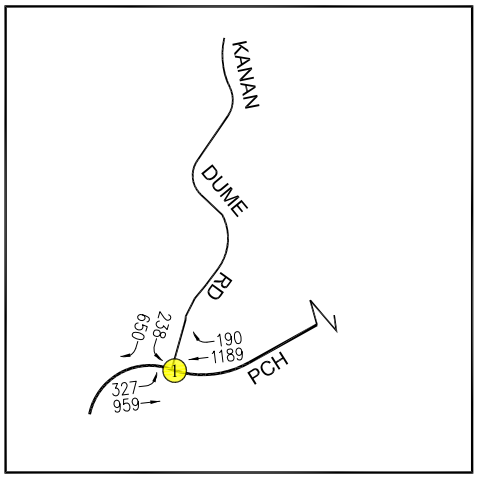

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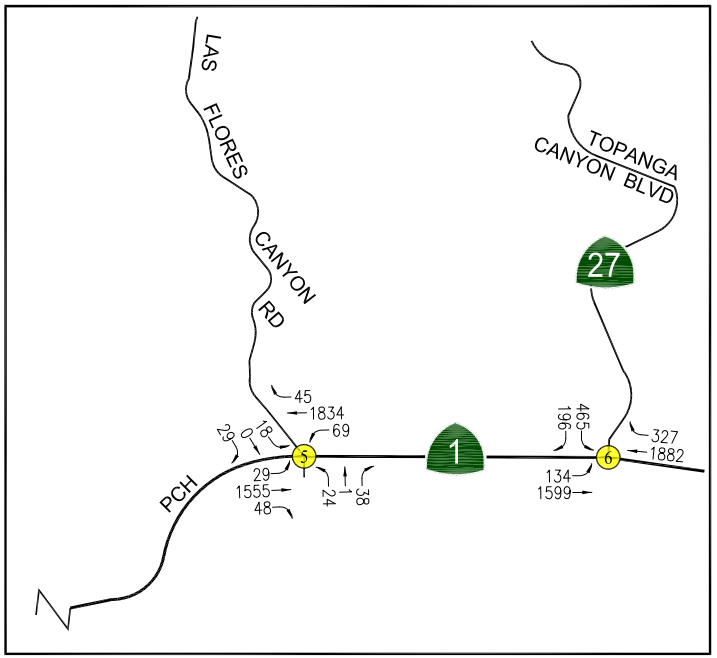

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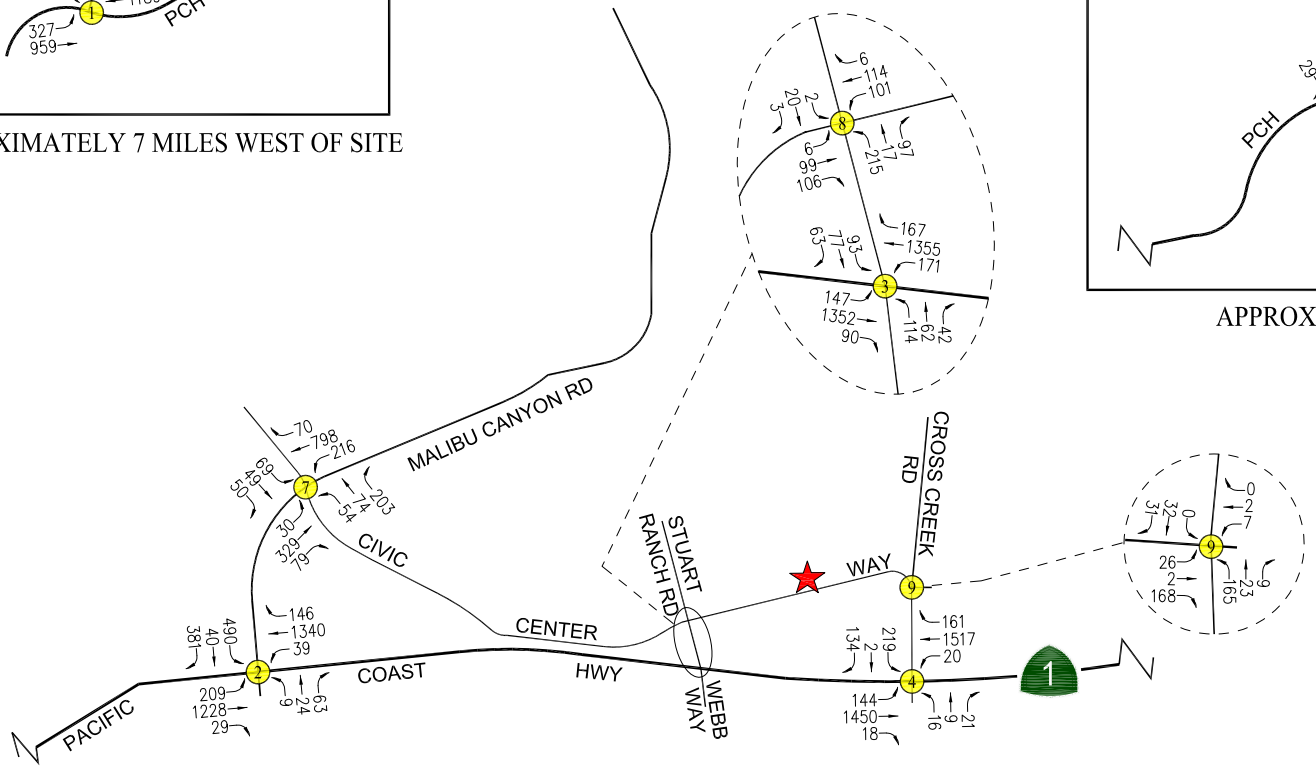

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FIGURE 5-3
EXISTING (SCHOOL TIME) TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LA PAZ RANCH PROJECT

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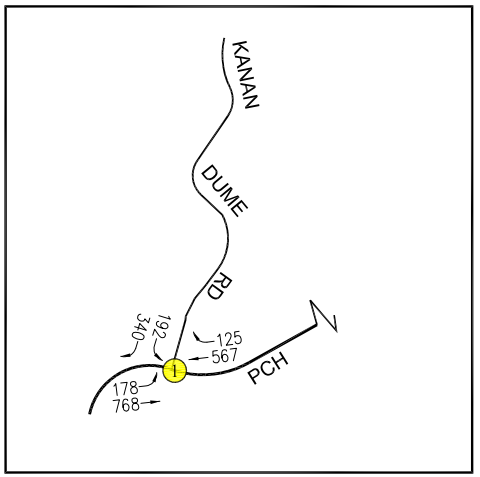

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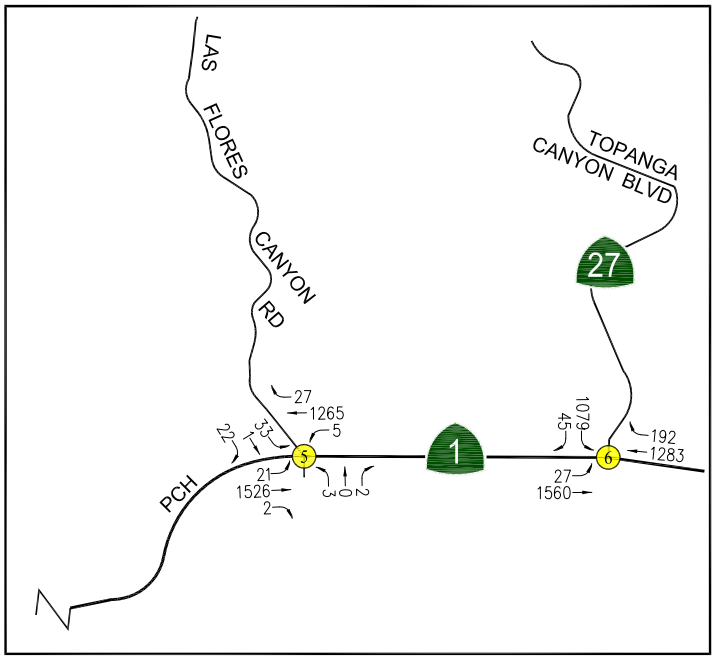

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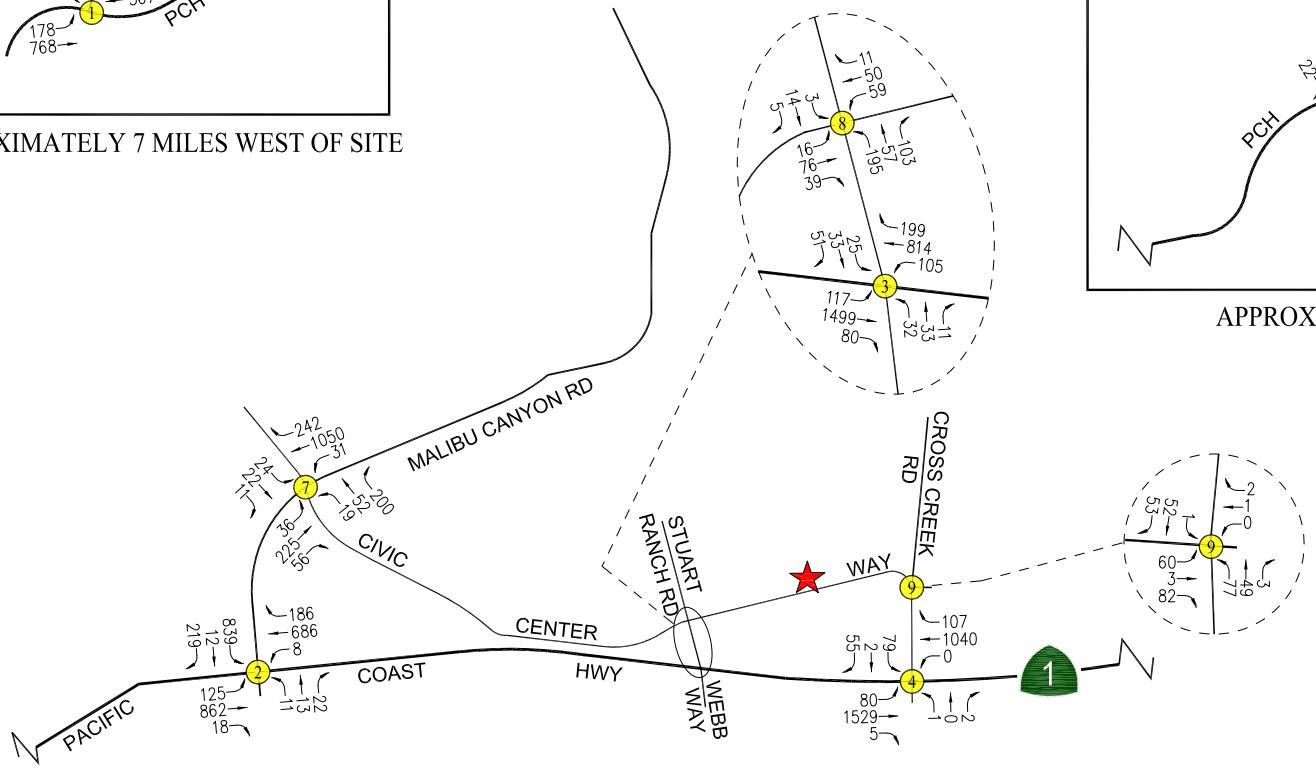

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FIGURE 5-4
EXISTING (SUMMERTIME) TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

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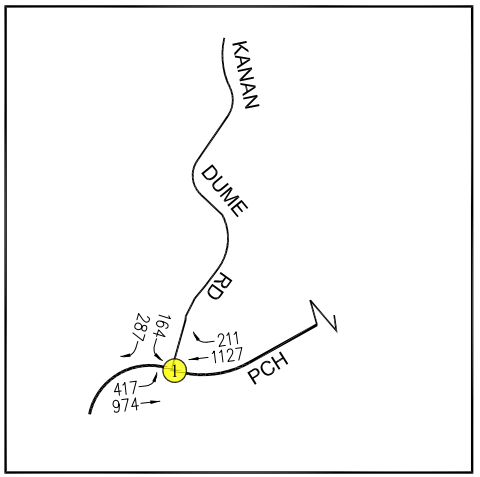

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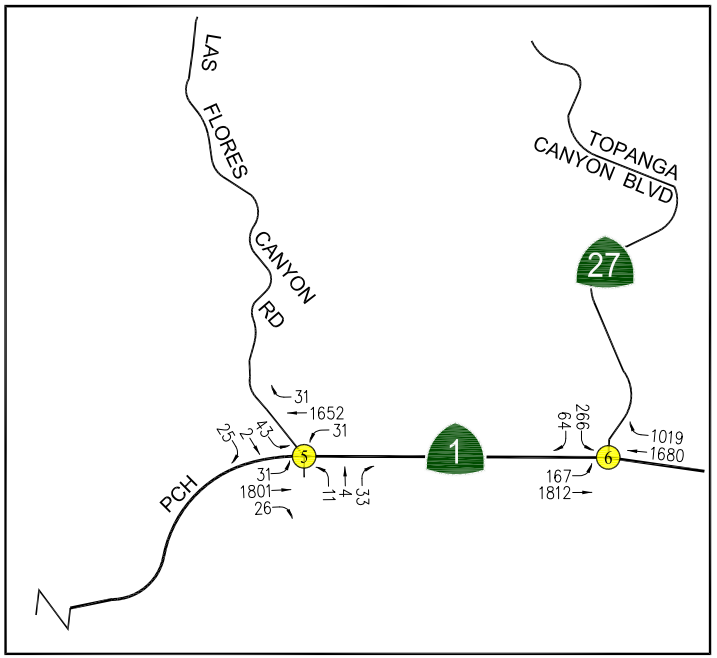

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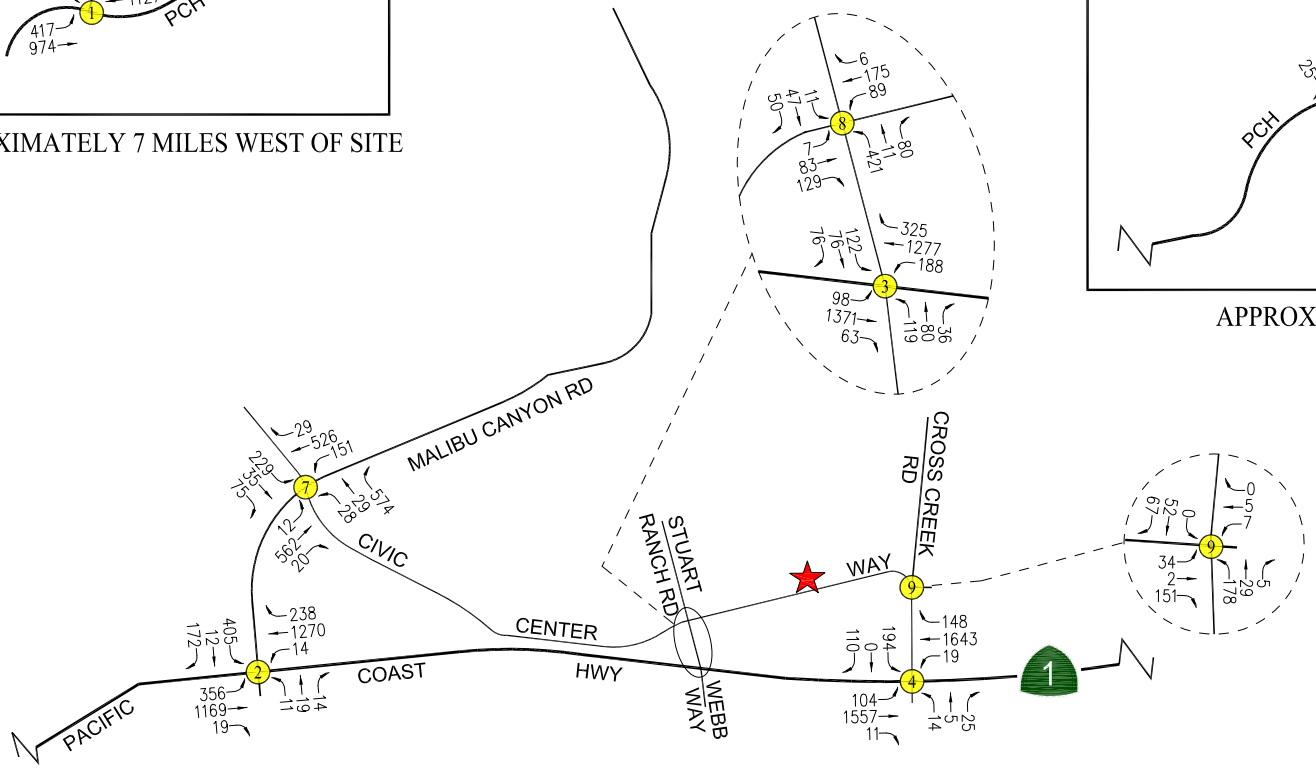

PROJECT SITE
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FIGURE 5-5
EXISTING (SUMMERTIME) TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LA PAZ RANCH PROJECT

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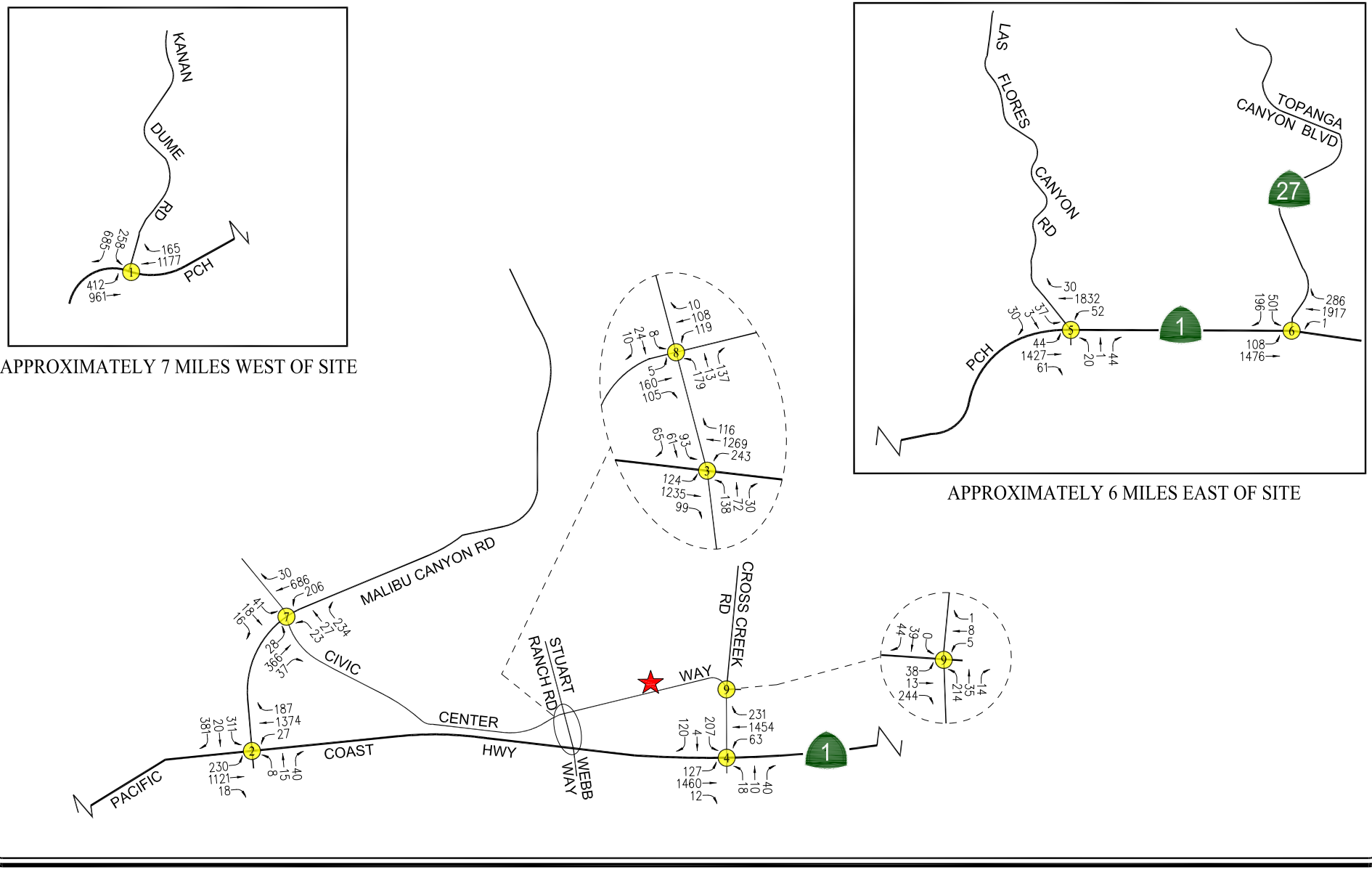

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FIGURE 5-6
EXISTING (SUMMERTIME) TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LA PAZ RANCH PROJECT

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6.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-Project conditions was prepared in accordance to procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provide two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency."

The traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in CEQA Guidelines for purposes of developing the forecast.

6.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the Project site was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed 2019 Project Modifications can be evaluated within the context of the cumulative impact of all ongoing development. The related projects research was based on information on file at the City of Malibu Planning Department, as well as recently accepted traffic impact analysis reports prepared for projects in the vicinity of the proposed Project site. The list of related projects in the Project site area is presented in ***Table 6–1***. The location of the related projects is shown in ***Figure 6–1***.

Traffic volumes expected to be generated by the related projects were calculated using rates provided in the 10th Edition of the ITE *Trip Generation Manual*[6]. The related projects' respective traffic generation for the weekday AM and PM peak hours and Saturday MD peak hour, as well as on a daily basis for a typical weekday and Saturday, are summarized in *Table 6–1*.

[6] Institute of Transportation Engineers *Trip Generation Manual*, 10th Edition, Washington, D.C., 2017.

Table 6-1
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT NAME/NUMBER ADDRESS/LOCATION	PROJECT STATUS	PROJECT DATA SOURCE	LAND USE DATA		DAILY TRIP ENDS	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT DAILY TRIP ENDS	SAT MIDDAY PEAK HOUR VOLUMES [2]		
				LAND-USE	SIZE	VOLUMES [2]	IN	OUT	TOTAL	IN	OUT	TOTAL	VOLUMES [2]	IN	OUT	TOTAL
City of Malibu																
M1	Sea Star Estates 6282, 6285, 6333 and 6380 Sea Star Drive	UPR	[3]	Single-Family Residential	4 DU	38	1	2	3	3	1	4	38	2	2	4
M2	Malibu High and Middle School Campus Improvements 30215 Morning View Drive	UC	[4]	Administration Bldg.	35,315 SF	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.
M3	28811 Pacific Coast Highway	PA	[3]	Single-Family Residential	3 DU	28	1	1	2	2	1	3	29	2	1	3
M4	Galahad Subdivision 6061 Galahad Drive	PA	[3]	Single-Family Residential	4 DU	38	1	2	3	3	1	4	38	2	2	4
M5	Sea Level 31864-31866 Sea Level Drive	UPR	[3]	Single-Family Residential	2 DU	19	0	1	1	1	1	2	19	1	1	2
M6	5905-5909 Latigo Canyon Road	UPR	[3]	Single-Family Residential	2 DU	19	1	1	2	1	1	2	20	1	1	2
M7	The Case (Crummer Site) 24120 Pacific Coast Highway	UC	[5]	Single-Family Residential Baseball Field	5 DU 2 Games	168	1	3	4	33	32	65	970	49	48	97
M8	Towing Subdivision 23915 Malibu Road	UC	[3]	Single-Family Residential	4 DU	38	1	2	3	3	1	4	40	2	2	4
M9	Rancho Malibu Memorial Park 4000 Malibu Canyon Road	PA	[6]	Church Cemetary	8,500 GSF 29 Acres	213	6	4	10	10	19	29	258	67	52	119
M10	Whole Foods Shopping Center 23401 Civic Center Way	UC	[7]	Shopping Center Restaurant (High-Turnover) Restaurant (Fast-Food)	34,425 GSF 2,500 GLSF 1,500 GSF	2,296	103	61	164	156	79	235	2,528	228	117	345
M11	Santa Monica College 23525 Civic Center Way	PA	[8]	Junior/Community College Community Sheriff Station	19,760 GSF 5,610 GSF	698	55	16	71	34	32	66	378	21	23	44
M12	Malibu Sycamore Village 23575 Civic Center Way	UPR	[9]	Shopping Center	76,000 GLSF	2,869	44	27	71	139	151	290	3,505	178	164	342
M13	Malibu Jewish Center & Synagogue 24855 Pacific Coast Highway	UPR	[10]	Jewish Community Center	18,423 GSF	128	4	2	6	4	5	9	110	30	21	51
M14	Surfrider Plaza 22959 Pacific Coast Highway	UPR	[11] [9]	Office Retail	2,630 GSF 4,517 GLSF	26 171	3 2	0 2	3 4	0 8	3 9	3 17	6 208	1 10	0 10	1 20
M15	22729 Pacific Coast Highway	UPR	[11]	Office	2,499 GSF	24	3	0	3	0	3	3	6	1	0	1
M16	22741 Pacific Coast Highway	UPR	[12]	Hotel	36 Rooms	301	10	7	17	11	11	22	295	15	11	26
M17	18805-18809 Pacific Coast Highway	UC	[3]	Single-Family Residential	3 DU	29	1	1	2	2	1	3	30	2	1	3

Table 6-1 (Continued)
RELATED PROJECTS LIST AND TRIP GENERATION [1]

MAP NO.	PROJECT NAME/NUMBER ADDRESS/LOCATION	PROJECT STATUS	PROJECT DATA SOURCE	LAND USE DATA		DAILY TRIP ENDS	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]			SAT DAILY TRIP ENDS	SAT MIDDAY PEAK HOUR VOLUMES [2]		
				LAND-USE	SIZE	VOLUMES [2]	IN	OUT	TOTAL	IN	OUT	TOTAL	VOLUMES [2]	IN	OUT	TOTAL
M18	21997-22003 Pacific Coast Highway	UPR	[3]	Single-Family Residential	2 DU	19	1	1	2	1	1	2	20	1	1	2
M19	20624-20630 Pacific Coast Highway	UC	[3]	Single-Family Residential	2 DU	19	1	1	2	1	1	2	20	1	1	2
M20	Seaboard 21100 and 21298 Seaboard Road	UPR	[3]	Single-Family Residential	3 DU	29	1	1	2	2	1	3	30	2	1	3
County of Los Angeles																
LC1	Pepperdine Campus Life Project 24255 Pacific Coast Highway	UC	[13]	Student Housing Athletics Center Soccer Field Welcome Center Recreation Center Parking Structure	394,137 SF	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.
LC2	Lunch Properties 2930 Sweetwater Mesa Road	PA	[3]	Single-Family Residential	5 DU	48	1	3	4	3	2	5	50	3	2	5
TOTAL						**7,218**	**241**	**138**	**379**	**417**	**356**	**773**	**8,598**	**619**	**461**	**1,080**

Notes:

[1] Sources: City of Malibu Planning Department and Los Angeles County Department of Regional Planning. Trip generation for the related projects are based on ITE "Trip Generation", 10th Edition, 2017 (as referenced in the Project Data Source column).
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 210 (Single-Family Detached Housing) trip generation average rates.
[4] Source: "Malibu Middle and High School Campus Improvement Project, Traffic Impact Analysis", prepared by Atkins, February 2012.
[5] Source: "Crummer Site Subdivision, Traffic Impact Analysis", prepared by Arch Beach Consulting, December 2012.
[6] Source: "Malibu Memorial Park, Traffic Impact Analysis", prepared by Overland Traffic Consultants, Inc., updated January 2015.
[7] Source: "Neighborhood Shopping Center, Traffic Impact Analysis", prepared by Overland Traffic Consultants, Inc., September 2010.
[8] Source: "SMC Malibu Satellite Campus Project, Traffic Impact Study", prepared by Linscott, Law & Greenspan, Engineers, October 2014.
[9] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
[10] ITE Land Use Code 560 (Church) trip generation average rates.
[11] ITE Land Use Code 710 (General Office Building) trip generation average rates.
[12] ITE Land Use Code 310 (Hotel) trip generation average rates.
[13] Source: "Pepperdine University Campus Life Project, Revised Traffic, Circulation and Parking Study", prepared by Associated Transportation Engineers, September 2010.

Acronyms:

UPR = Under Planning Review
BPC = In Building Plan Check
PA = Planning Approval/CDP received
UC = Under Construction



NOT TO SCALE

MAP SOURCE: GOOGLE MAPS
PROJECT SITE
XX RELATED PROJECT

FIGURE 6-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

LA PAZ RANCH PROJECT

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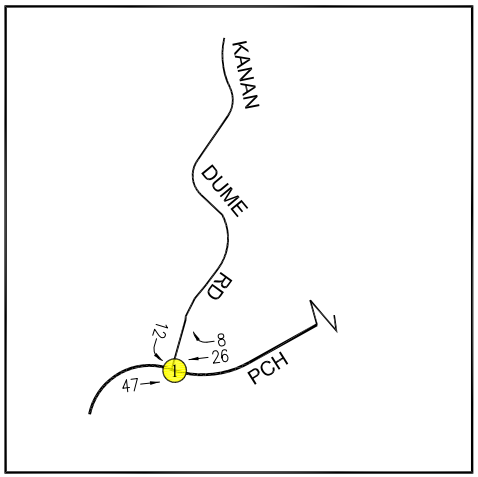
The distribution of the related projects traffic volumes to the study intersections during the weekday AM and PM peak hours and Saturday MD peak hour are displayed in ***Figures 6–2***, ***6–3***, and ***6–4***, respectively. Further detail on the assignment of traffic volumes expected to be generated by the related projects can be found in ***Appendix C***.

6.2 Ambient Traffic Growth Factor

In order to account for unknown related projects not included in this analysis, the existing traffic volumes were increased at an annual rate of 1.0 percent (1.0%) per year to the year 2022 (i.e., the anticipated year of the 2019 Project Modifications build-out). The ambient growth factor was based on general traffic growth factors provided in the *2010 Congestion Management Program for Los Angeles County* ("CMP manual") and determined in consultation with City staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the Malibu area, it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 0.47% per year between the years 2015 and 2022. Thus, application of an annual growth factor of 1.0% annual growth provides a conservative, worst case forecast of future traffic volumes in the area as it substantially exceeds the annual traffic growth rate published in the CMP manual. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the Project site vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.



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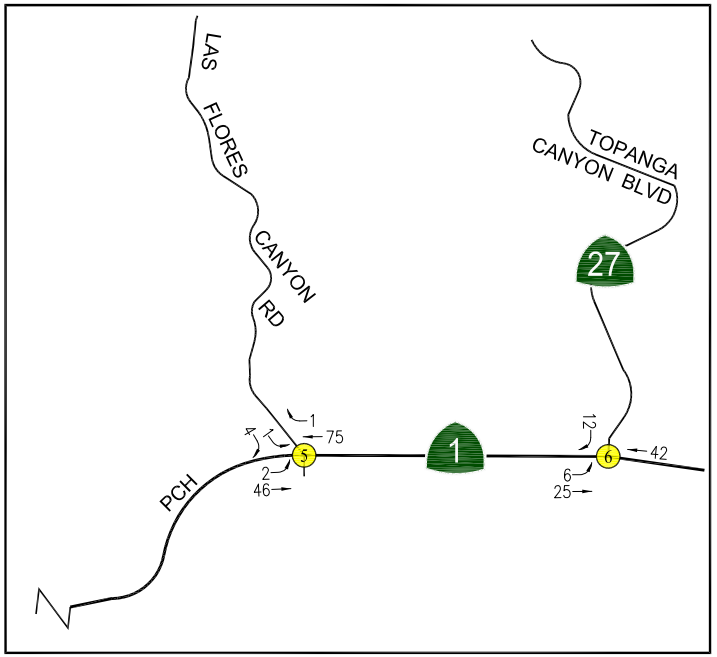

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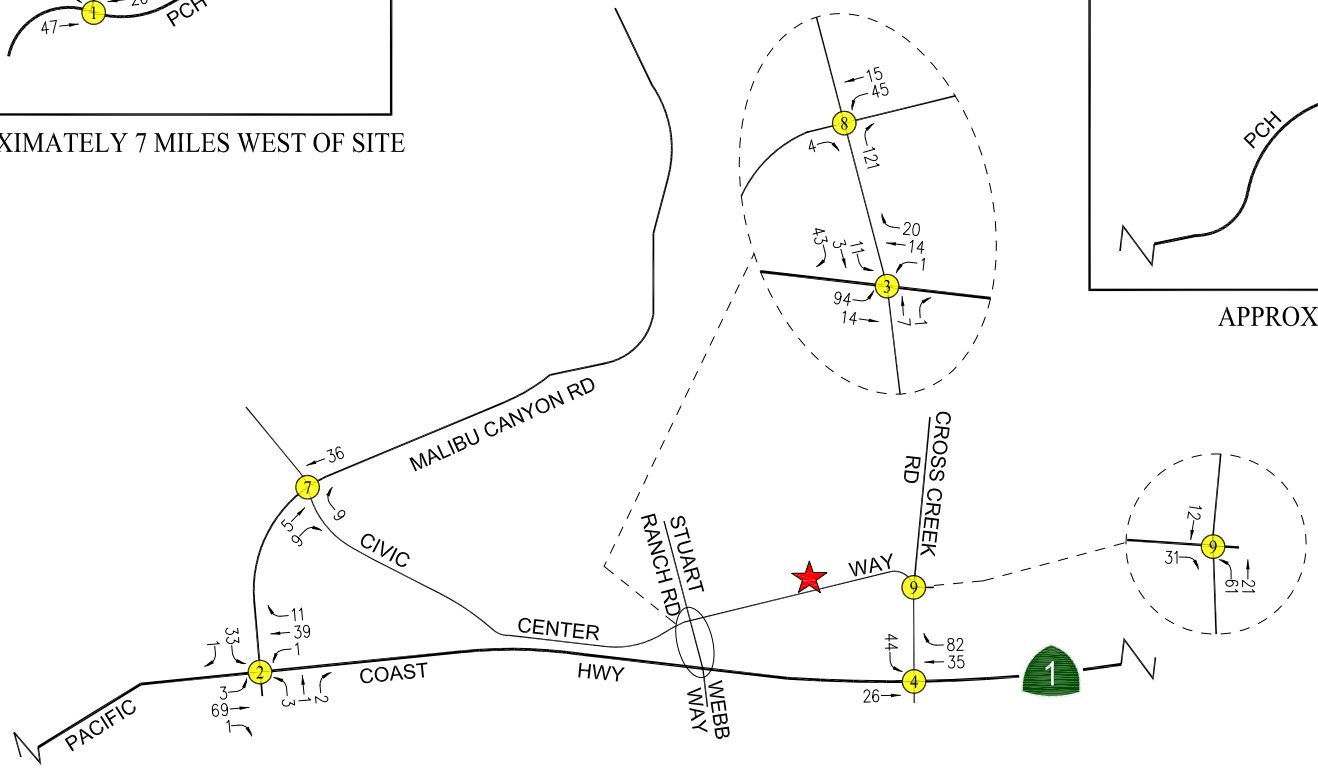

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE 6-2
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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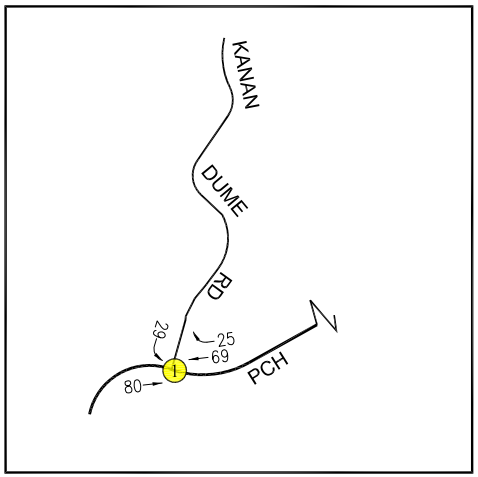

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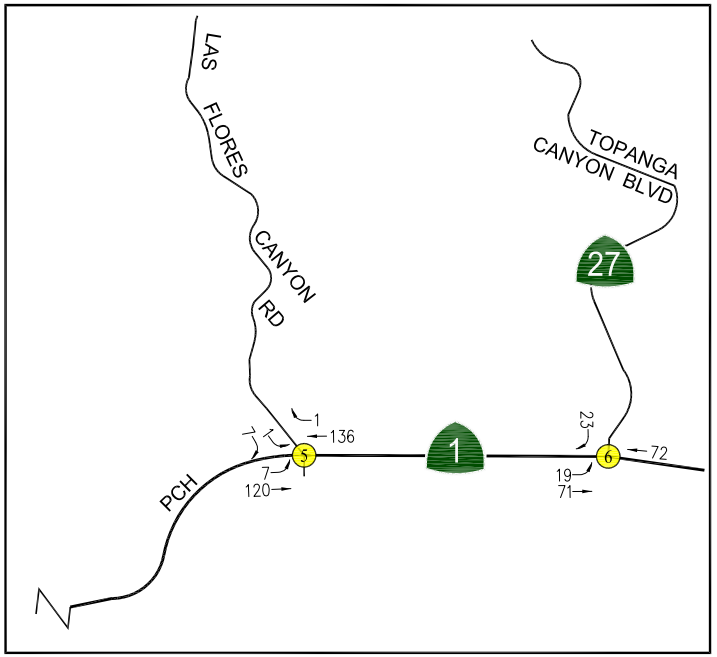

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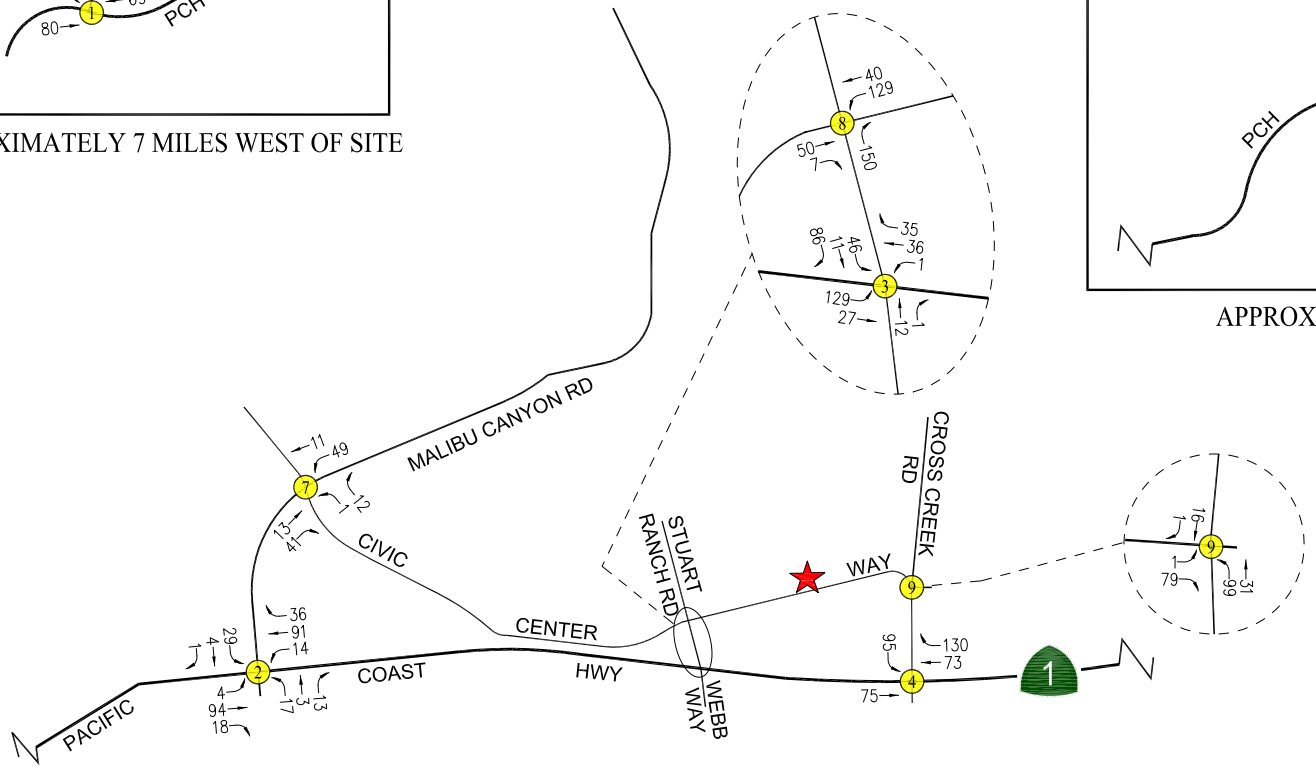

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FIGURE 6-3
RELATED PROJECTS TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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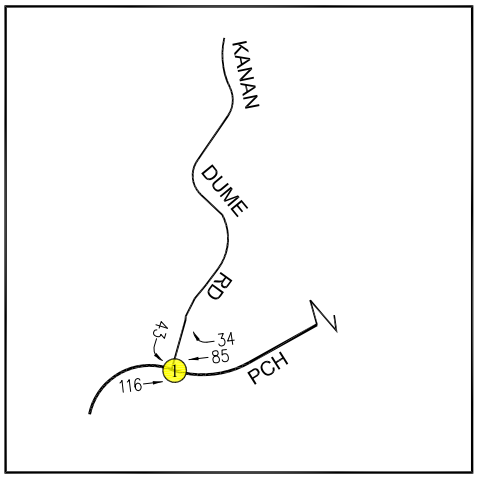

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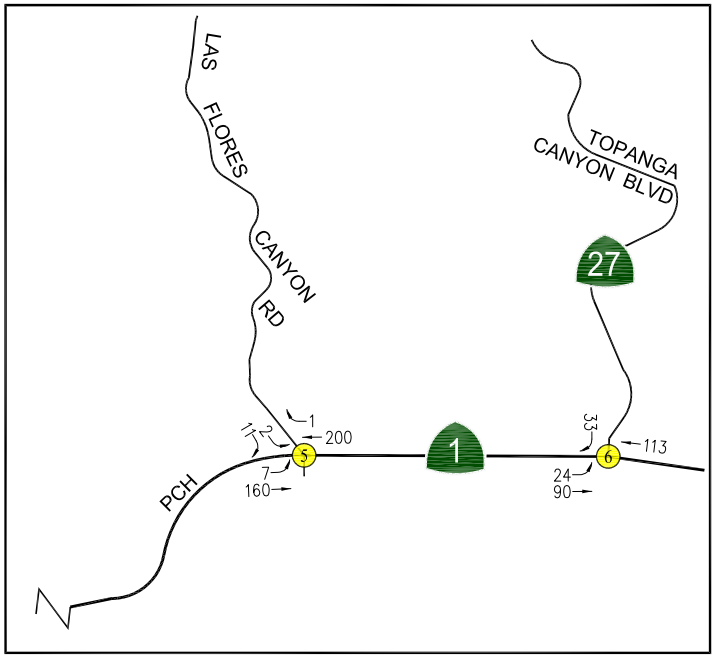

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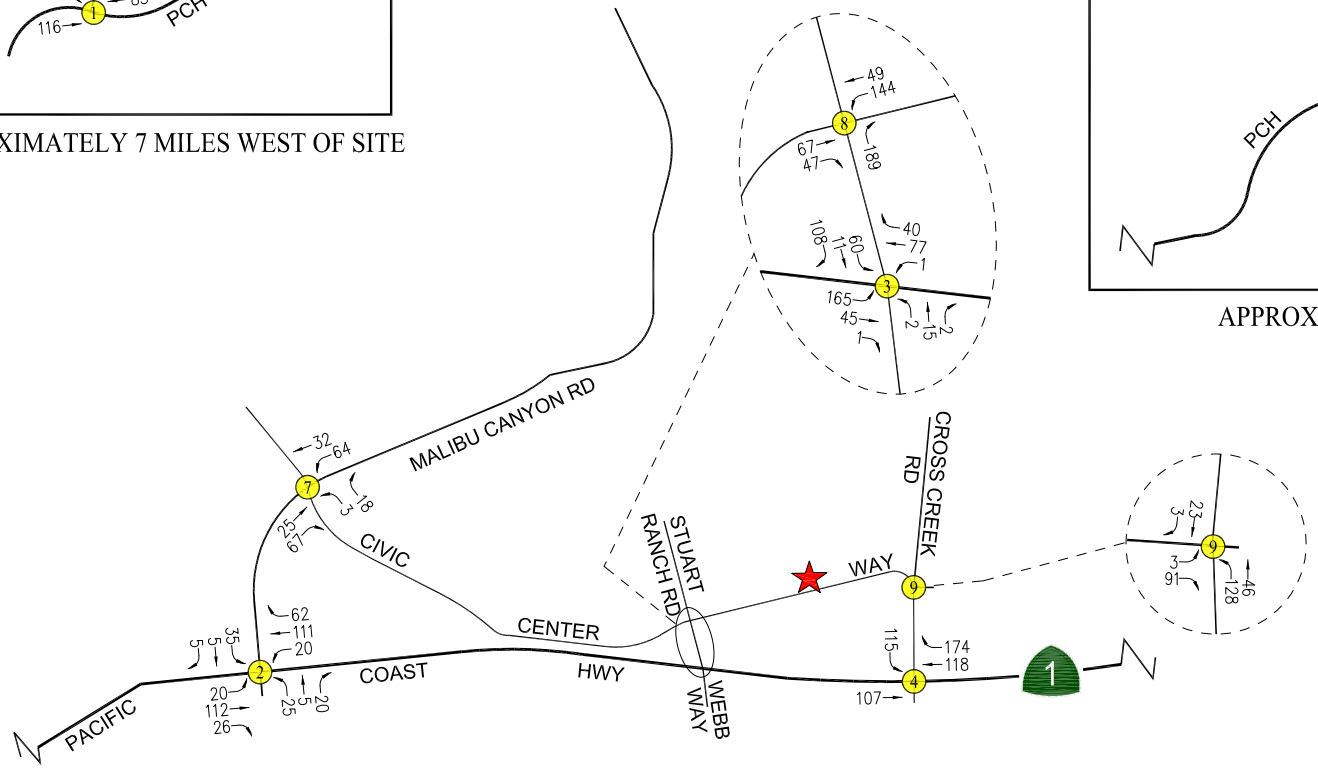

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PROJECT SITE
STUDY INTERSECTION

FIGURE 6-4
RELATED PROJECTS TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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7.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the proposed 2019 Project Modifications, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation rates to the development tabulation for the 2019 Project Modifications.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound traffic volumes forecast for the 2019 Project Modifications. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of traffic forecast for the 2019 Project Modifications to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and traffic assignments developed, the impact of the proposed 2019 Project Modifications is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using existing and expected future traffic volumes without and with forecast traffic due to the 2019 Project Modifications. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the impacts due to the 2019 Project Modifications identified.

7.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed 2019 Project Modifications during the weekday AM and PM peak hours, the Saturday MD peak hour as well as on a daily basis (weekdays and Saturdays), were estimated using rates published in the 10th Edition of the ITE *Trip Generation Manual*. As previously noted, the trip generation forecast for the 2005 Analyzed Project as provided in the Kaku traffic utilized trip rates published in the prior 6th Edition of the ITE *Trip Generation Manual.*

The trip generation methodology for the proposed 2019 Project Modifications is detailed in the trip generation memorandum contained in ***Appendix B***. The trip generation is depicted in ***Table 7–1*** within this addendum traffic study.

Table 7-1
PROJECT TRIP GENERATION [1]

18-Oct-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Proposed 2019 Project Modifications												
Office [3]	62,556 GSF	609	63	10	73	12	60	72	138	28	5	33
Shopping Center [4]	69,502 GSF	2,624	40	25	65	127	138	265	3,205	163	150	313
Subtotal		3,233	103	35	138	139	198	337	3,343	191	155	346
Internal Capture [5], [6]		(265)	(6)	(6)	(12)	(13)	(13)	(26)	(77)	(4)	(4)	(8)
SUBTOTAL DRIVEWAY TRIPS		**2,968**	**97**	**29**	**126**	**126**	**185**	**311**	**3,266**	**187**	**151**	**338**
Pass-By Adjustment [7], [8]												
Shopping Center		(262)	0	0	0	(25)	(28)	(53)	(801)	(41)	(37)	(78)
NET INCREASE "OFF-SITE" TRIPS		**2,706**	**97**	**29**	**126**	**101**	**157**	**258**	**2,465**	**146**	**114**	**260**

[1] Source: ITE "Trip Generation," 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 710 (General Office Building) trip generation average rates.
- Daily Trip Rate: 9.74 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.16 trips/1,000 SF of floor area; 86% inbound/14% outbound
- PM Peak Hour Trip Rate: 1.15 trips/1,000 SF of floor area; 16% inbound/84% outbound
- Saturday Trip Rate: 2.21 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 0.53 trips/1,000 SF of floor area; 54% inbound/46% outbound

[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of floor area; 48% inbound/52% outbound
- Saturday Trip Rate: 46.12 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 4.50 trips/1,000 SF of floor area; 52% inbound/48% outbound

[5] Peak hour internal capture reduction based on synergy between the shopping center and office uses calculated using NCHRP 684 internal trip capture estimation tool (see attached worksheets). PM peak hour calculation used to determine Saturday MD peak hour internal capture.
[6] Weekday daily internal capture assumed to be average of calculated AM peak hour and PM peak hour internal capture (i.e., 8.2%). Saturday daily internal capture assumed to be equivalent to the calculated MD peak hour internal capture (i.e., 2.3%).
[7] Weekday PM peak hour and Saturday MD peak hour pass-by trip adjustment per City direction (20% for weekday PM peak hour and 25% for Saturday MD peak hour).
[8] Weekday daily pass-by assumed to be average of applied AM peak hour pass-by and PM peak hour pass-by (i.e., 10%). Saturday daily pass-by assumed to be average of applied MD peak hour pass-by (i.e., 25%).

As presented in *Table 7–1*, the proposed 2019 Project Modifications is expected to generate 126 vehicle trips (97 inbound trips and 29 outbound trips) during the weekday AM peak hour. During the weekday PM peak hour, the proposed 2019 Project Modifications is expected to generate 258 vehicle trips (101 inbound trips and 157 outbound trips). During the Saturday MD peak hour, the proposed 2019 Project Modifications is expected to generate 260 net new vehicle trips (146 inbound trips and 114 outbound trips). Over a 24-hour period during a typical weekday, the proposed 2019 Project Modifications is forecast to generate 2,706 daily trips ends (approximately 1,353 inbound trips and 1,353 outbound trips). Over a 24-hour period on a typical Saturday, the proposed 2019 Project Modifications is forecast to generate 2,465 daily trips ends (approximately 1,233 inbound trips and 1,232 outbound trips).

As previously discussed in Section 1.1, the Kaku traffic study analyzed a development project consisting of 53,825 square feet of office floor area, 67,110 square feet of retail floor area, and 10,000 square feet of restaurant floor area (i.e., the "2005 Analyzed Project"). The trip generation forecast for the development evaluated in the Kaku traffic study is provided in Table A from the trip generation memo. When compared to the 2005 Analyzed Project evaluated in the Kaku traffic study, the 2019 Project Modifications is forecast to generate:

- 157 fewer weekday daily trips as compared to the 2005 Analyzed Project;
- 225 additional Saturday daily trips as compared to the 2005 Analyzed Project;
- 24 fewer weekday AM peak hour trips as compared to the 2005 Analyzed Project;
- 10 additional weekday PM peak hour trips as compared to the 2005 Analyzed Project; and
- 63 additional Saturday MD peak hour trips as compared to the 2005 Analyzed Project.

The 2008 Approved Project description as approved by the Malibu City Council consists of 62,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area. Table B from the trip generation memorandum provides the trip generation forecast for the 2008 Approved Project based on the trip generation forecast utilized in the Kaku traffic study. When compared to the 2008 Approved Project, the 2019 Project Modifications is forecast to generate:

- 58 fewer weekday daily trips as compared to the 2008 Approved Project;
- 414 additional Saturday daily trips as compared to the 2008 Approved Project;
- 34 fewer weekday AM peak hour trips as compared to the 2008 Approved Project;
- 9 additional weekday PM peak hour trips as compared to the 2008 Approved Project; and
- 77 additional Saturday MD peak hour trips as compared to the 2008 Approved Project.

Since the 2019 Project Modification do not change the 2008 Approved Project square footage, there is no change in the 2008 Approved Project-related trip generation as a result of the 2019 Project Modifications if the trip generation forecast of the 2019 Project Modifications is calculated as was done in the Kaku traffic study. However, for informational purposes, this addendum traffic study evaluates the 2019 Project Modifications due to:

- Changed environmental conditions (e.g., update traffic counts, updated list of related projects, evaluation of current intersection configurations and controls, etc.); and

- Current practices and standards for evaluating trip generation (changes to the ITE *Trip Generation Manual*), analyzing traffic operations (updates to the HCM methodologies and software), and use of the City of Malibu traffic study guidelines, including thresholds of significance.

7.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Pacific Coast Highway (SR-1), Malibu Canyon Road, Kanan Dume Road, Topanga Canyon Boulevard (SR-27), etc.);

- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;

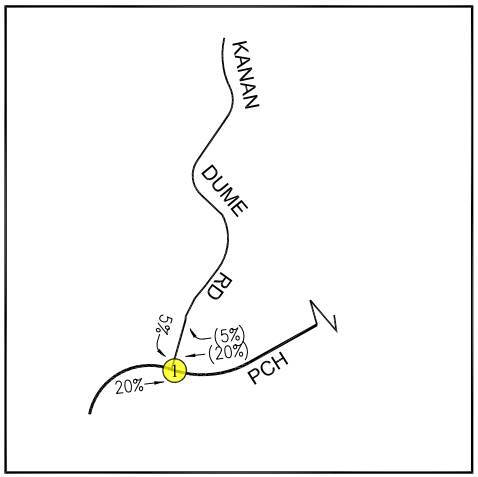
- Existing intersection traffic volumes;

- Ingress/egress availability at the Project site assuming the site access and circulation scheme described in Section 3.0; and

- Nearby population and employment centers.

The Kaku traffic study does not provide exhibits displaying the specific turning movement assignments (e.g., as a percentage basis of trips related to the 2005 Analyzed Project) at the analyzed study intersections. However, the general distributions of the trips associated with the 2005 Analyzed Project can be estimated through other graphics provided in the Kaku traffic study and were utilized and consulted (in addition to the factors listed above) in developing the forecast assignment of trips related to the 2019 Project Modifications at the study intersections evaluated in this addendum traffic study.

The general, directional traffic distribution patterns for the proposed 2019 Project Modifications during the weekday AM peak hour are presented in ***Figure 7–1***, while the general, directional traffic distribution patterns for the proposed 2019 Project Modifications during the weekday PM and Saturday MD peak hours are presented in ***Figure 7–2***. A separate assignment is provided for the weekday AM peak hour at the study intersections in *Figure 7–1* primarily related to the existing left-turn prohibition on southbound Malibu Canyon Road at the intersection with Civic



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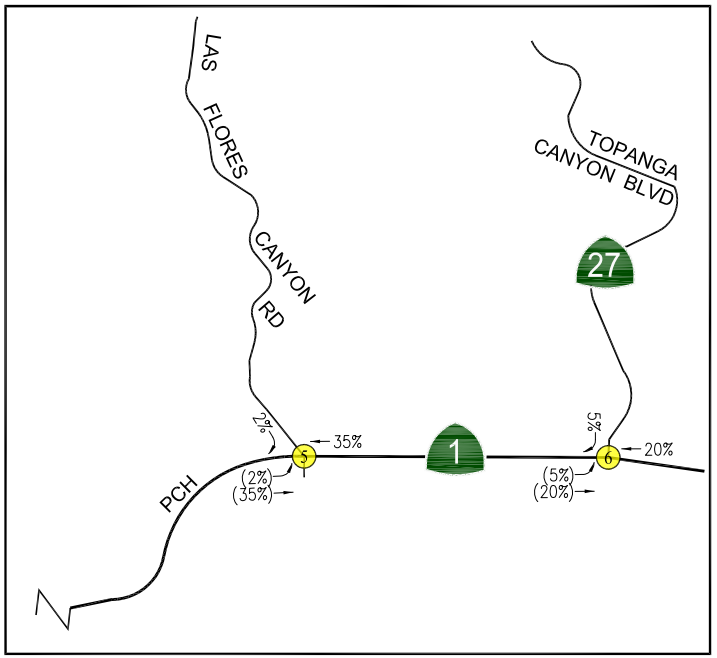

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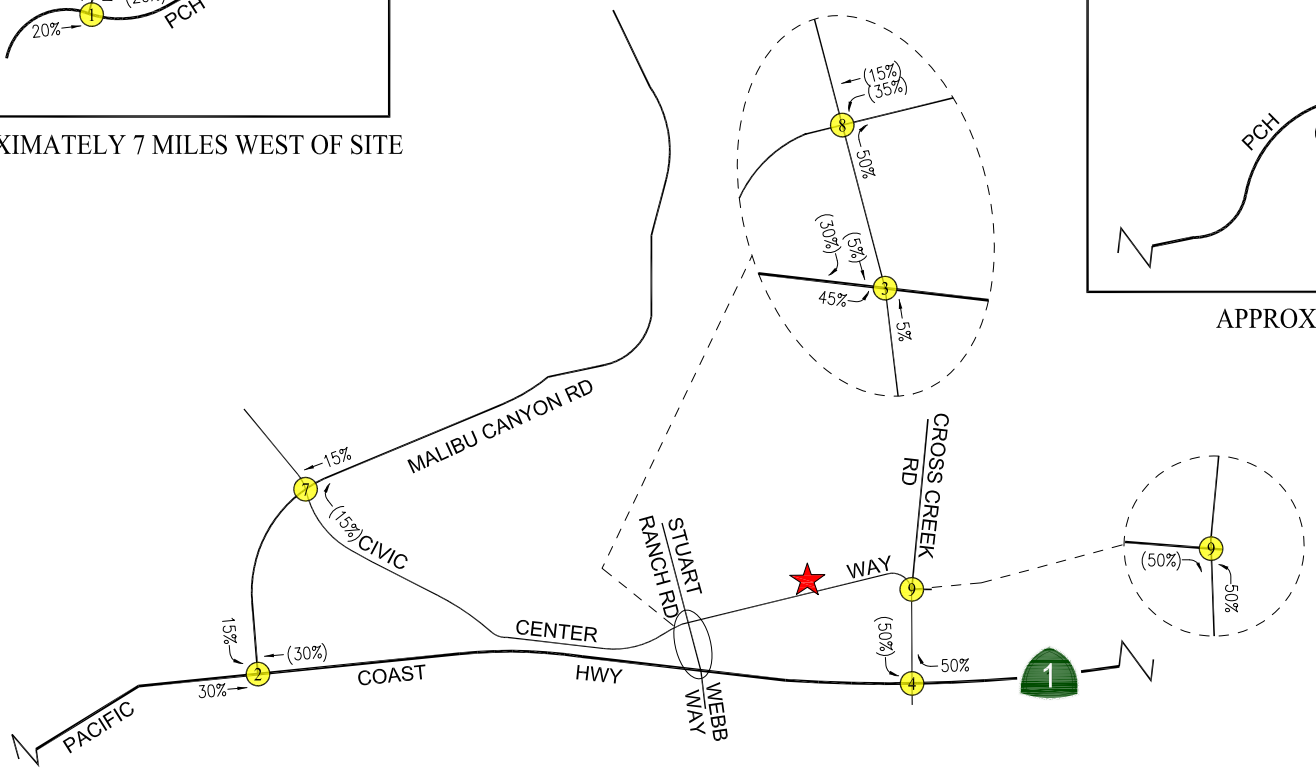

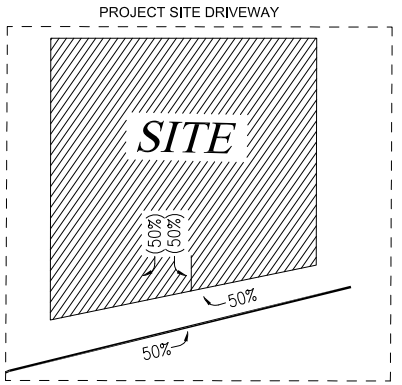

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★ PROJECT SITE
(XX) STUDY INTERSECTION
= INBOUND PERCENTAGES
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FIGURE 7-1
PROJECT TRIP DISTRIBUTION

WEEKDAY AM PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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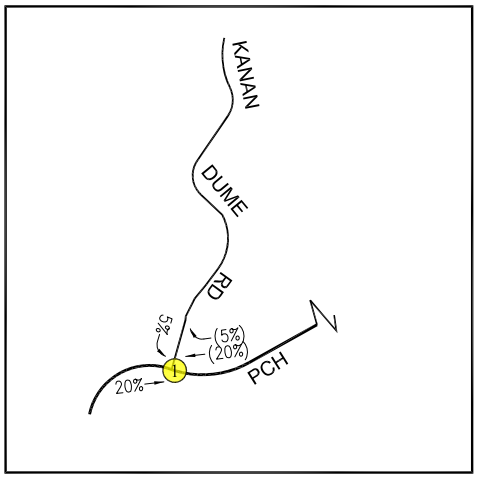

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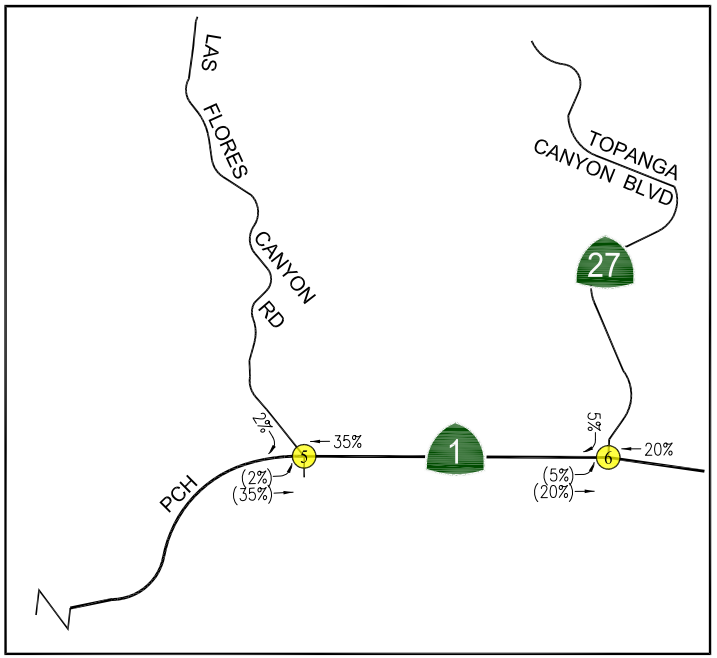

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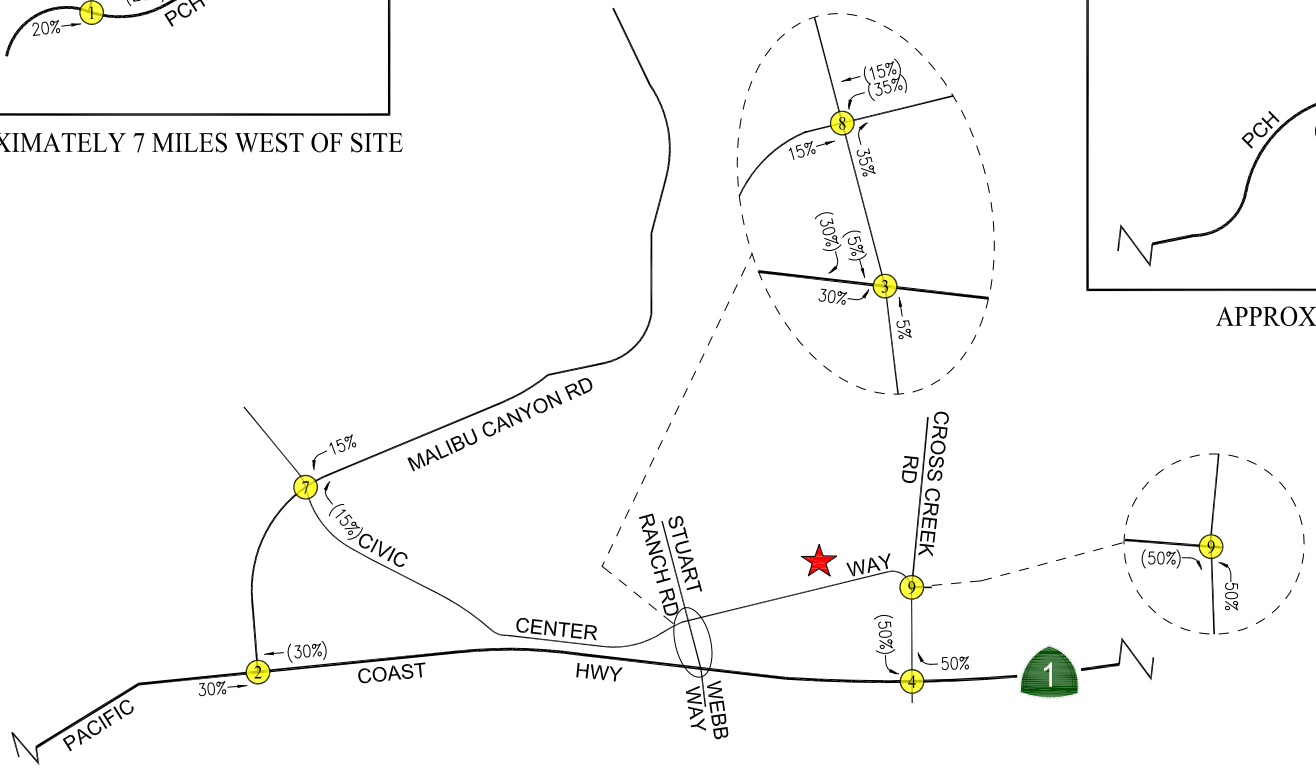

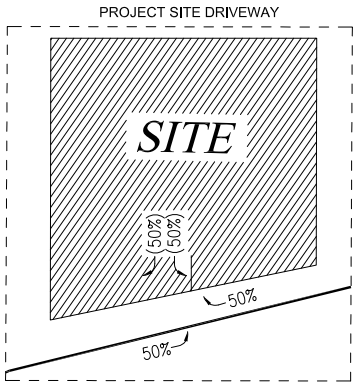

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= INBOUND PERCENTAGES
(##) = OUTBOUND PERCENTAGES

FIGURE 7-2
PROJECT TRIP DISTRIBUTION

WEEKDAY PM & SATURDAY MID-DAY PEAK HOURS

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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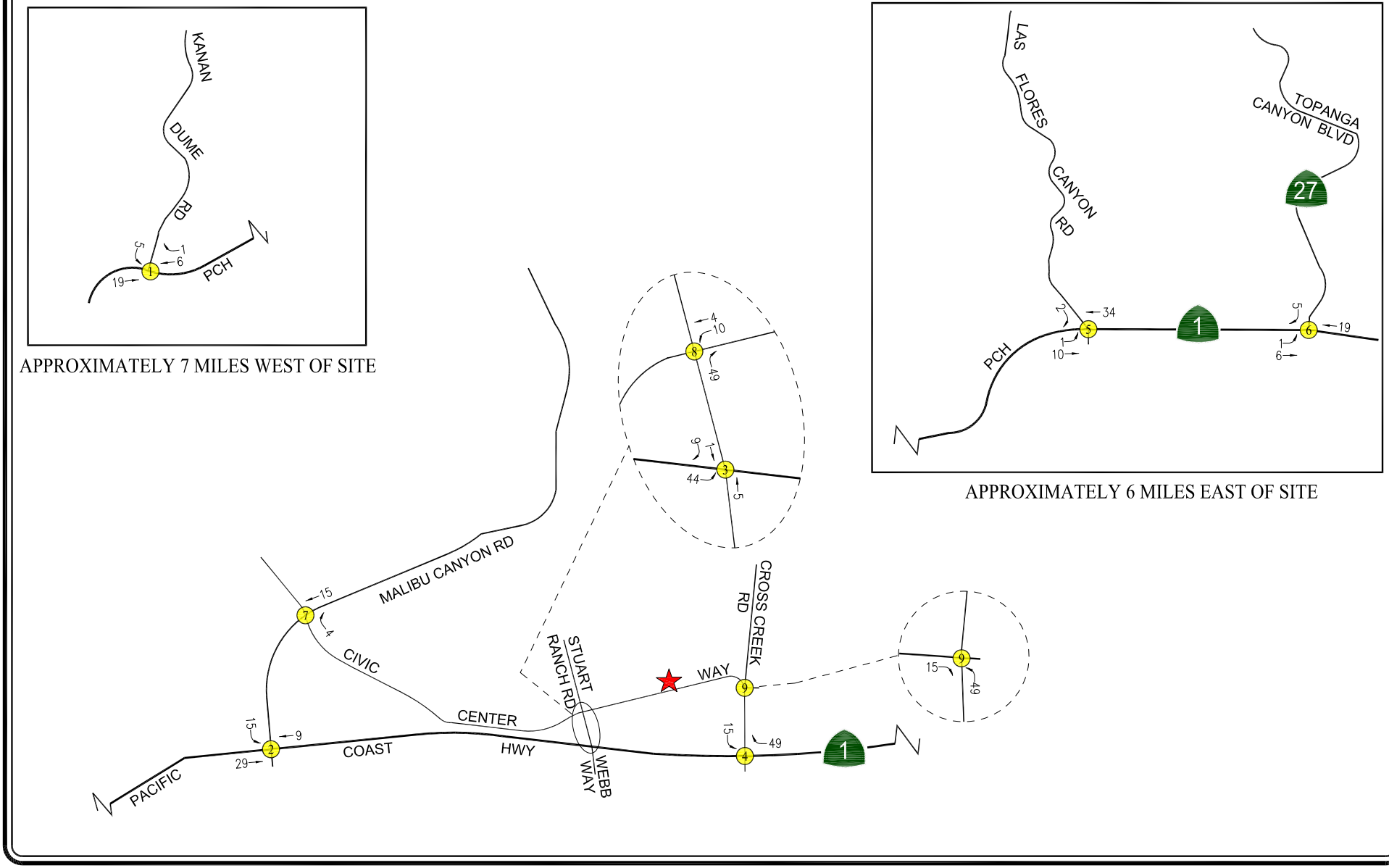
Center Way during the weekday morning commuter period. The forecast weekday AM and PM peak hours and Saturday MD peak hour traffic volumes at the study intersections associated with the proposed 2019 Project Modifications are presented in ***Figures 7–3***, ***7–4***, and ***7–5***, respectively. The traffic volume assignments presented in *Figures 7–3*, *7–4*, and *7–5* reflect the traffic distribution characteristics shown in *Figures 7–1* and *7–2*, and the 2019 Project Modifications traffic generation forecast presented in *Table 7–1*.



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PROJECT SITE
STUDY INTERSECTION

FIGURE 7-3
NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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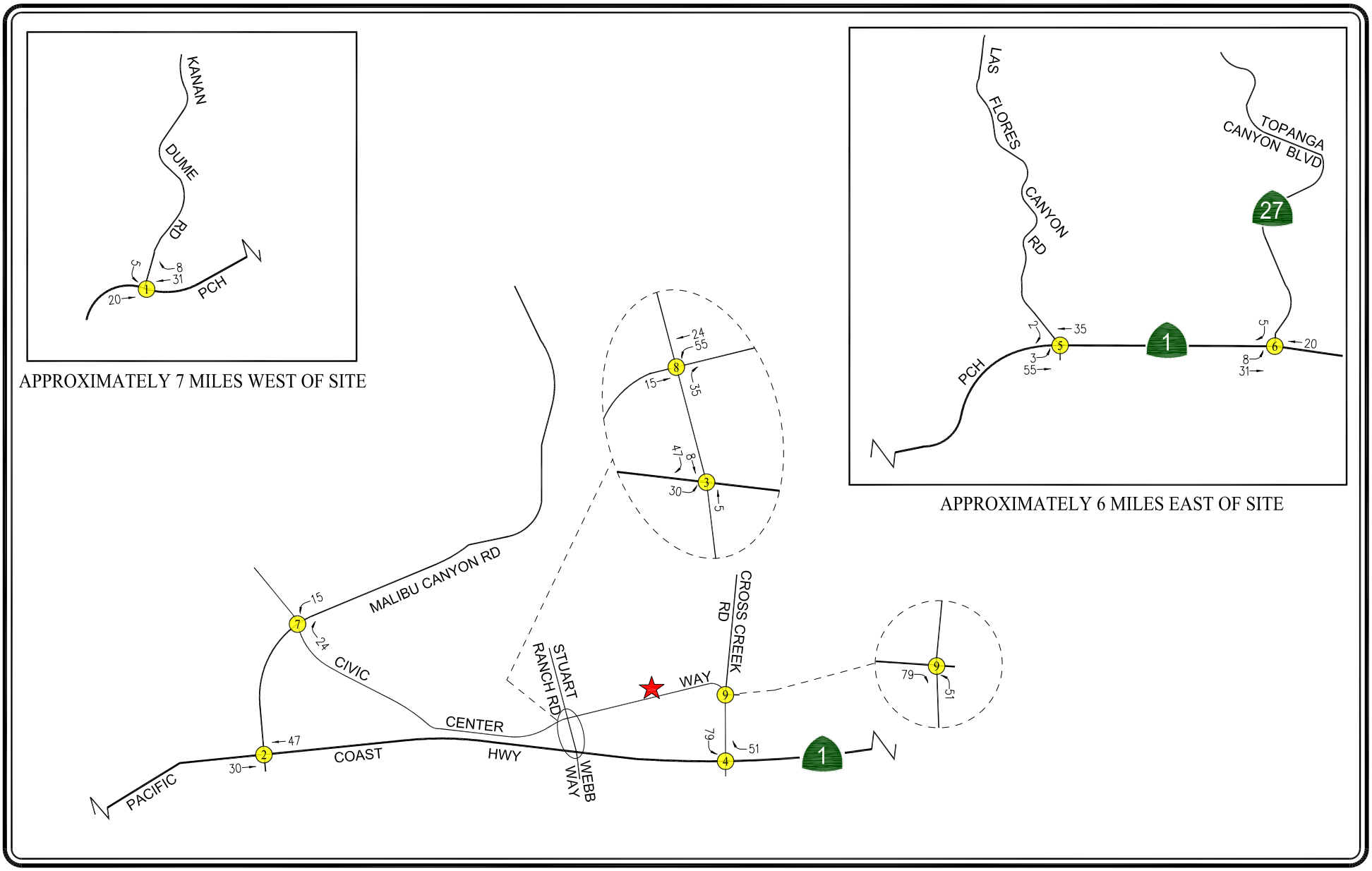

NOT TO SCALE

PROJECT SITE
STUDY INTERSECTION

FIGURE 7-4
NET NEW PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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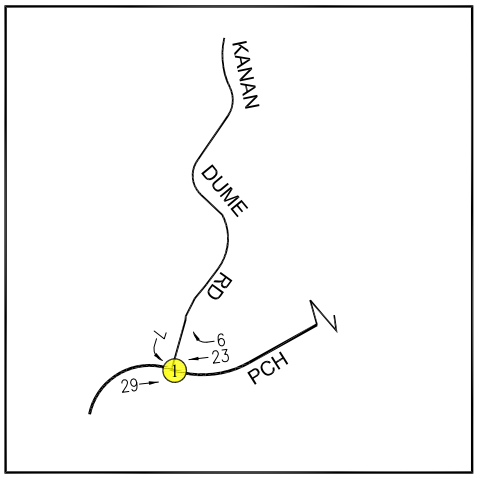
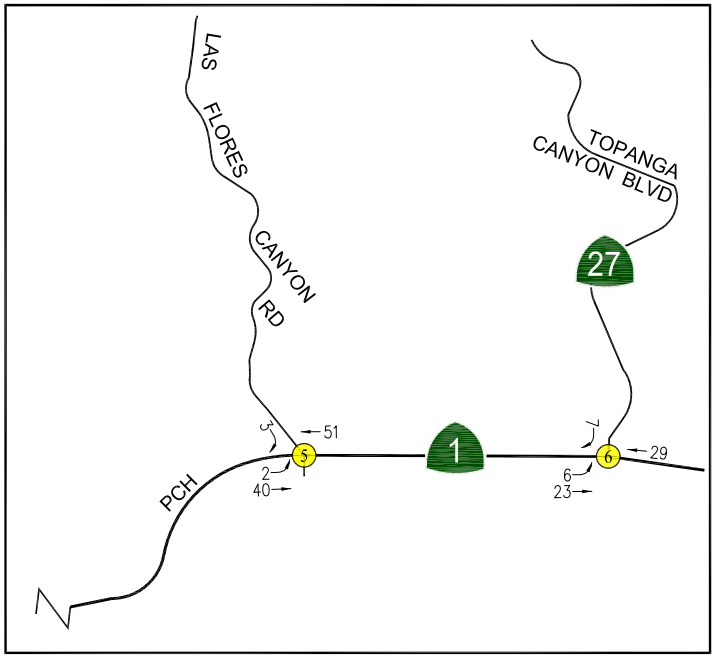
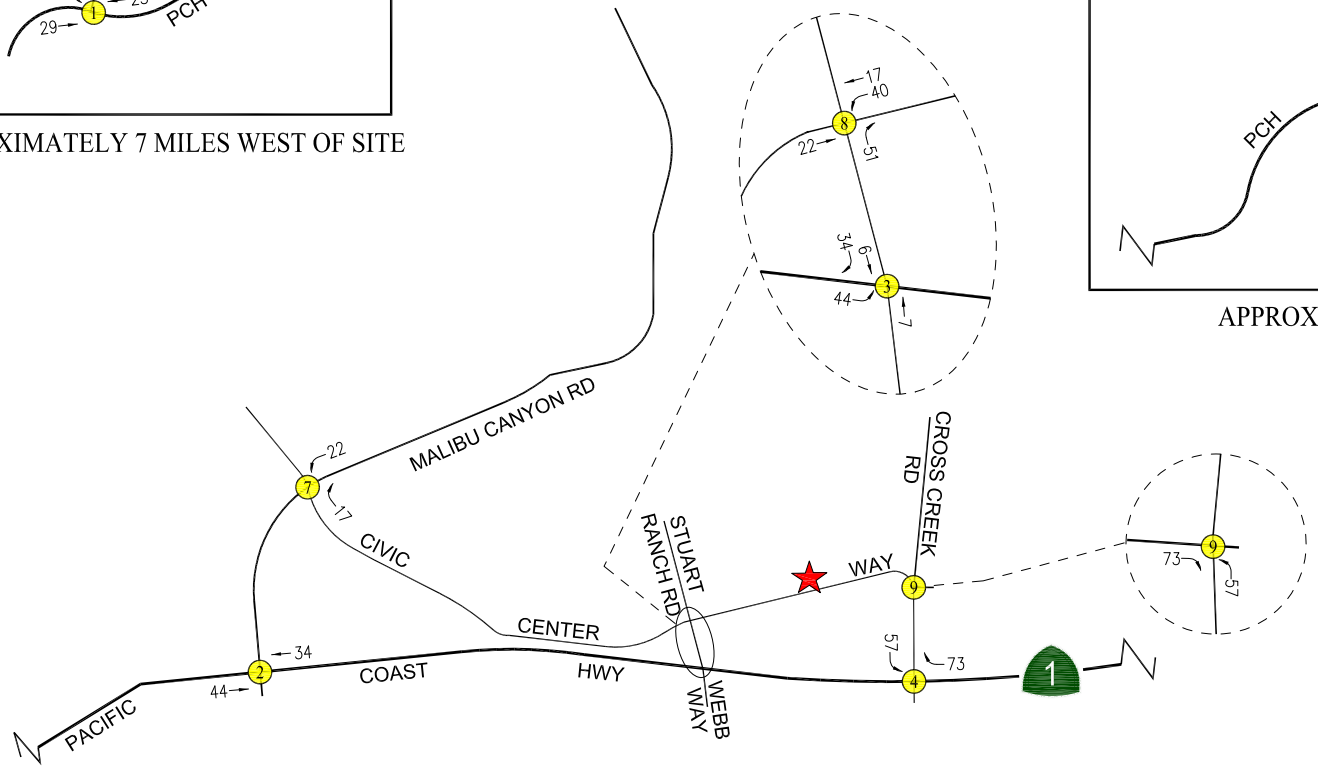


APPROXIMATELY 7 MILES WEST OF SITE



APPROXIMATELY 6 MILES EAST OF SITE



PROJECT SITE
STUDY INTERSECTION

NOT TO SCALE

FIGURE 7-5
NET NEW PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

Operations at the seven signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis for signalized intersections based on the City's traffic study guidelines. Specifically, the ICU method was used to determine *v/c* ratios and corresponding LOS. The ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through, and right-turn lanes, and dual left-turn capacity of 2,880 vph. Additionally, a clearance adjustment factor of 0.05 was added to each LOS calculation.

Additionally, the two stop-controlled study intersections (Stuart Ranch Road-Webb Way / Civic Center Way and Cross Creek Road / Civic Center Way) were analyzed using the methodology included in the Highway Capacity Manual (HCM). This methodology estimates the average control delay for each of the subject movements and determines the LOS for each constrained movement. Average control delay for any particular movement is a function of the capacity of the approach and the degree of saturation. The overall average control delay is measured in seconds per vehicle. For an all-way stop controlled intersection, the overall intersection delay is subsequently assigned an LOS value to describe intersection operations.

The LOS under both the ICU and HCM methodologies varies from LOS A (free flow) to LOS F (jammed condition). A description of the ICU method and corresponding LOS are provided in ***Appendix D*** and ***E*** for school time and summertime conditions, respectively. A description of the HCM method and corresponding LOS are provided in ***Appendix F*** and ***G*** for school time and summertime conditions, respectively.

8.1 Impact Criteria and Thresholds

The relative impact of the added Project traffic volumes to be generated by the proposed 2019 Project Modifications during the weekday AM and PM peak hours, as well as the Saturday mid-day peak hour was evaluated based on analysis of existing and future operating conditions at the study intersections, without and with the proposed 2019 Project Modifications. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of the forecast traffic generated by the 2019 Project Modifications was evaluated using the traffic impact criteria provided by the City of Malibu[7]. In addition, for the one study intersection located in unincorporated Los Angeles County (Topanga Canyon Boulevard / Pacific Coast Highway), this significance of the potential impacts related to traffic from the 2019 Project Modifications was evaluated using thresholds of significance published by the County of Los Angeles[8]. According to the respective published guidelines, an intersection traffic impact is considered significant if the increase in the *v/c* ratio due to the 2019 Project Modifications is equal to or exceeds the thresholds presented in ***Tables 8–1*** and ***8–2*** for signalized intersections, and ***Table 8–3*** for unsignalized intersections.

[7] *Traffic Impact Analysis Guidelines*, City of Malibu, August 2012.
[8] County of Los Angeles' *Traffic Impact Analysis Report Guidelines*, January 1997.

Table 8-1 CITY OF MALIBU SIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA		
Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.71 - 0.80	C	equal to or greater than 0.040
> 0.81 - 0.90	D	equal to or greater than 0.020
> 0.91	E or F	equal to or greater than 0.010

Table 8-2 COUNTY OF LOS ANGELES SIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA		
Final *v/c*	**Level of Service**	**Project Related Increase in *v/c***
> 0.701 - 0.800	C	equal to or greater than 0.040
> 0.801 - 0.900	D	equal to or greater than 0.020
> 0.901	E or F	equal to or greater than 0.010

Table 8-3 CITY OF MALIBU UNSIGNALIZED INTERSECTION IMPACT THRESHOLD CRITERIA	
Project Related Increase in Delay	**Final LOS**
5 or more seconds	Degrades to LOS D or worse

The City and County criteria require mitigation of impacts due to the 2019 Project Modification whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above for signalized intersections. For unsignalized intersections, the City's Guidelines state an impact is considered significant if traffic from the 2019 Project Modifications: 1) Degrades the Level of Service (LOS) at an unsignalized intersection to an unacceptable level of LOS D or worse; or 2) Increases delay at an unsignalized intersection operating at an unacceptable level by five or more seconds.

8.2 Traffic Impact Analysis Scenarios

The LOS calculations have been prepared for the following scenarios for the nine study intersections:

(a) Existing (2018) conditions.

(b) Condition (a) with completion and occupancy of the 2019 Project Modifications.

(c) Condition (b) with implementation of 2019 Project Modifications mitigation measures where necessary.

(d) Condition (a) plus one percent (1.0%) annual ambient traffic growth through year 2022 and with completion and occupancy of the related projects (i.e., future cumulative baseline)

(e) Condition (d) with completion and occupancy of the 2019 Project Modifications.

(f) Condition (e) with implementation of 2019 Project Modifications mitigation measures where necessary.

It is noted that at three study intersections (i.e., at Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway, and Stuart Ranch Road-Webb Way / Civic Center Way), the Applicant of the 2019 Project Modifications recently constructed traffic improvements consistent with the traffic mitigation measures identified in the Kaku traffic study. As previously discussed, these improvements were constructed after the collection of the traffic count data used in this traffic analysis, and thus, the LOS calculations assume the prior lane configurations at the three affected intersections for purposes of evaluating operations with and without traffic related to the 2019 Project Modifications (i.e., scenarios (a), (b), (d), and (e) above) so as to assess the effects of the development, similar to the Kaku traffic study. The post-improvement lane configurations at the three intersections were then incorporated into the scenarios with mitigation (i.e., scenarios (c) and (f) above) to assess the effectiveness of the mitigation measures, also consistent with the Kaku traffic study.

9.0 TRAFFIC ANALYSIS

The traffic impact analysis prepared for the nine study intersections using the ICU and HCM methodologies and application of the City of Malibu and County of Los Angeles significant traffic impact criteria during school time and summertime conditions is summarized in ***Tables 9–1*** and ***9–2***, respectively. The ICU data worksheets for the analyzed intersections during school time and summertime conditions are contained in *Appendix D* and *E*, respectively. The HCM data worksheets for the analyzed intersections are contained in *Appendix F* and *G*, respectively.

9.1 Existing Conditions

9.1.1 *Existing Conditions – School Time*

As indicated in column [1] of *Table 9–1*, the nine study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours, as well as the Saturday MD peak hour under existing school time conditions. The existing school time traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday MD peak hour are displayed in *Figures 5–1*, *5–2*, and *5–3*, respectively.

9.1.2 *Existing Conditions – Summertime*

As indicated in column [1] of *Table 9–2*, eight of the nine study intersections are presently operating at LOS D or better during the weekday AM and PM peak hours, as well as the Saturday MD peak hour under existing summertime conditions. The following intersection is currently operating at LOS E during the peak hours shown below under existing conditions:

- Int. No. 6: Topanga Canyon Boulevard / Pacific Coast Highway — AM Peak Hour: *v/c* = 0.934, LOS E

The existing summertime traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday MD peak hour are displayed in *Figures 5–4*, *5–5*, and *5–3*, respectively.

9.1.3 *Existing With Project Conditions – School Time*

As shown in column [2] of *Table 9–1*, application of the City and County's threshold criteria to the "Existing With Project" scenario indicates that the 2019 Project Modifications is not expected to create significant impacts at any of the nine study intersections during school time conditions. Therefore, no mitigation measures are required or recommended with respect to these intersections under the "Existing With Project" conditions. The "Existing With Project" school time traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday MD peak hour are illustrated in ***Figures 9–1***, ***9–2***, and ***9–3***, respectively.

Table 9-1
SUMMARY OF VOLUME TO CAPACITY RATIOS/DELAYS
AND LEVELS OF SERVICE
SCHOOL TIME WEEKDAY AM / PM AND WEEKEND MID-DAY PEAK HOURS

			[1]		[2]				[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2018 EXISTING V/C or Delay	LOS	YEAR 2018 EXISTING W/ PROJECT V/C or Delay	LOS	CHANGE V/C or Delay [(2)-(1)]	SIGNIF. IMPACT	YEAR 2022 FUTURE PRE-PROJ W/A.G. & REL PROJ V/C or Delay	LOS	YEAR 2022 FUTURE WITH PROJECT V/C or Delay	LOS	CHANGE V/C or Delay [(4)-(3)]	SIGNIF. IMPACT	YEAR 2022 W/ PROJECT MITIGATION V/C or Delay	LOS	CHANGE V/C or Delay [(5)-(3)]	MITI-GATED
1	Kanan Dume Road/	AM	0.480	A	0.484	A	0.004	NO	0.510	A	0.513	A	0.003	NO	0.513	A	0.003	---
	Pacific Coast Highway (SR-1)	PM	0.618	B	0.629	B	0.011	NO	0.672	B	0.684	B	0.012	NO	0.684	B	0.012	---
	[a]	SAT	0.828	D	0.835	D	0.007	NO	0.885	D	0.893	D	0.008	NO	0.893	D	0.008	---
2	Malibu Canyon Road/	AM	0.614	B	0.628	B	0.014	NO	0.672	B	0.685	B	0.013	NO	0.685	B	0.013	---
	Pacific Coast Highway (SR-1)	PM	0.657	B	0.672	B	0.015	NO	0.732	C	0.747	C	0.015	NO	0.747	C	0.015	---
	[a]	SAT	0.737	C	0.748	C	0.011	NO	0.834	D	0.845	D	0.011	NO	0.845	D	0.011	---
3	Webb Way/	AM	0.501	A	0.506	A	0.005	NO	0.564	A	0.595	A	0.031	NO	0.535	A	-0.029	---
	Pacific Coast Highway (SR-1)	PM	0.628	B	0.650	B	0.022	NO	0.761	C	0.783	C	0.022	NO	0.716	C	-0.045	---
	[a]	SAT	0.690	B	0.719	C	0.029	NO	0.869	D	0.903	E	0.034	YES	0.802	D	-0.067	YES
4	Cross Creek Road/	AM	0.536	A	0.556	A	0.020	NO	0.606	B	0.626	B	0.020	NO	0.561	A	-0.045	---
	Pacific Coast Highway (SR-1)	PM	0.715	C	0.755	C	0.040	NO	0.834	D	0.875	D	0.041	YES	0.775	C	-0.059	YES
	[a]	SAT	0.749	C	0.790	C	0.041	NO	0.904	E	0.945	E	0.041	YES	0.815	D	-0.089	YES
5	Las Flores Canyon Road/	AM	0.643	B	0.648	B	0.005	NO	0.684	B	0.689	B	0.005	NO	0.689	B	0.005	---
	Pacific Coast Highway (SR-1)	PM	0.648	B	0.667	B	0.019	NO	0.715	C	0.733	C	0.018	NO	0.733	C	0.018	---
	[a]	SAT	0.692	B	0.709	C	0.017	NO	0.786	C	0.805	D	0.019	NO	0.805	D	0.019	---
6	Topanga Canyon Boulevard (SR-27)/	AM	0.934	E	0.935	E	0.001	NO	0.977	E	0.979	E	0.002	NO	0.979	E	0.002	---
	Pacific Coast Highway (SR-1)	PM	0.787	C	0.796	C	0.009	NO	0.843	D	0.852	D	0.009	NO	0.852	D	0.009	---
	[c]	SAT	0.755	C	0.765	C	0.010	NO	0.822	D	0.832	D	0.010	NO	0.832	D	0.010	---
7	Malibu Canyon Road/	AM	0.494	A	0.498	A	0.004	NO	0.523	A	0.527	A	0.004	NO	0.527	A	0.004	---
	Civic Center Way	PM	0.486	A	0.496	A	0.010	NO	0.538	A	0.547	A	0.009	NO	0.547	A	0.009	---
	[a]	SAT	0.401	A	0.401	A	0.000	NO	0.432	A	0.445	A	0.013	NO	0.445	A	0.013	---
8	Stuart Ranch Road - Webb Way/	AM	11.93	B	11.99	B	0.06	NO	13.00	B	13.34	B	0.34	NO	13.34	B	0.34	---
	Civic Center Way	PM	16.92	C	18.11	C	1.19	NO	22.40	C	25.09	D	2.69	NO	25.09	D	2.69	---
	[b]	SAT	10.40	B	10.96	B	0.56	NO	14.16	B	16.25	C	2.09	NO	16.25	C	2.09	---
9	Cross Creek Road/	AM	8.07	A	8.44	A	0.37	NO	8.85	A	9.39	A	0.54	NO	9.39	A	0.54	---
	Civic Center Way	PM	8.60	A	9.50	A	0.90	NO	10.72	B	12.63	B	1.91	NO	12.63	B	1.91	---
	[b]	SAT	8.58	A	9.60	A	1.02	NO	11.64	B	14.47	B	2.83	NO	14.47	B	2.83	---

[a] City of Malibu signalized intersection impact threshold criteria is as follows:

Pre-Project v/c	LOS	Project Related Increase in v/c
0.71 - 0.80	C	0.04 or more
0.81 - 0.90	D	0.02 or more
0.91 or more	E / F	0.01 or more

[b] City of Malibu unsignalized intersection impact threshold criteria is as follows:
Final LOS
Degrades the LOS to LOS D or worse
or
Project Related Increase in Delay
Increases delay by 5 seconds or more

[c] County of Los Angeles signalized intersection impact threshold criteria is as follows:

Pre-Project v/c	LOS	Project Related Increase in v/c
0.71 to 0.80	C	0.04 or more
0.81 to 0.90	D	0.02 or more
0.91 or more	E / F	0.01 or more

Table 9-2
SUMMARY OF VOLUME TO CAPACITY RATIOS/DELAYS
AND LEVELS OF SERVICE
SUMMERTIME WEEKDAY AM / PM AND WEEKEND MID-DAY PEAK HOURS

			[1]		[2]				[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2018 EXISTING V/C or Delay	LOS	YEAR 2018 EXISTING W/ PROJECT V/C or Delay	LOS	CHANGE V/C or Delay [(2)-(1)]	SIGNIF. IMPACT	YEAR 2022 FUTURE PRE-PROJ W/A.G. & REL PROJ V/C or Delay	LOS	YEAR 2022 FUTURE WITH PROJECT V/C or Delay	LOS	CHANGE V/C or Delay [(4)-(3)]	SIGNIF. IMPACT	YEAR 2022 W/ PROJECT MITIGATION V/C or Delay	LOS	CHANGE V/C or Delay [(5)-(3)]	MITI-GATED
1	Kanan Dume Road/	AM	0.440	A	0.442	A	0.002	NO	0.463	A	0.465	A	0.002	NO	0.465	A	0.002	---
	Pacific Coast Highway (SR-1)	PM	0.720	C	0.731	C	0.011	NO	0.778	C	0.790	C	0.012	NO	0.790	C	0.012	---
	[a]	SAT	0.846	D	0.853	D	0.007	NO	0.904	E	0.912	E	0.008	NO	0.912	E	0.008	---
2	Malibu Canyon Road/	AM	0.610	B	0.624	B	0.014	NO	0.667	B	0.681	B	0.014	NO	0.681	B	0.014	---
	Pacific Coast Highway (SR-1)	PM	0.715	C	0.729	C	0.014	NO	0.792	C	0.806	D	0.014	NO	0.806	D	0.014	---
	[a]	SAT	0.737	C	0.748	C	0.011	NO	0.818	D	0.829	D	0.011	NO	0.829	D	0.011	---
3	Webb Way/	AM	0.474	A	0.477	A	0.003	NO	0.511	A	0.541	A	0.030	NO	0.507	A	-0.004	---
	Pacific Coast Highway (SR-1)	PM	0.647	B	0.669	B	0.022	NO	0.786	C	0.811	D	0.025	YES	0.738	C	-0.048	YES
	[a]	SAT	0.658	B	0.688	B	0.030	NO	0.833	D	0.863	D	0.030	YES	0.769	C	-0.064	YES
4	Cross Creek Road/	AM	0.556	A	0.561	A	0.005	NO	0.598	A	0.603	B	0.005	NO	0.603	B	0.005	---
	Pacific Coast Highway (SR-1)	PM	0.751	C	0.792	C	0.041	NO	0.872	D	0.913	E	0.041	YES	0.808	D	-0.064	YES
	[a]	SAT	0.747	C	0.788	C	0.041	NO	0.903	E	0.943	E	0.040	YES	0.791	C	-0.112	YES
5	Las Flores Canyon Road/	AM	0.568	A	0.572	A	0.004	NO	0.606	B	0.610	B	0.004	NO	0.610	B	0.004	---
	Pacific Coast Highway (SR-1)	PM	0.697	B	0.714	C	0.017	NO	0.761	C	0.778	C	0.017	NO	0.778	C	0.017	---
	[a]	SAT	0.714	C	0.731	C	0.017	NO	0.808	D	0.827	D	0.019	NO	0.827	D	0.019	---
6	Topanga Canyon Boulevard (SR-27)/	AM	0.912	E	0.914	E	0.002	NO	0.954	E	0.956	E	0.002	NO	0.956	E	0.002	---
	Pacific Coast Highway (SR-1)	PM	0.809	D	0.818	D	0.009	NO	0.866	D	0.875	D	0.009	NO	0.875	D	0.009	---
	[c]	SAT	0.750	C	0.760	C	0.010	NO	0.817	D	0.827	D	0.010	NO	0.827	D	0.010	---
7	Malibu Canyon Road/	AM	0.448	A	0.452	A	0.004	NO	0.475	A	0.479	A	0.004	NO	0.479	A	0.004	---
	Civic Center Way	PM	0.421	A	0.430	A	0.009	NO	0.470	A	0.480	A	0.010	NO	0.480	A	0.010	---
	[a]	SAT	0.328	A	0.342	A	0.014	NO	0.387	A	0.401	A	0.014	NO	0.401	A	0.014	---
8	Stuart Ranch Road - Webb Way/	AM	9.96	A	10.03	B	0.07	NO	10.67	B	11.00	B	0.33	NO	11.00	B	0.33	---
	Civic Center Way	PM	19.02	C	20.75	C	1.73	NO	26.90	D	30.42	D	3.52	NO	30.42	D	3.52	---
	[b]	SAT	10.46	B	11.25	B	0.79	NO	15.56	C	18.72	C	3.16	NO	18.72	C	3.16	---
9	Cross Creek Road/	AM	8.04	A	8.37	A	0.33	NO	8.75	A	9.25	A	0.50	NO	9.25	A	0.50	---
	Civic Center Way	PM	8.76	A	9.73	A	0.97	NO	11.02	B	13.14	B	2.12	NO	13.14	B	2.12	---
	[b]	SAT	9.85	A	11.46	B	1.61	NO	15.32	C	21.68	C	6.36	YES	21.68	C	6.36	NO

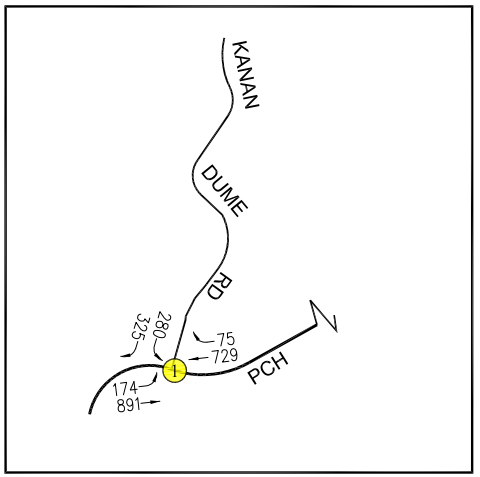
[a] City of Malibu signalized intersection impact threshold criteria is as follows:

Pre-Project v/c	LOS	Project Related Increase in v/c
0.71 - 0.80	C	0.04 or more
0.81 - 0.90	D	0.02 or more
0.91 or more	E / F	0.01 or more

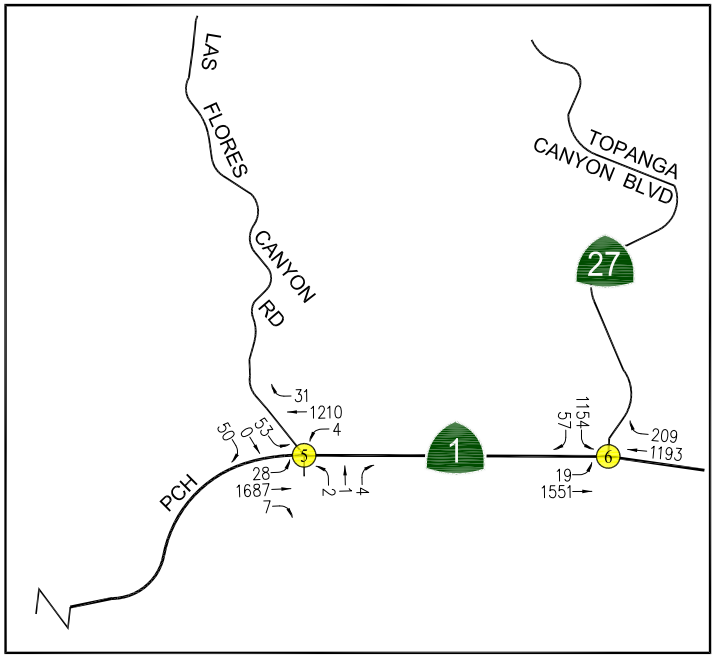
[b] City of Malibu unsignalized intersection impact threshold criteria is as follows:
Final LOS
Degrades the LOS to LOS D or worse
or
Project Related Increase in Delay
Increases delay by 5 seconds or more

[c] County of Los Angeles signalized intersection impact threshold criteria is as follows:

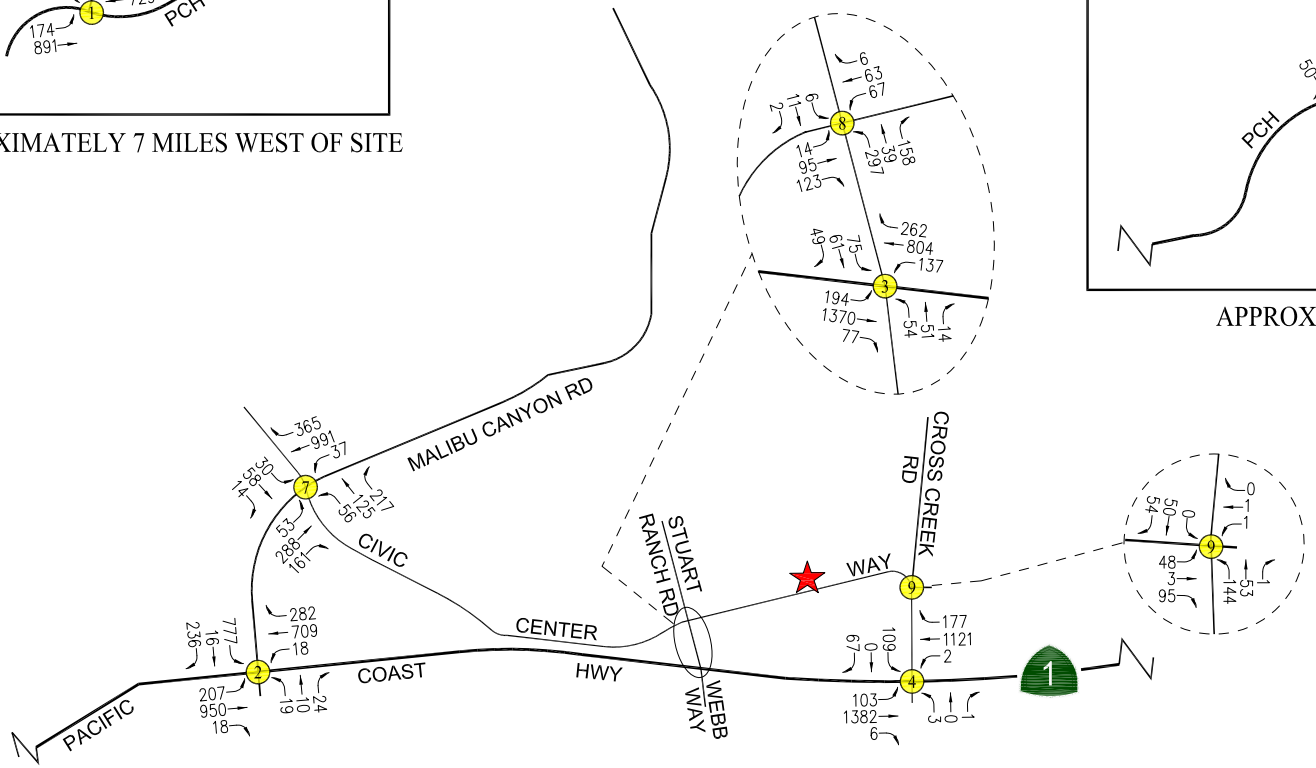
Pre-Project v/c	LOS	Project Related Increase in v/c
0.71 to 0.80	C	0.04 or more
0.81 to 0.90	D	0.02 or more
0.91 or more	E / F	0.01 or more



APPROXIMATELY 7 MILES WEST OF SITE



APPROXIMATELY 6 MILES EAST OF SITE



N

NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 9-1
EXISTING (SCHOOL TIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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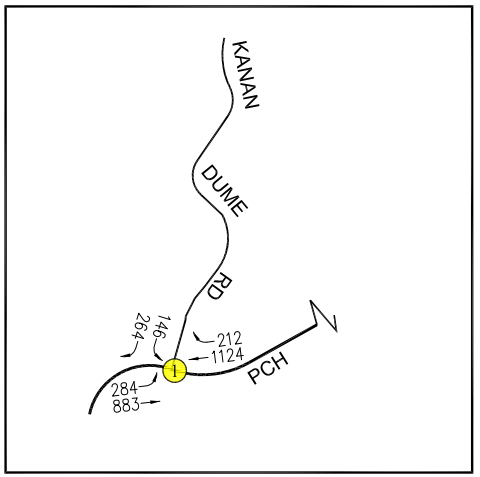
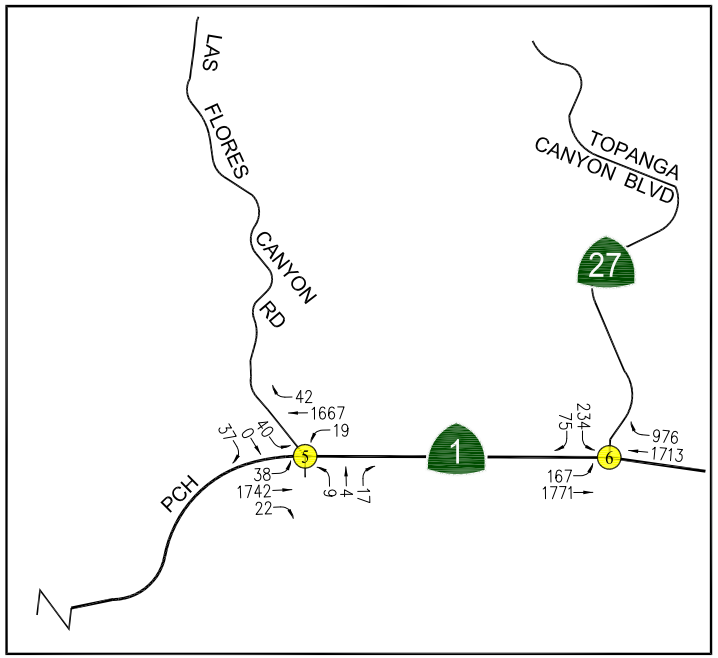
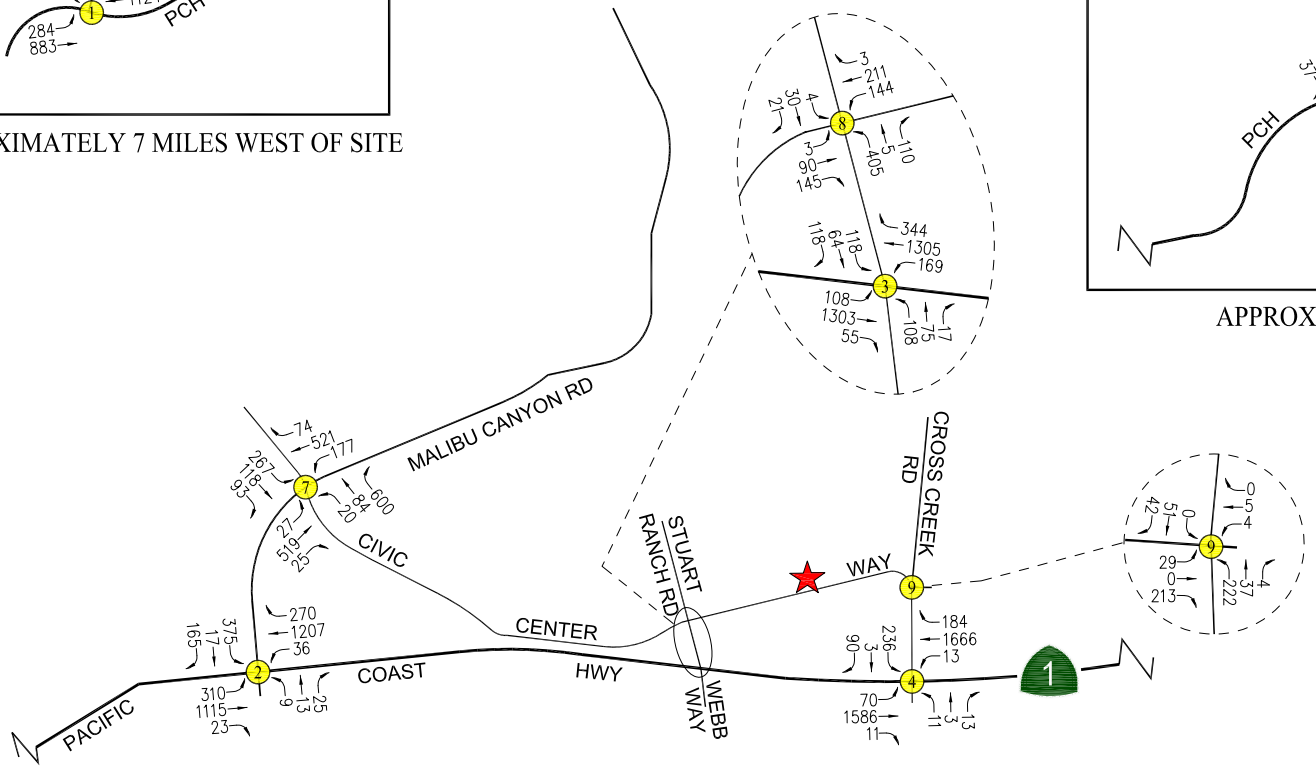


APPROXIMATELY 7 MILES WEST OF SITE



APPROXIMATELY 6 MILES EAST OF SITE



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NOT TO SCALE

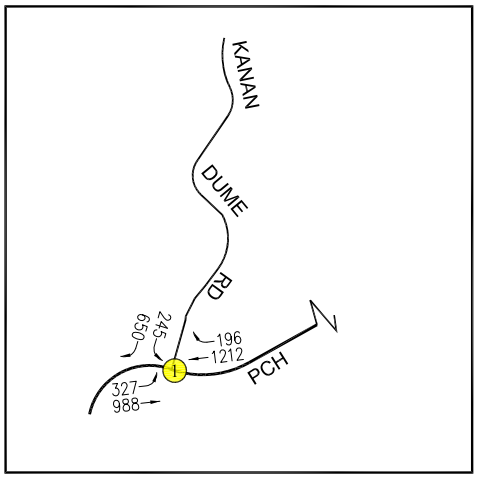
★ PROJECT SITE

(XX) STUDY INTERSECTION

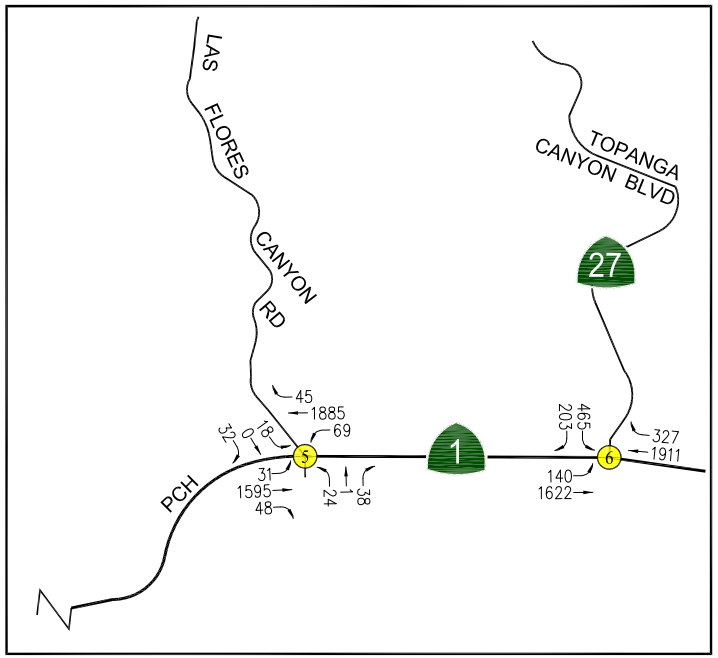
FIGURE 9-2
EXISTING (SCHOOL TIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers



APPROXIMATELY 7 MILES WEST OF SITE



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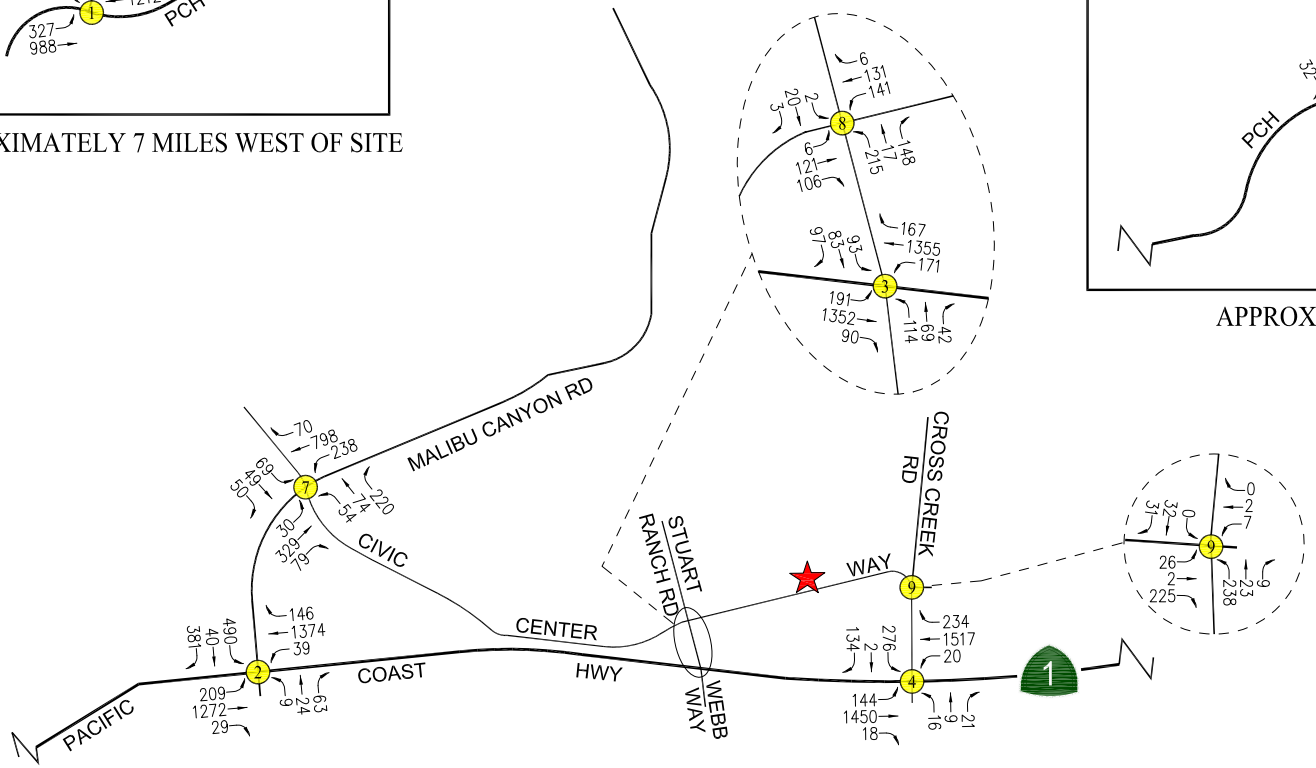

PROJECT SITE
STUDY INTERSECTION

NOT TO SCALE

FIGURE 9-3
EXISTING (SCHOOL TIME) WITH PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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9.1.4 *Existing With Project Conditions – Summertime*

As shown in column [2] of *Table 9–2*, application of the City and County's threshold criteria to the "Existing With Project" scenario indicates that the 2019 Project Modifications is not expected to create significant impacts at any of the nine study intersections during summertime conditions. Therefore, no mitigation measures are required or recommended with respect to these intersections under the "Existing With Project" conditions. The "Existing With Project" summertime traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday mid-day peak hour are illustrated in ***Figures 9–4***, ***9–5***, and ***9–6***, respectively.

9.2 Future Conditions

9.2.1 *Future Cumulative Baseline Conditions – School Time*

The school time future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios and control delays at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6–1*.

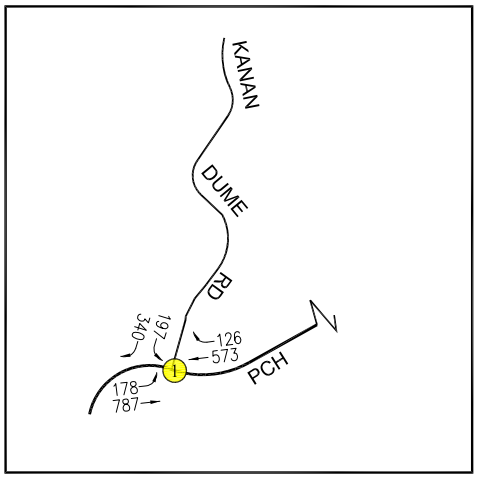
As presented in column [3] of *Table 9–1*, seven of the nine study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the school time future cumulative baseline conditions. The following intersections are expected to operate at LOS E during the peak hours shown below under the school time future cumulative baseline conditions:

- Int. No. 4: Cross Creek Road / Pacific Coast Highway — MD Peak Hour: *v/c* = 0.905, LOS E
- Int. No. 6: Topanga Canyon Boulevard / Pacific Coast Highway — AM Peak Hour: *v/c* = 0.977, LOS E

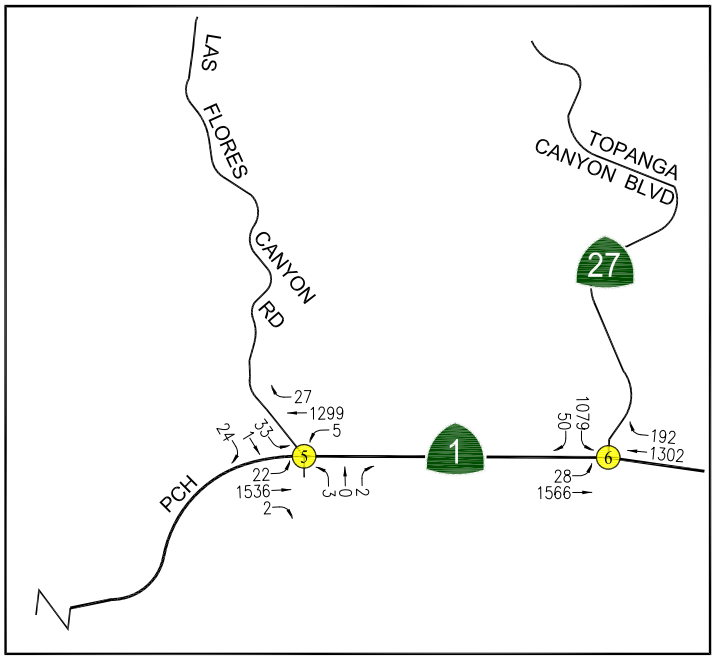
The future cumulative baseline (existing, ambient growth and related projects) school time traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday mid-day peak hour are presented in ***Figures 9–7***, ***9–8***, and ***9–9***, respectively.

9.2.2 *Future Cumulative Baseline Conditions – Summertime*

The summertime future cumulative baseline conditions were forecast based on the addition of traffic generated by the completion and occupancy of the related projects, as well as the growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors (i.e., ambient growth). The *v/c* ratios and control delays at all of the study intersections are incrementally increased with the addition of ambient traffic and traffic generated by the related projects listed in *Table 6–1*.



APPROXIMATELY 7 MILES WEST OF SITE



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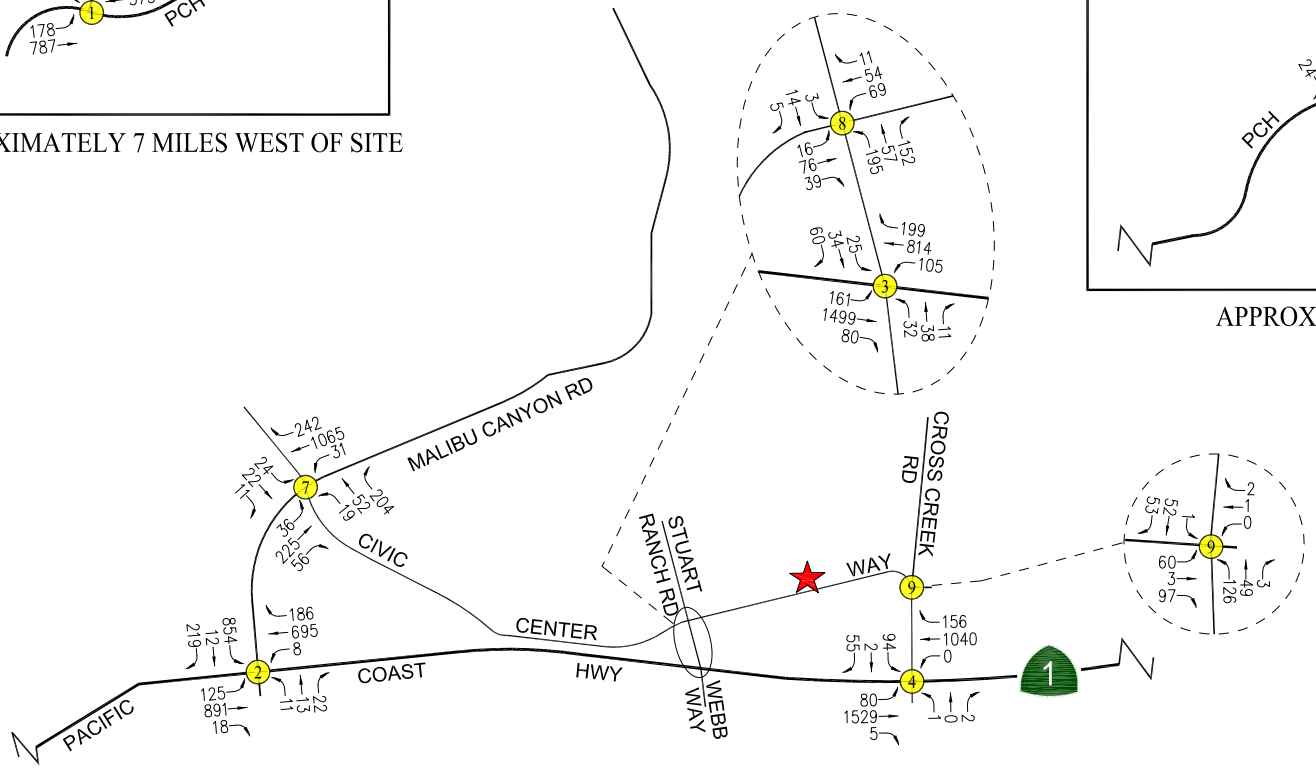

N

NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE 9-4
EXISTING (SUMMERTIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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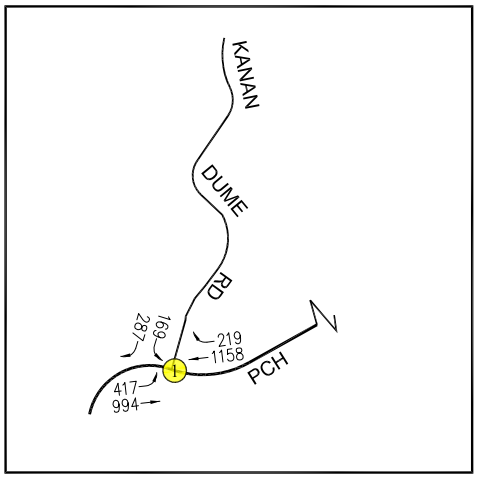

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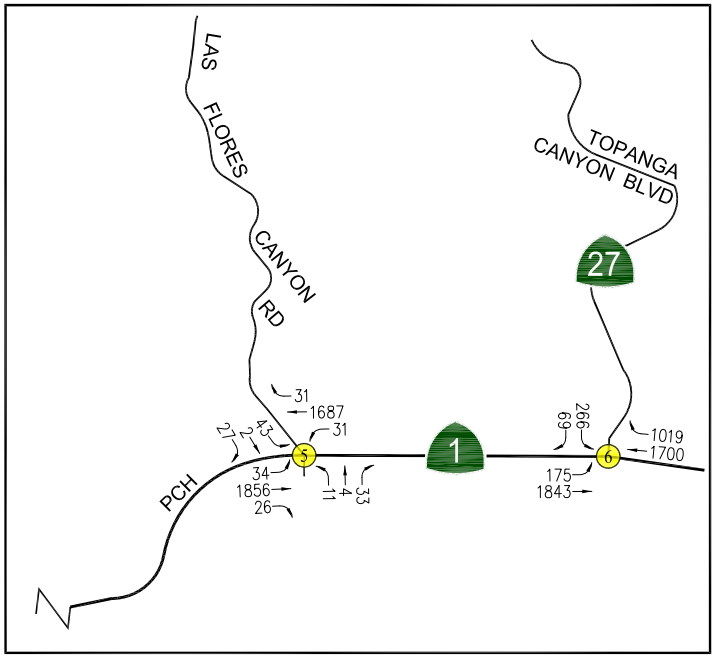

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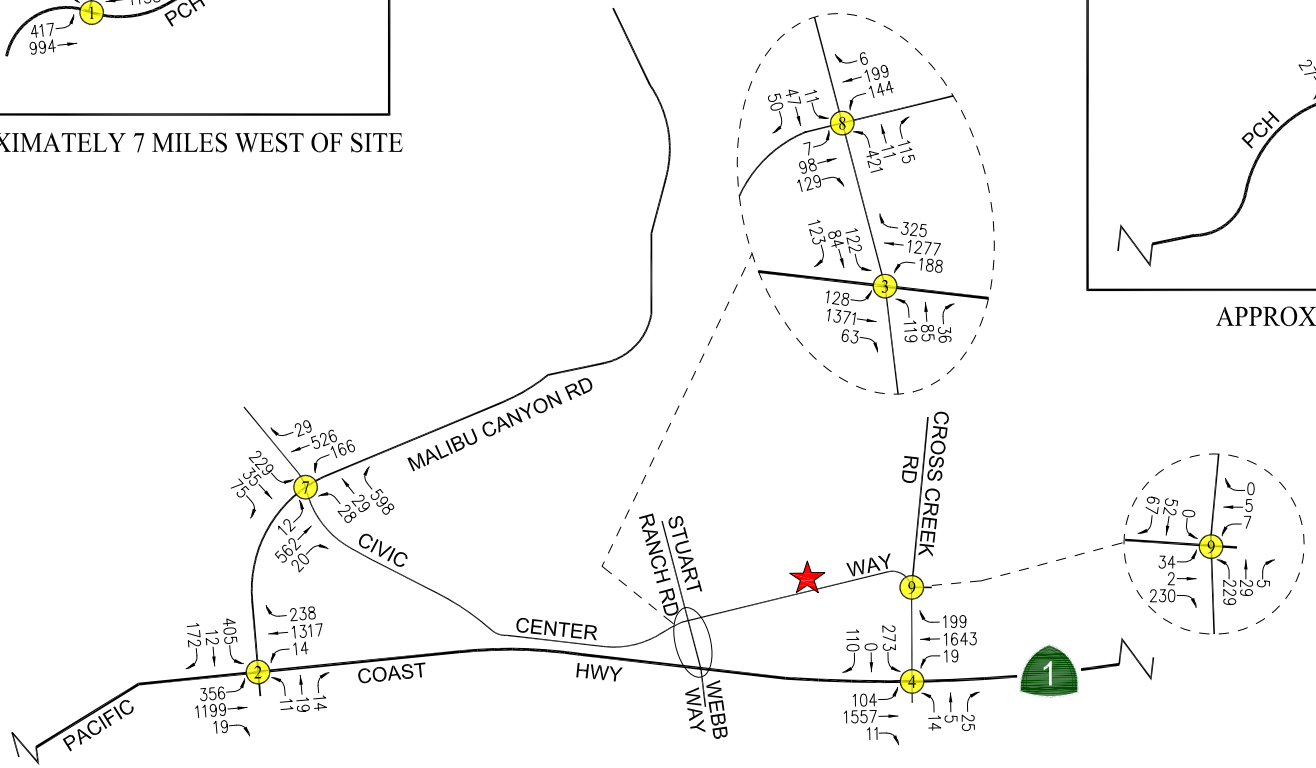

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 9-5
EXISTING (SUMMERTIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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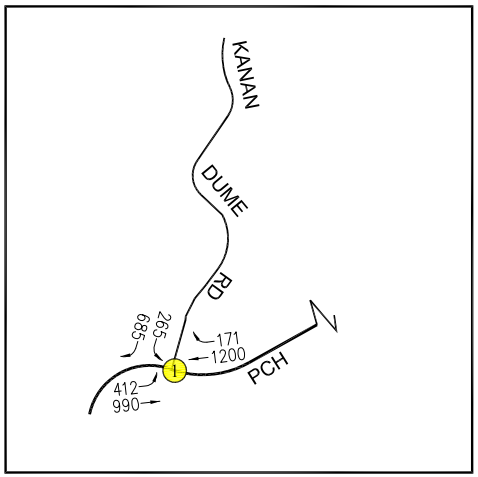

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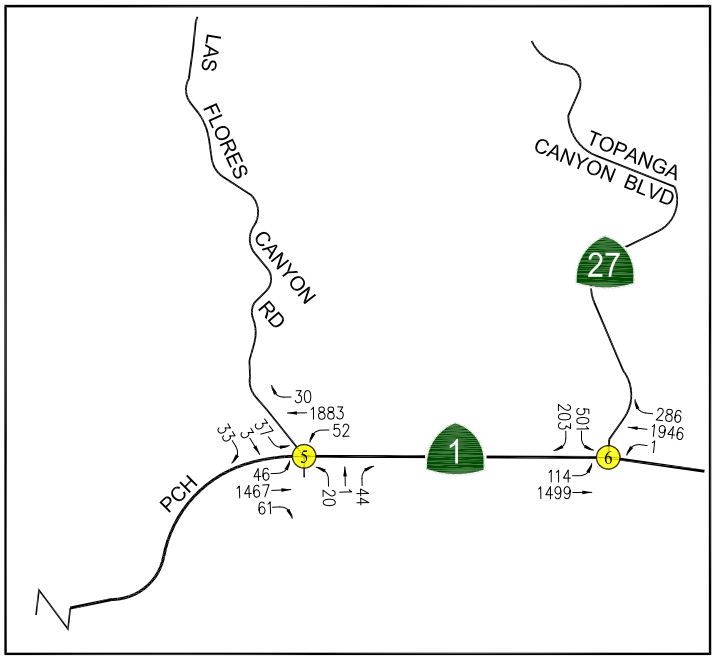

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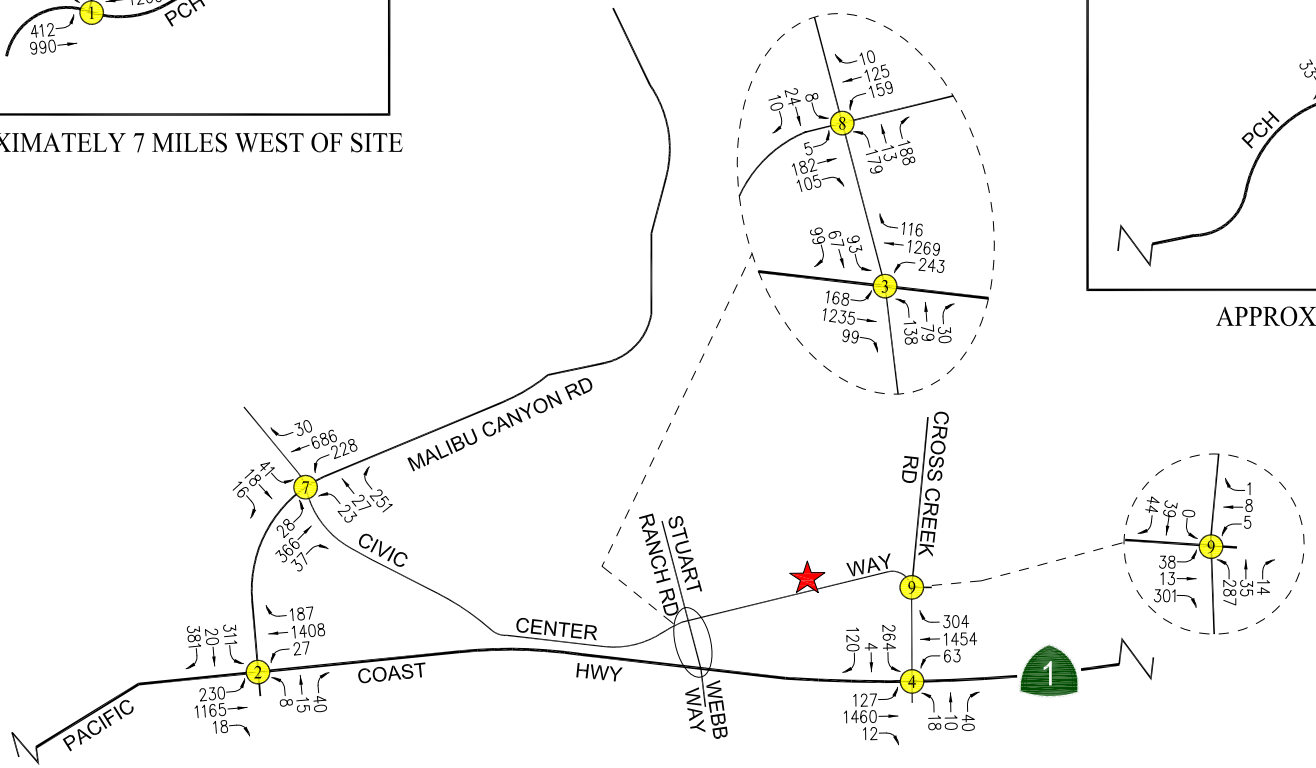

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(XX) STUDY INTERSECTION

FIGURE 9-6
EXISTING (SUMMERTIME) WITH PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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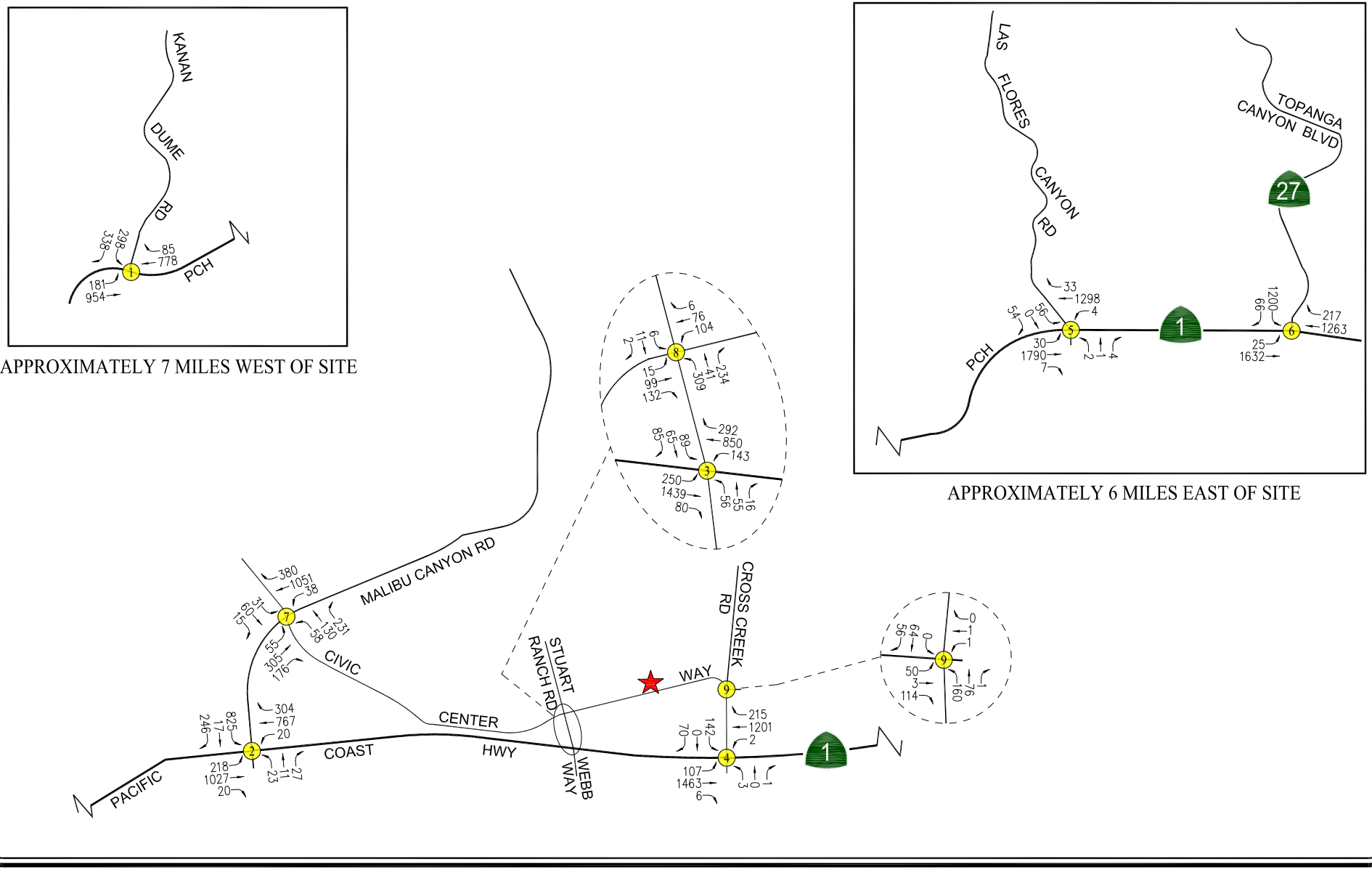

PROJECT SITE
STUDY INTERSECTION

NOT TO SCALE

FIGURE 9-7
FUTURE CUMULATIVE (SCHOOL TIME) BASELINE TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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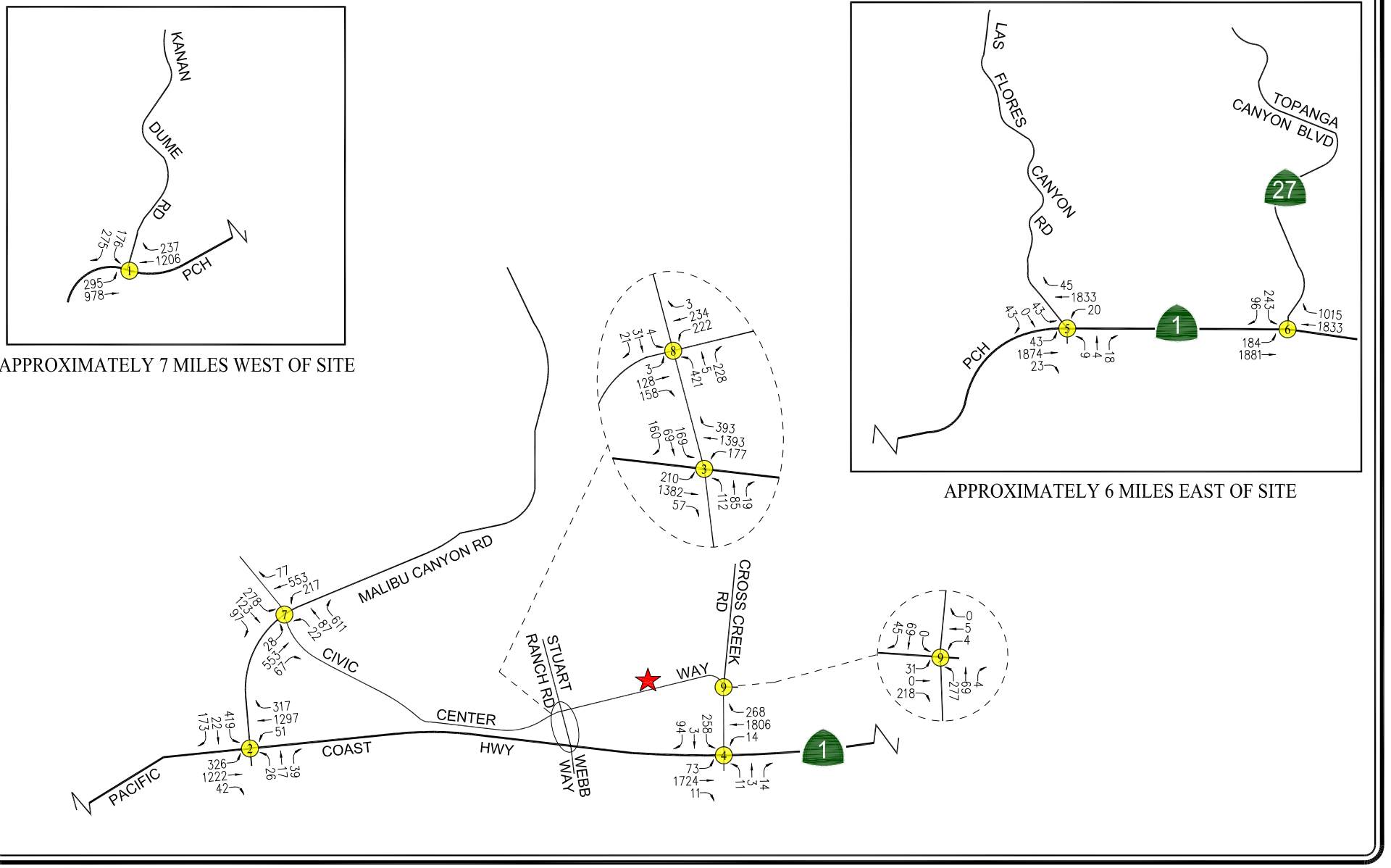

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PROJECT SITE

STUDY INTERSECTION

FIGURE 9-8
FUTURE CUMULATIVE (SCHOOL TIME) BASELINE TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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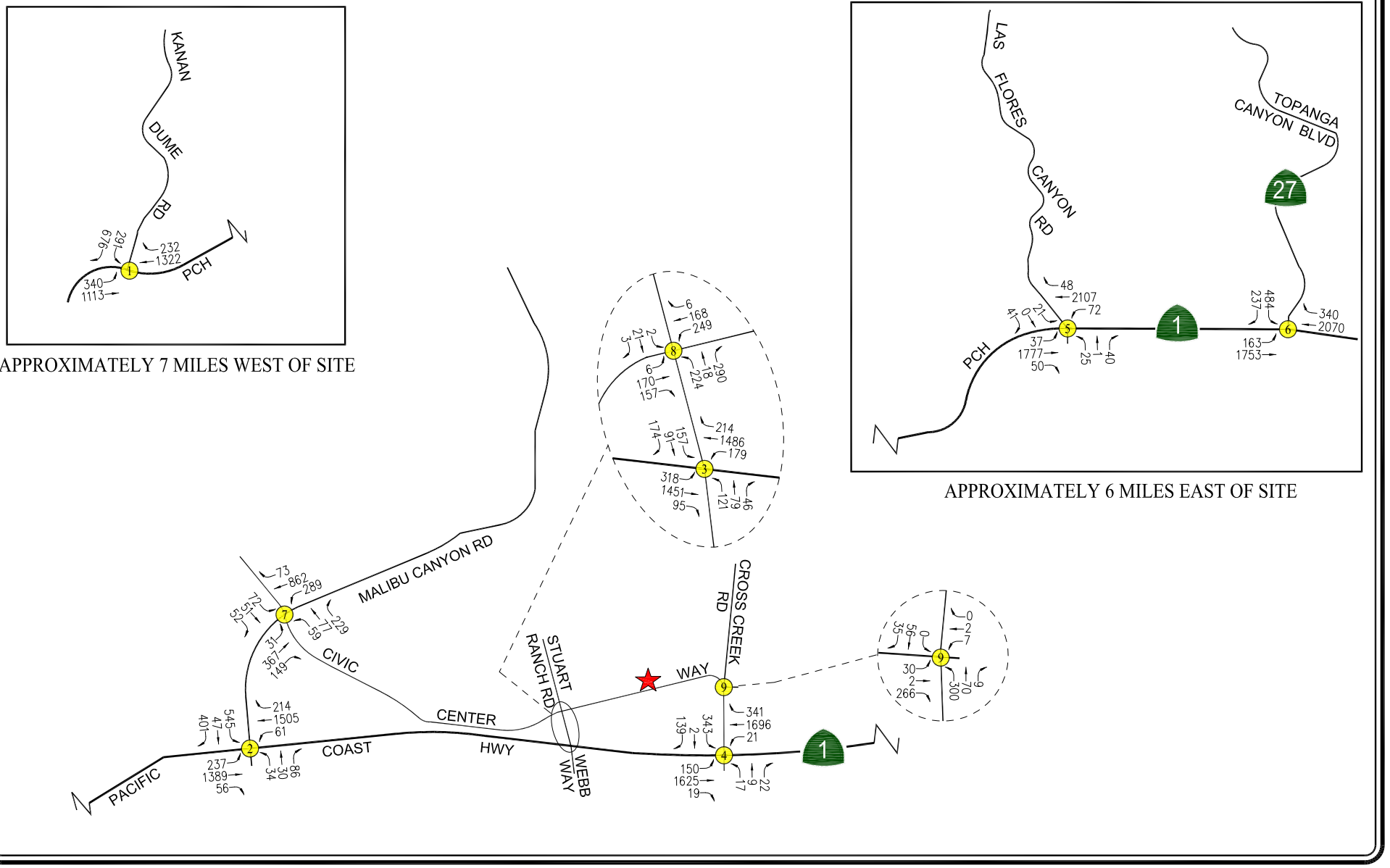

PROJECT SITE
STUDY INTERSECTION

NOT TO SCALE

FIGURE 9-9
FUTURE CUMULATIVE (SCHOOL TIME) BASELINE TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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As presented in column [3] of *Table 9–2*, six of the nine study intersections are expected to operate at LOS D or better during the weekday AM and PM peak hours with the addition of growth in ambient traffic and related project traffic under the summertime future cumulative baseline conditions. The following intersections are expected to operate at LOS E during the peak hours shown below under the summertime future cumulative baseline conditions:

- Int. No. 1: Kanan Dume Road / Pacific Coast Highway — MD Peak Hour: *v/c* = 0.904, LOS E
- Int. No. 4: Cross Creek Road / Pacific Coast Highway — MD Peak Hour: *v/c* = 0.903, LOS E
- Int. No. 6: Topanga Canyon Boulevard / Pacific Coast Highway — AM Peak Hour: *v/c* = 0.954, LOS E

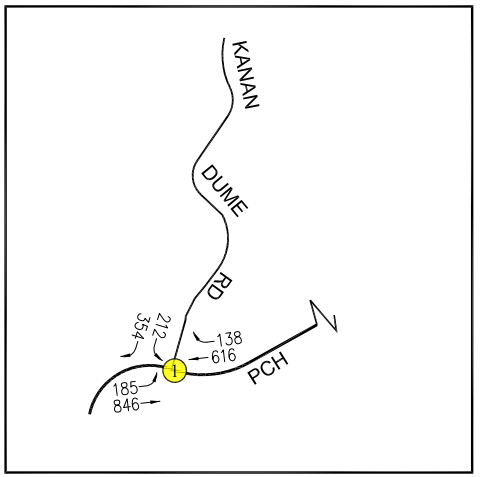
The future cumulative baseline (existing, ambient growth and related projects) summertime traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday mid-day peak hour are presented in ***Figures 9–10***, ***9–11***, and ***9–12***, respectively.

9.2.3 *Future Cumulative With Project Conditions – School Time*

The school time "Future Cumulative With Project" conditions were forecast based on the addition of traffic generated by the 2019 Project Modifications plus completion and occupancy of related projects. As shown in column [4] of *Table 9–1*, application of the City and County's threshold criteria to the school time "Future Cumulative With Project" scenario indicates that the proposed 2019 Project Modifications is not expected to create significant impacts at seven of the nine study intersections. As indicated in *Table 9–1*, a significant transportation impact is expected at the following intersections during the peak hours shown below under school time "Future Cumulative With Project" conditions:

- Int. No. 3: Webb Way / Pacific Coast Highway — MD Peak Hour *v/c* increases 0.034
- Int. No. 4: Cross Creek Road / Pacific Coast Highway — PM Peak Hour *v/c* increases 0.041; SAT Peak Hour *v/c* increases 0.041

Incremental, but not significant impacts are noted at the other seven intersections due to the 2019 Project Modifications. The "Future Cumulative With Project" (existing, ambient growth, related projects, and 2019 Project Modifications) school time traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday mid-day peak hour are illustrated in ***Figures 9–13***, ***9–14***, and ***9–15***, respectively.



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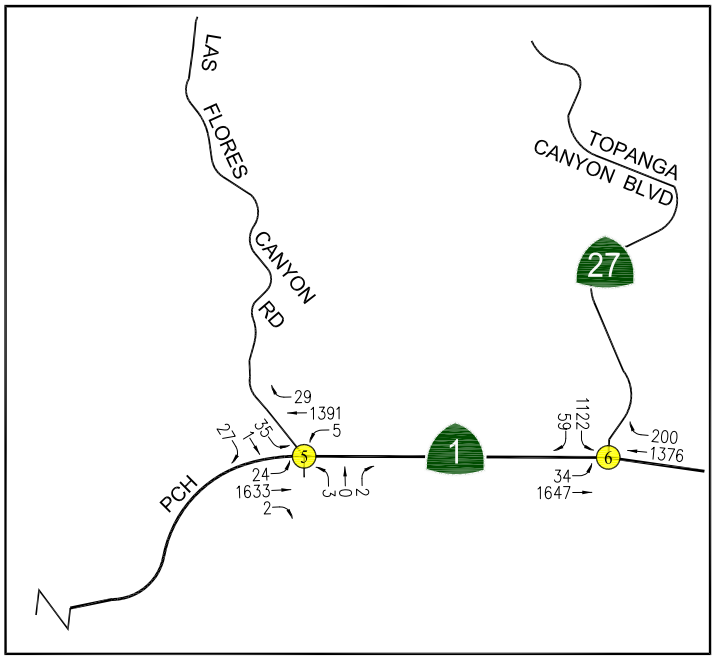

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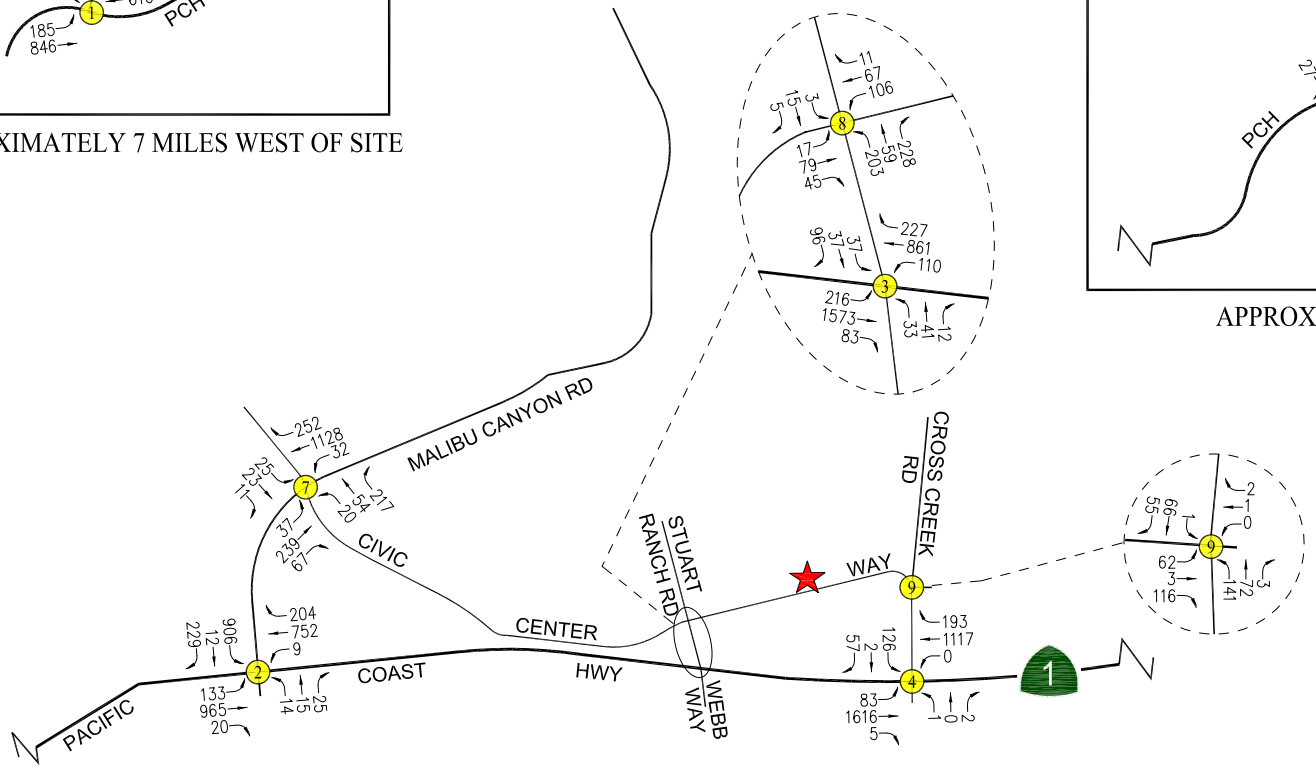

PROJECT SITE
STUDY INTERSECTION

NOT TO SCALE

FIGURE 9-10
FUTURE CUMULATIVE (SUMMERTIME) BASELINE TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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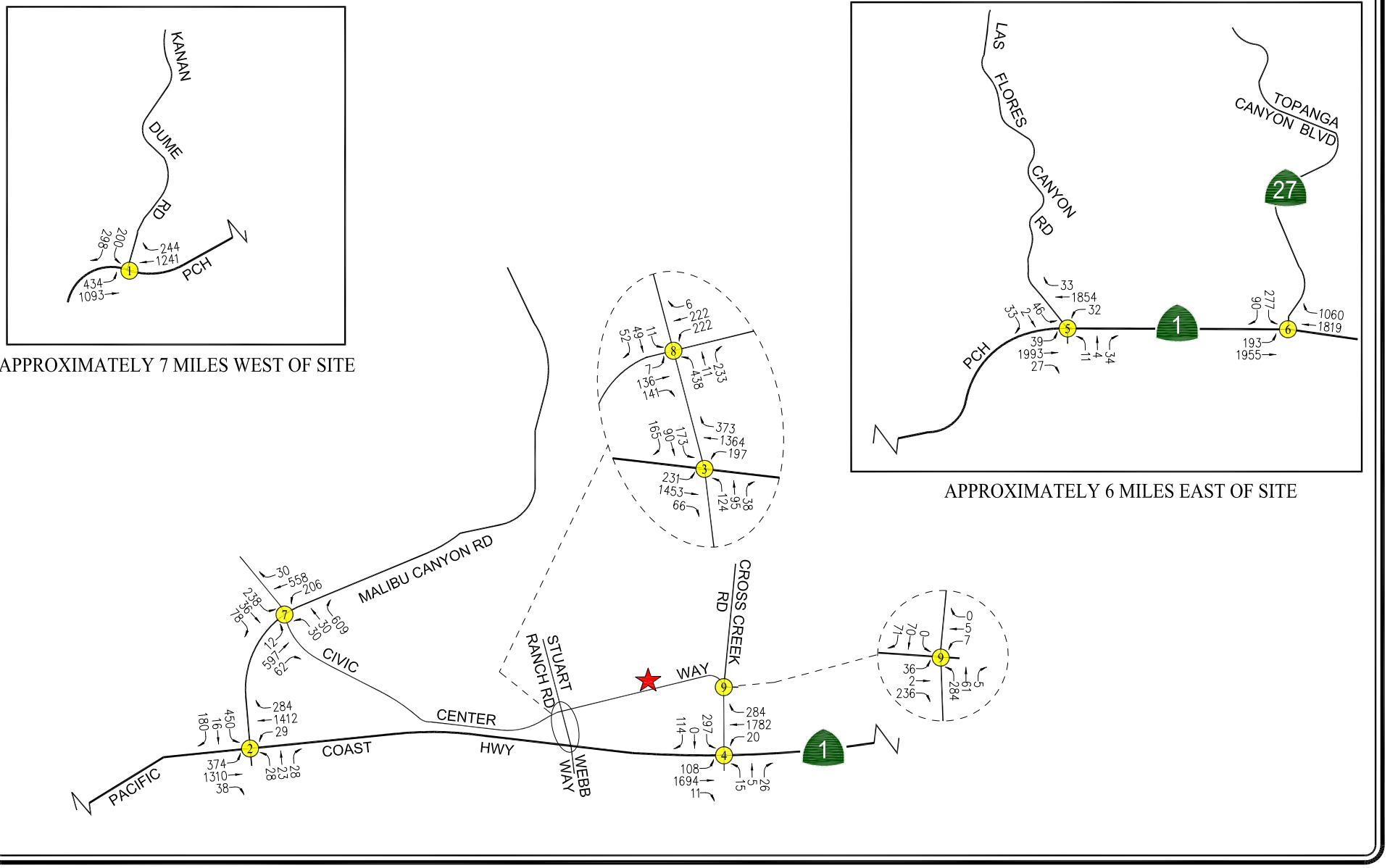

PROJECT SITE

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FIGURE 9-11
FUTURE CUMULATIVE (SUMMERTIME) BASELINE TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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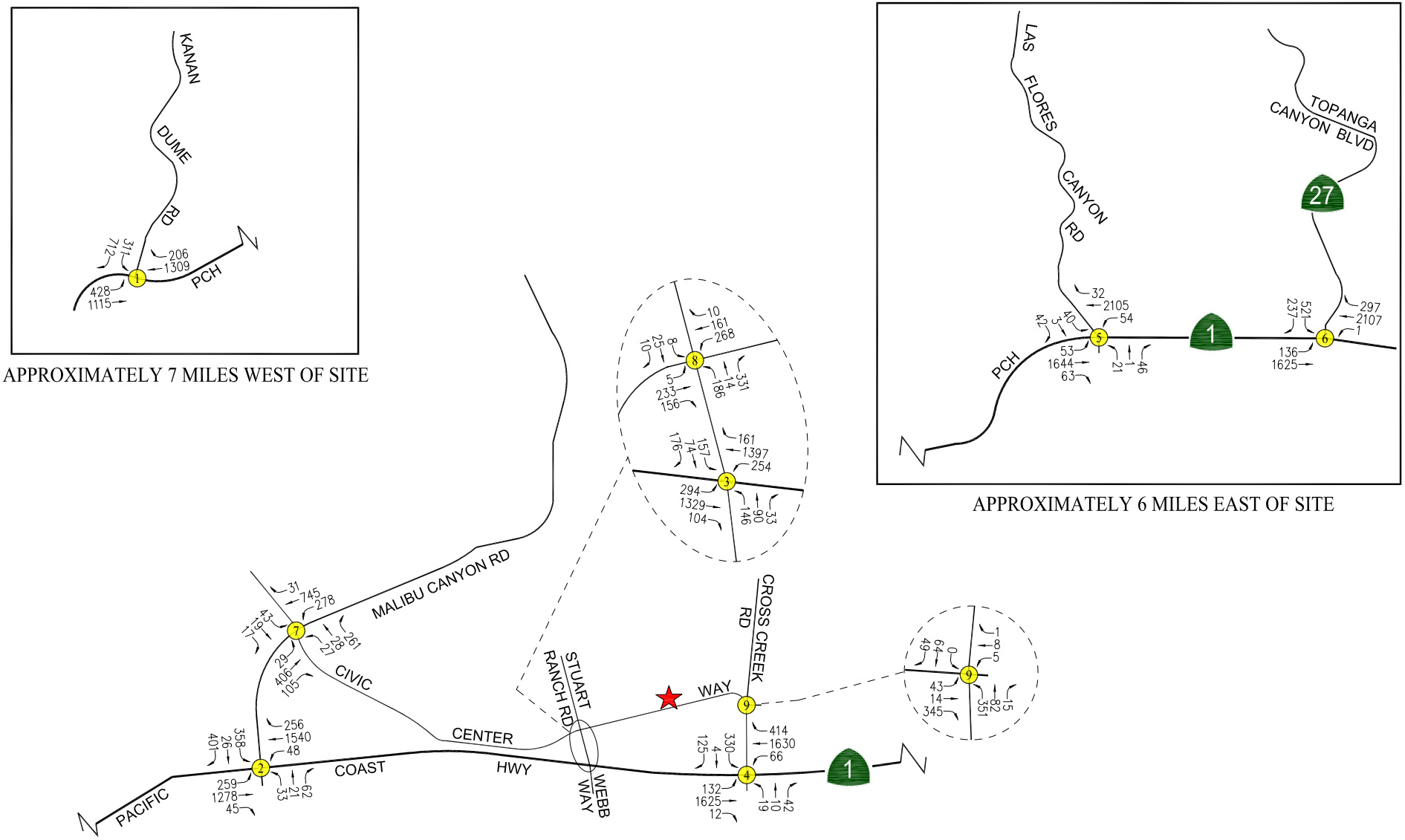

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PROJECT SITE
STUDY INTERSECTION

FIGURE 9-12
FUTURE CUMULATIVE (SUMMERTIME) BASELINE TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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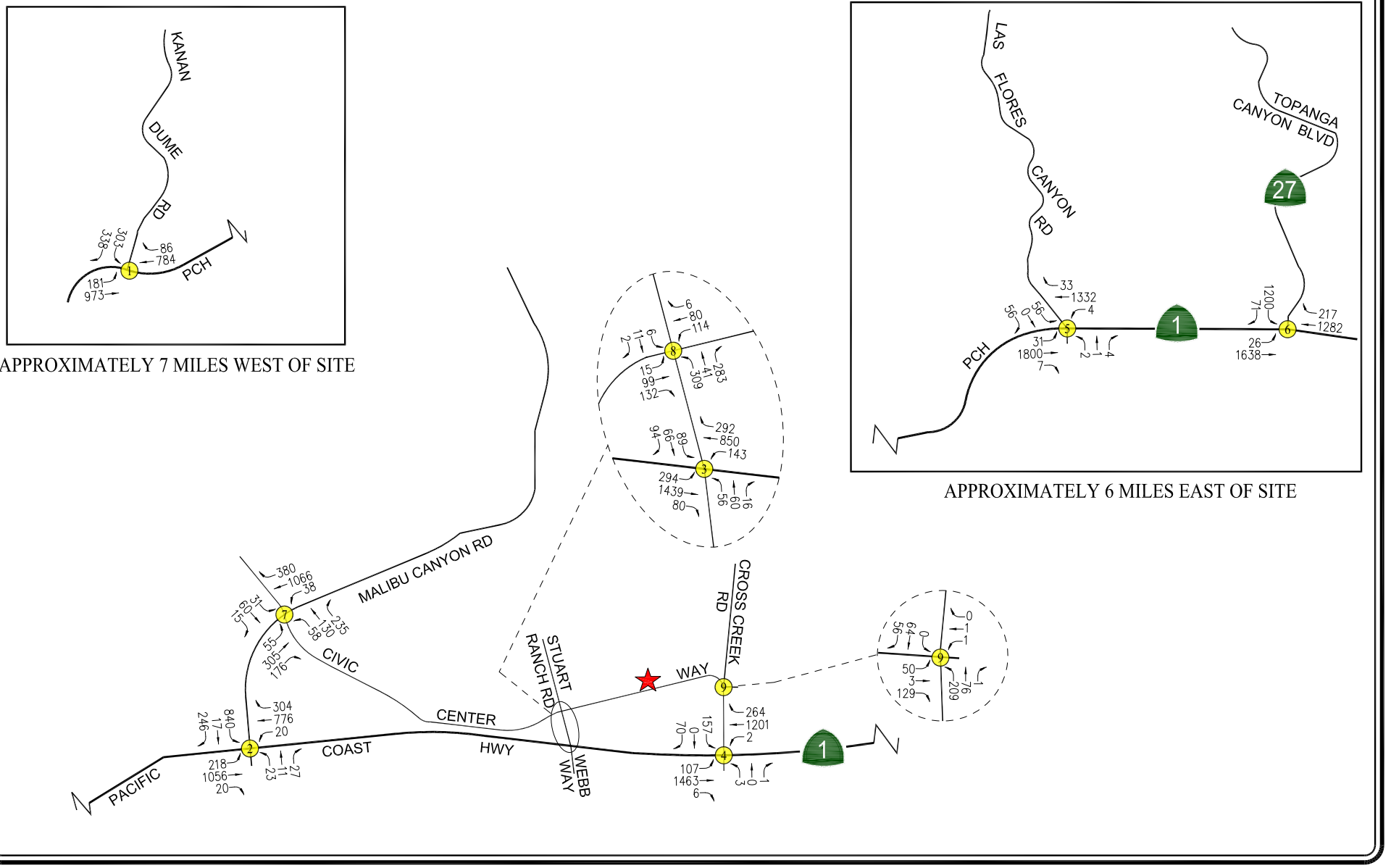

NOT TO SCALE

PROJECT SITE
STUDY INTERSECTION

FIGURE 9-13
FUTURE CUMULATIVE (SCHOOL TIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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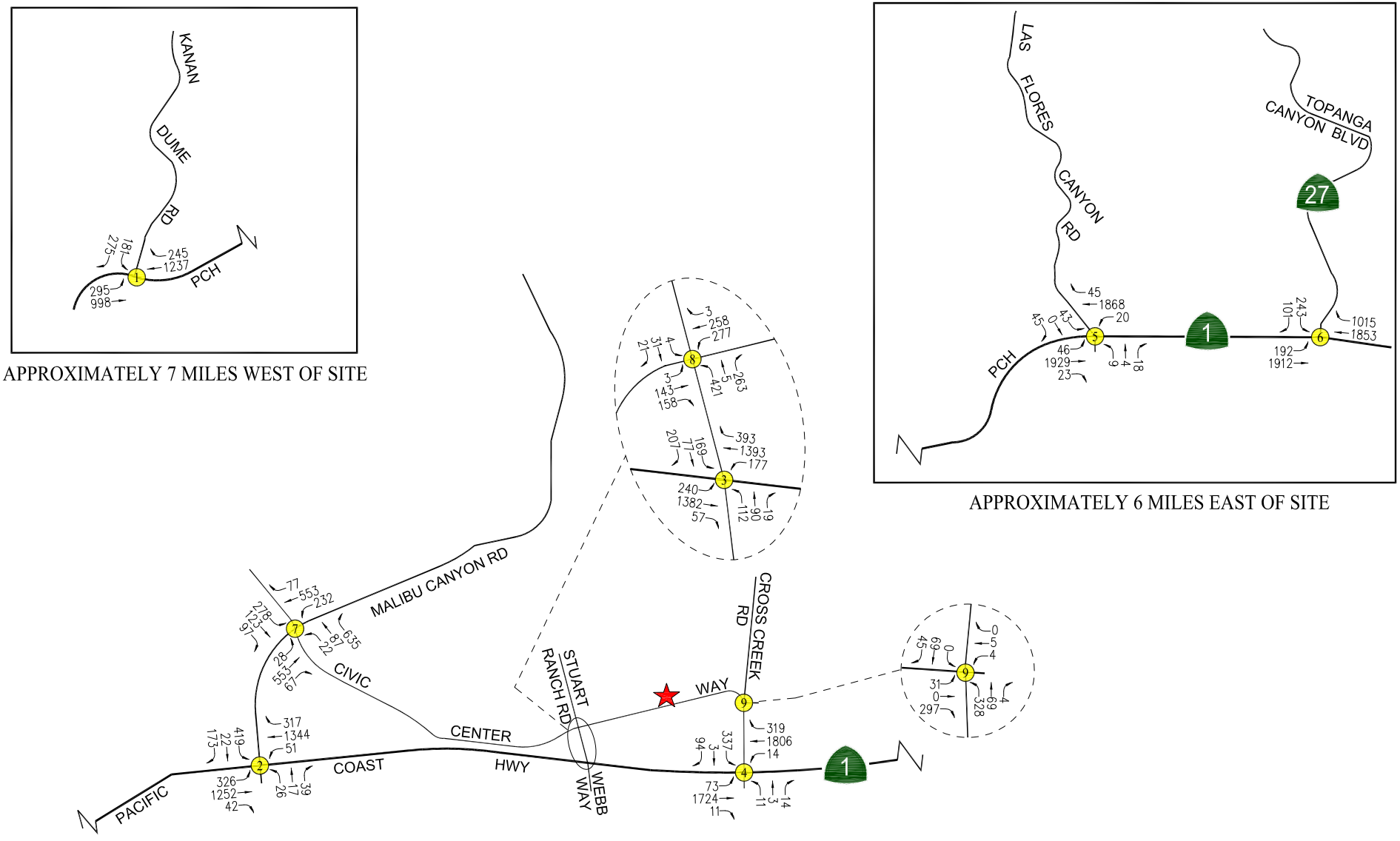

NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE 9-14
FUTURE CUMULATIVE (SCHOOL TIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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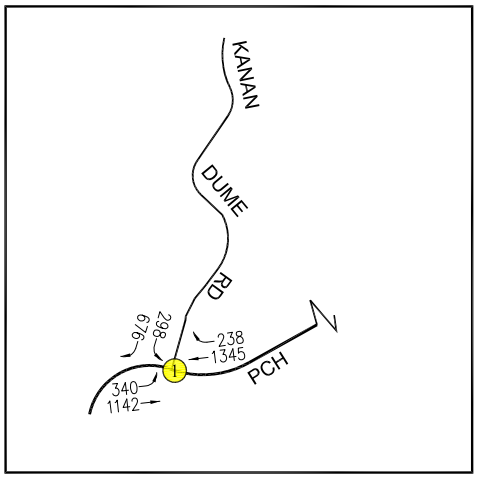
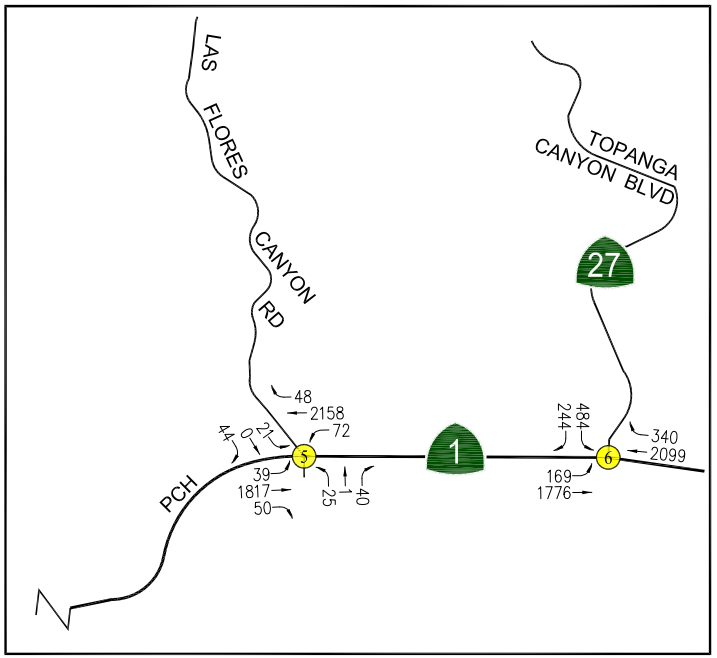


APPROXIMATELY 7 MILES WEST OF SITE



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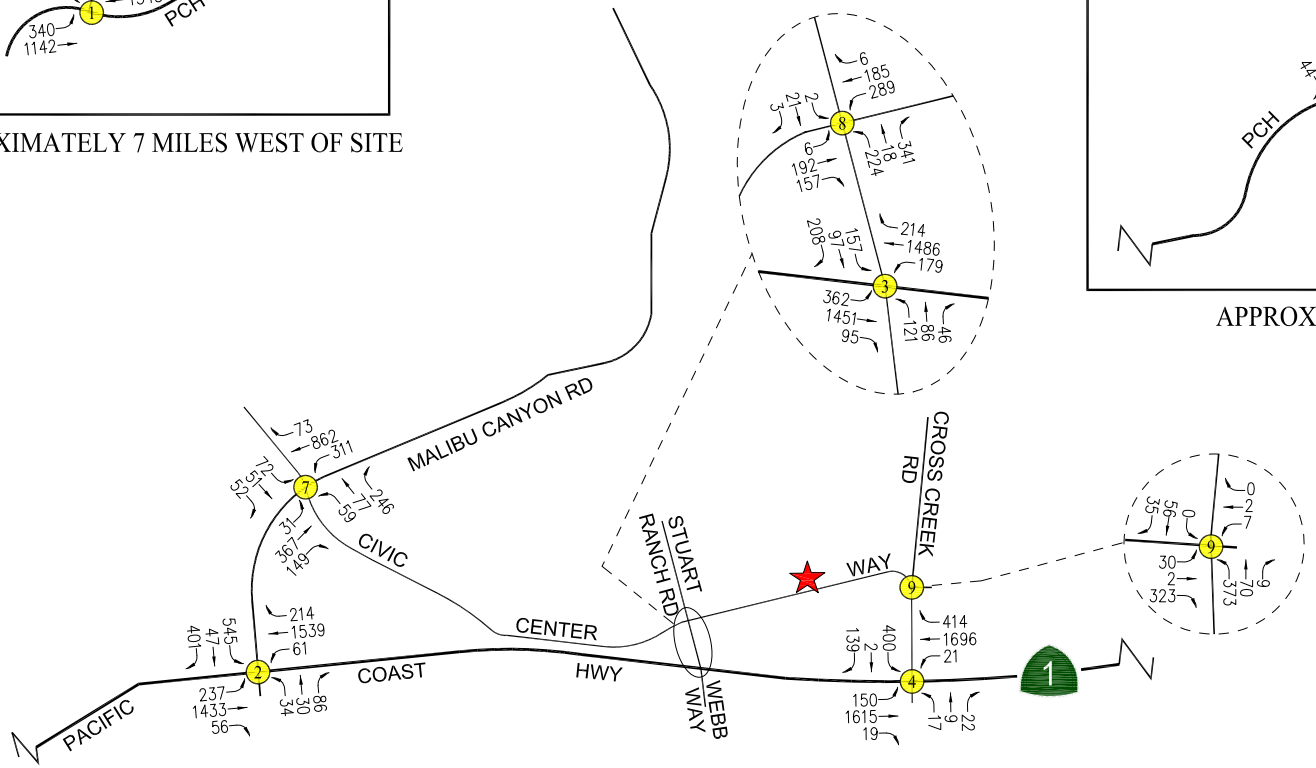

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(XX) STUDY INTERSECTION

FIGURE 9-15
FUTURE CUMULATIVE (SCHOOL TIME) WITH PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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9.2.4 *Future Cumulative With Project Conditions – Summertime*

The summertime "Future Cumulative With Project" conditions were forecast based on the addition of traffic generated by the 2019 Project Modifications plus completion and occupancy of related projects. As shown in column [4] of *Table 9–2*, application of the City and County's threshold criteria to the summertime "Future Cumulative With Project" scenario indicates that the proposed 2019 Project Modifications is not expected to create significant impacts at six of the nine study intersections. As indicated in *Table 9–2*, a significant transportation impact is expected at the following intersections during the peak hours shown below under summertime "Future Cumulative With Project" conditions:

- Int. No. 3: Webb Way / Pacific Coast Highway — PM Peak Hour *v/c* increases 0.025; MD Peak Hour *v/c* increases 0.030
- Int. No. 4: Cross Creek Road / Pacific Coast Highway — PM Peak Hour *v/c* increases 0.041; MD Peak Hour *v/c* increases 0.040
- Int No. 9 Cross Creek Road / Civic Center Way — MD Peak Hour delay increases 6.36 sec.

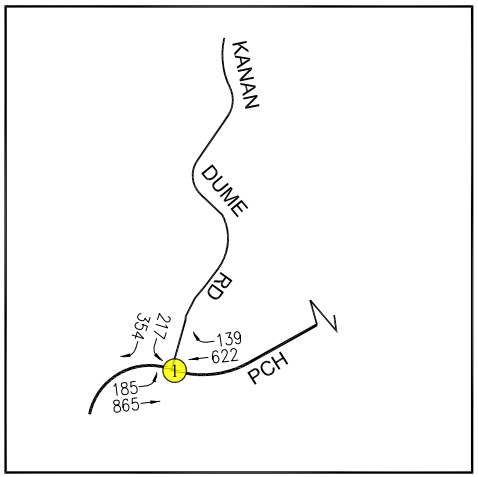
Incremental, but not significant impacts are noted at the other six intersections due to the 2019 Project Modifications. The "Future Cumulative With Project" (existing, ambient growth, related projects, and 2019 Project Modifications) summertime traffic volumes at the study intersections during the weekday AM and PM peak hours, as well as the Saturday MD peak hour are illustrated in ***Figures 9–16***, ***9–17***, and ***9–18***, respectively.

9.3 Further Discussion of Unsignalized Intersection Analysis at the Intersection of Cross Creek Road / Civic Center Way.

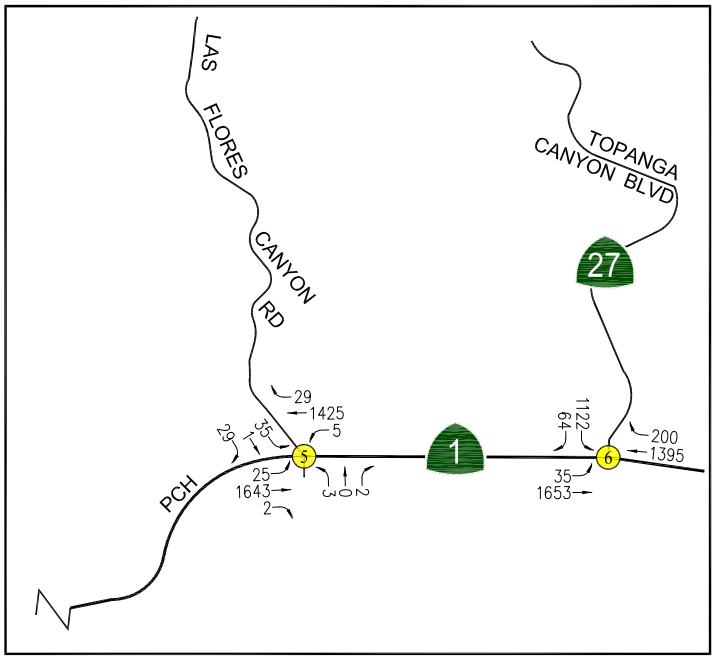
Appendix H provides a further discussion of the unsignalized intersection analysis for the intersection of Cross Creek Road and Civic Center Way. As discussed, in *Appendix H*, this addendum traffic study evaluates the 2019 Approved Project Update due to:

- Changed environmental conditions (e.g., updated traffic counts, updated list of related projects, evaluation of current intersection configurations and controls, etc.); and
- Current practices and standards for evaluating trip generation (changes to the ITE *Trip Generation Manual*), analyzing evaluating traffic operations (updates to the HCM methodologies and software), and use of the current Guidelines, including thresholds of significance.

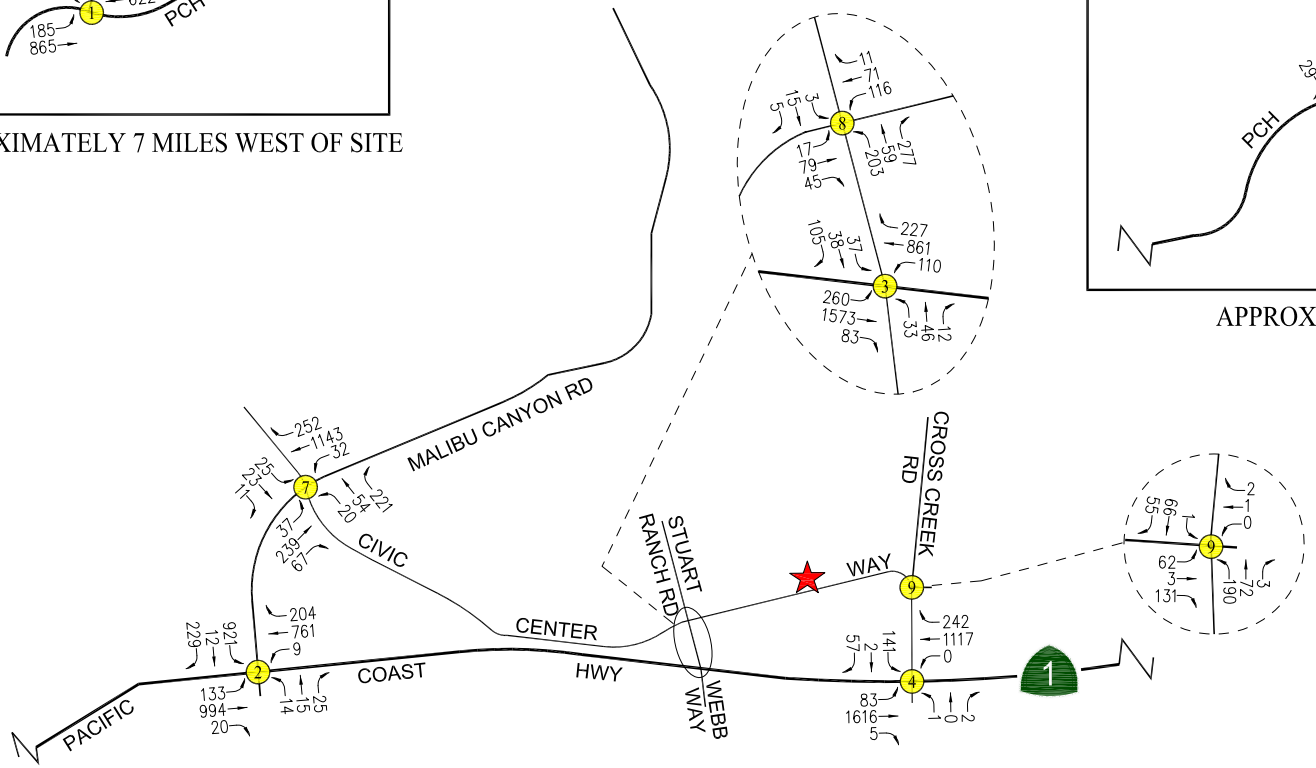
As would be expected, there are differences in terms of the findings with respect to motorist delay and Levels of Service at the intersection for Existing, Cumulative, and Cumulative + Project conditions during the weekday AM, weekday PM, and Saturday MD peak hours when comparing 2005 Analyzed Project, the 2008 Approved Project, and the 2019 Approved Project Update.



APPROXIMATELY 7 MILES WEST OF SITE



APPROXIMATELY 6 MILES EAST OF SITE



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(XX) STUDY INTERSECTION

FIGURE 9-16
FUTURE CUMULATIVE (SUMMERTIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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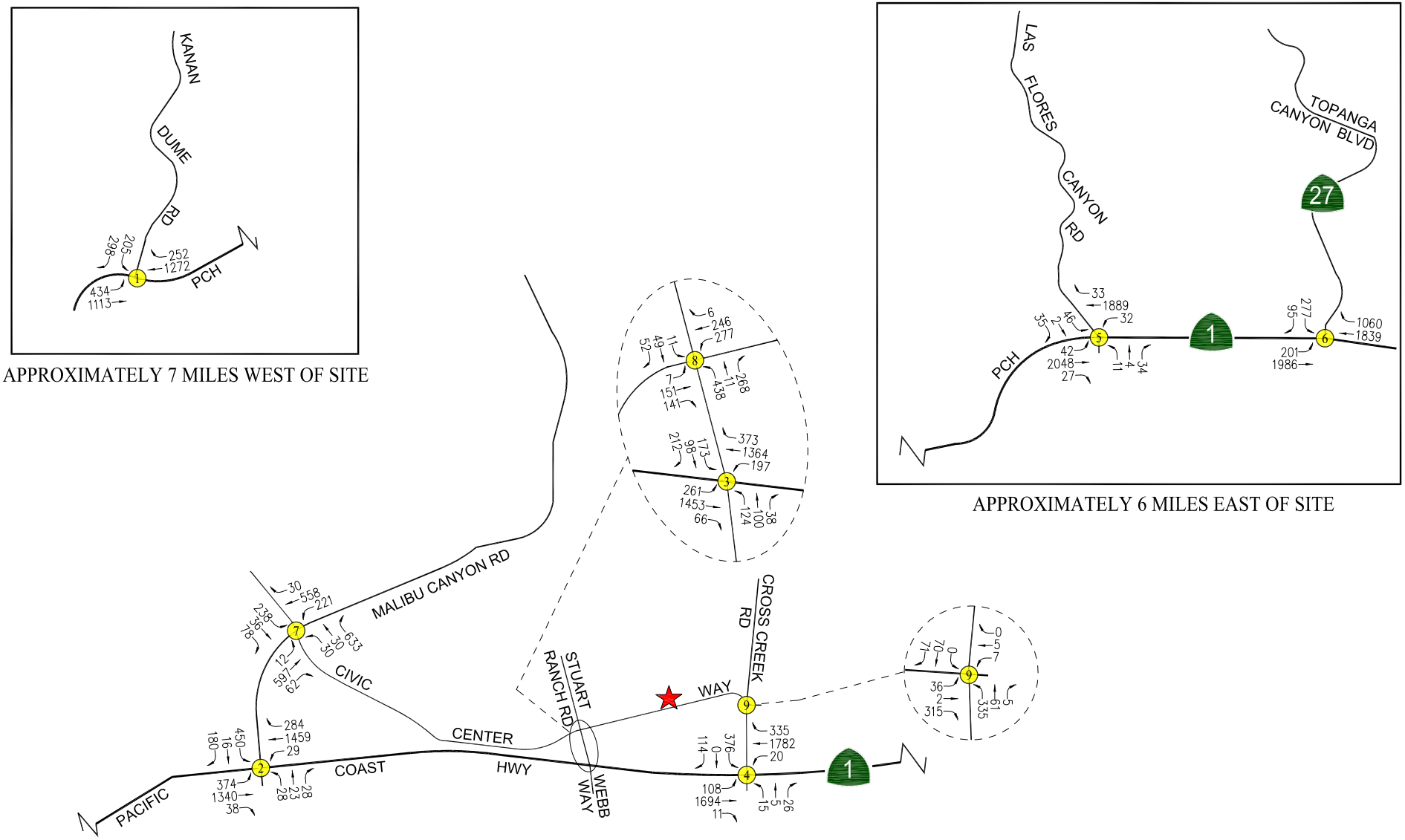

PROJECT SITE
XX STUDY INTERSECTION

N
NOT TO SCALE

FIGURE 9-17
FUTURE CUMULATIVE (SUMMERTIME) WITH PROJECT TRAFFIC VOLUMES

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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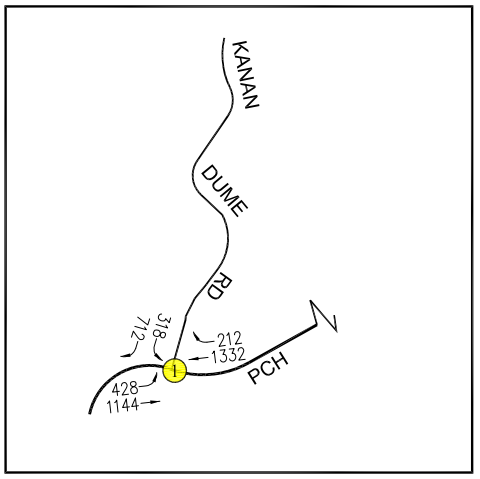
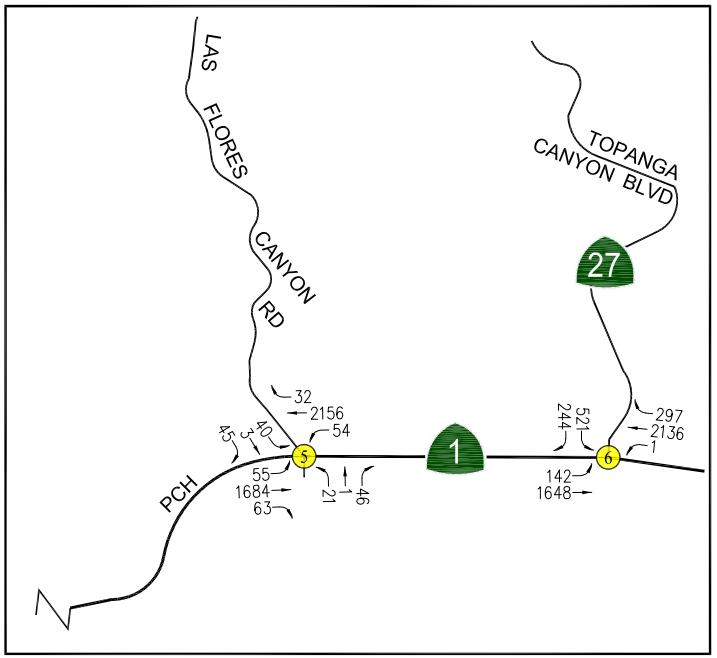
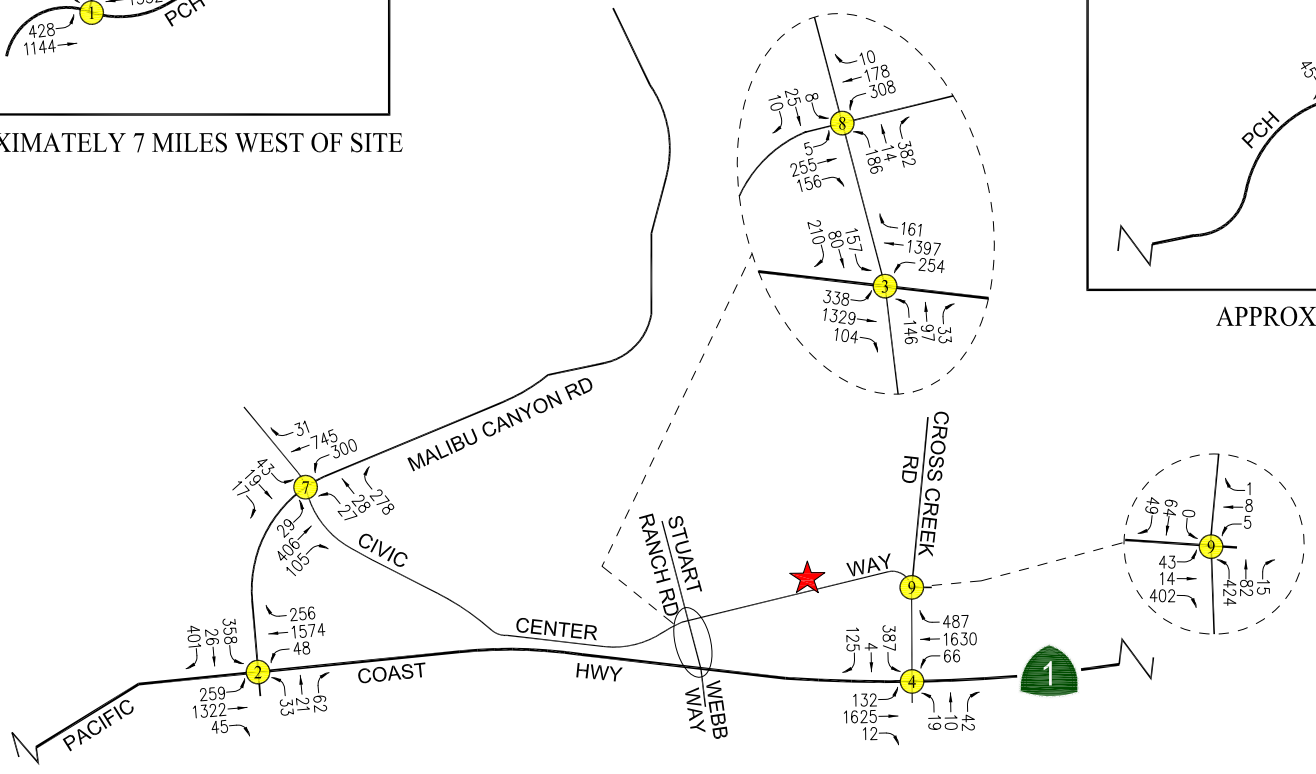


APPROXIMATELY 7 MILES WEST OF SITE



APPROXIMATELY 6 MILES EAST OF SITE



NOT TO SCALE

PROJECT SITE
XX STUDY INTERSECTION

FIGURE 9-18
FUTURE CUMULATIVE (SUMMERTIME) WITH PROJECT TRAFFIC VOLUMES

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at the Cross Creek Road / Civic Center Way intersection during the Saturday MD peak hour based on summertime traffic counts. The Kaku traffic study determined that the 2005 Analyzed Project would cause a significant traffic impact during the weekday PM peak hour based on school-time traffic counts (this addendum traffic study concludes that the impacts due the 2019 Project Modifications would be less than significant during this same time period using school-time traffic counts), Consistent with the findings of the Kaku traffic study for the 2005 Analyzed Project, it is concluded that no feasible mitigation measures are available. It is noted that the Kaku traffic study did not evaluate the impacts of the 2005 Analyzed Project based on summertime traffic counts. However, this addendum traffic study concludes that had the Kaku traffic study provided a traffic analysis based on summertime traffic counts, it would have concluded that both the 2005 Analyzed Project and 2008 Approved Project would result in relatively greater increases in motorist delay at the Cross Creek Road / Civic Center Way intersection during all peak hours as compared to the 2019 Project Modifications

10.0 MITIGATION MEASURES

As previously noted, the Kaku traffic study identified feasible traffic mitigation measures at three intersections adversely affected by the 2005 Analyzed Project: Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway, and Webb Way / Civic Center Way. Further, the Kaku traffic study determined that no feasible mitigation measures were available at two of the affected intersections: Malibu Canyon Road / Pacific Coast Highway and Cross Creek Road / Civic Center Way. It is noted that the Applicant for the 2019 Project Modifications has completed construction of the mitigation measures outlined in the Kaku traffic study at the three intersections: Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway, and Webb Way / Civic Center Way.

The significant pre-mitigation transportation impacts due to the 2019 Project Modifications are identified in Section 9.0 above in the opening year (2022) of the 2019 Project Modifications. The mitigation measures identified in the Kaku traffic study – which would effectively mitigate the significant traffic impacts of the 2019 Project Modifications at three of the affected intersections – are restated below.

10.1 Webb Way / Pacific Coast Highway

The Applicant of the 2019 Project Modifications has funded construction of the mitigation measure, which consists of the installation of a second left-turn lane on the eastbound Pacific Coast Highway approach to the Webb Way intersection. The eastbound Pacific Coast Highway approach would provide two left-turn lanes, three through lanes, and one right-turn lane.

10.2 Cross Creek Road / Pacific Coast Highway

The Applicant of the 2019 Project Modifications has funded the construction of the mitigation measure, which consists of the installation of a right-turn lane on the westbound Pacific Coast Highway approach to the Cross Creek Road intersection. The westbound Pacific Coast Highway approach would provide one left-turn lane, two through lanes, and one right-turn lane.

10.3 Stuart Ranch Road-Webb Way / Civic Center Way

Application of the City's threshold criteria indicates that the 2019 Project Modifications is not expected to create a significant transportation impact at the Stuart Ranch Road-Webb Way / Civic Center Way intersection during any of the analyzed periods. However, the Kaku traffic study indicated a significant impact, and therefore, the Applicant of the 2019 Project Modifications has funded the installation of a traffic signal. In addition, the Applicant of the 2019 Project Modifications has funded the construction of the following improvements and reconfiguration of the intersection: northbound Webb Way approach to provide one left-turn lane, one through lane, and one right-turn lane; southbound Stuart Rach Road approach to provide one shared left/through/right-turn lane; eastbound Civic Center Way approach to provide one left-turn lane and one shared through/right-turn lane; and westbound Civic Center Way approach to provide one left-turn lane and one shared through/right-turn lane.

10.4 Cross Creek Road / Civic Center Way

As with the 2005 Analyzed Project, *Table 9–2* indicates that the forecast traffic from the 2019 Project Modifications will result in a significant traffic impact at the intersection of Cross Creek Road and Civic Center Way. The Kaku traffic study determined that no feasible mitigation measures were available to mitigate the impacts of the 2005 Analyzed Project.

LLG reviewed potential modifications to the existing all-way stop intersection for purposes of mitigating the significant traffic impact, including modifying the northbound Cross Creek Road approach to provide a separate lane for left-turn traffic movements. It was found that the potential modifications would not reduce the calculated increase in motorist delay at the intersection due to the 2019 Project Modifications below levels of significance.

As requested by City staff, a review was conducted of the potential feasibility of a constructing a mini-roundabout at the existing Cross Creek Road / Civic Center Way intersection for purposes of mitigating the significant traffic impact due to traffic from the 2019 Project Modifications. The supplemental study of the potential mini-roundabout is provide in ***Appendix I***.

As detailed in ***Appendix I***, the supplemental study concludes that a mini-roundabout is not feasible due to the need to obtain and demolish an existing commercial building adjacent to the intersection, the potential need to obtain private right-of-way, impacts to existing street parking, removal of existing landscape and other hardscape improvements, and adverse impacts to pedestrian safety and mobility. The supplemental study also notes that the existing all-way stop operation of the Cross Creek Road/Civic Center Way intersection is calculated to operate at good to excellent Levels of Service (LOS C or better) during all peak hours under existing and future conditions, without and with the 2019 Project Modifications. Therefore, as with the 2005 Analyzed Project, it is concluded that no feasible traffic mitigation measures are available to mitigate the significant traffic impact at the Cross Creek Road / Civic Center Way intersection.

10.5 Assessment of Impacts After Mitigation

As shown in Column [5] of *Tables 9–1* and *9–2*, the mitigation measures would mitigate the effects of the forecast traffic from the 2019 Project Modifications at the Webb Way / Pacific Coast Highway and Cross Creek Road / Pacific Coast Highway intersections to less-than significant levels.

11.0 SIGNIFICANT TRANSPORTATION IMPACT COMPARISON

In conjunction with this addendum traffic study for the 2019 Project Modifications, a comparison is provided related to the potential traffic impacts to the 2019 Project Modifications as analyzed herein to the 2005 Analyzed Project as documented in the Kaku traffic study.

As previously discussed, the Kaku traffic study concluded the 2005 Analyzed Project would result in significant traffic impacts at five intersections based on its analysis of traffic operations using school-time traffic counts: Webb Way / Pacific Coast Highway, Cross Creek Road / Civic Center Way, Cross Creek Road / Civic Center Way, Webb Way / Civic Center Way, and Malibu Canyon Road / Pacific Coast Highway. This addendum traffic study concludes that based on school-time traffic counts, the 2019 Project Modifications is forecast to result in significant traffic impacts at two of the five study intersections significantly impacted by the 2005 Analyzed Project: Webb Way / Pacific Coast Highway and Cross Creek Road / Pacific Coast Highway. (As previously discussed, the 2019 Project Modification is determined to cause a significant traffic impact at the Cross Creek Road / Civic Center Way intersection based on summertime traffic counts during the Saturday MD peak hour, but is not impacted by the 2019 Project Modifications based on the analysis using school-time traffic counts). Traffic mitigation measures previously identified for the 2008 Approved Project (and funded for construction by the Applicant of the 2019 Project Modifications) would completely mitigate the significant traffic impacts at the two impacted intersections.

Table 11–1 provides a comparison of the significant transportation impacts identified in the Kaku traffic study for the 2005 Analyzed Project and the analysis of transportation impacts for the 2019 Project Modifications as provided in this addendum traffic study. As previously noted, the Kaku traffic study was prepared based on school-time traffic counts, and therefore, *Table 11–1* focuses to the analysis of traffic impacts of the 2019 Project Modifications as analyzed herein based on the school-time traffic counts.

The summary of the comparison of traffic impacts between the 2019 Project Modifications and 2005 Analyzed Project as provided in *Table 11–1* is provided below:

- Malibu Canyon Road / Pacific Coast Highway. As shown in *Table 11–1*, the 2019 Project Modifications is not expected to cause a significant traffic impact at this intersection. The 2005 Analyzed Project was identified to have a significant traffic impact at the Malibu Canyon Road / Pacific Coast Highway intersection during the weekday AM and PM peak hours. Further, as the Kaku traffic study determined that no feasible mitigation measures were available, a significant and unmitigated traffic impact was identified at this intersection related to the 2005 Analyzed Project.

Table 11-1
SUMMARY OF VOLUME TO CAPACITY RATIOS/DELAYS
AND LEVELS OF SERVICE
SCHOOL TIME WEEKDAY AM / PM AND WEEKEND MID-DAY PEAK HOURS
2019 PROJECT MODIFICATIONS VS. 2005 ANALYZED PROJECT TRAFFIC STUDY COMPARISON

			2019 PROJECT MODIFICATIONS - LLG TRAFFIC STUDY						2005 ANALYZED PROJECT - KAKU TRAFFIC STUDY [d]					
			FUTURE PRE-PROJECT		W/ PROJECT & MITIGATION		CHANGE V/C or Delay	SIGNIF. IMPACT	FUTURE PRE-PROJECT		W/ PROJECT & MITIGATION		CHANGE V/C or Delay	SIGNIF. IMPACT
NO.	INTERSECTION	PEAK HOUR	V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS	V/C or Delay	LOS		
1	Kanan Dume Road/	AM	0.510	A	0.513	A	0.003	NO	0.557	A	0.561	A	0.004	NO
	Pacific Coast Highway (SR-1)	PM	0.672	B	0.684	B	0.012	NO	0.632	B	0.646	B	0.014	NO
	[a]	SAT	0.885	D	0.893	D	0.008	NO	0.817	D	0.824	D	0.007	NO
2	Malibu Canyon Road/	AM	0.672	B	0.685	B	0.013	NO	0.841	D	0.864	D	0.023	YES
	Pacific Coast Highway (SR-1)	PM	0.732	C	0.747	C	0.015	NO	0.929	E	0.953	E	0.024	YES
	[a]	SAT	0.834	D	0.845	D	0.011	NO	0.815	D	0.827	D	0.012	NO
3	Webb Way/	AM	0.564	A	0.535	A	-0.029	NO	0.680	B	0.653	B	-0.027	NO
	Pacific Coast Highway (SR-1)	PM	0.761	C	0.716	C	-0.045	NO	0.951	E	0.902	E	-0.049	NO
	[a]	SAT	0.869	D	0.802	D	-0.067	NO	0.914	E	0.871	D	-0.043	NO
4	Cross Creek Road/	AM	0.606	B	0.561	A	-0.045	NO	0.774	C	0.716	C	-0.058	NO
	Pacific Coast Highway (SR-1)	PM	0.834	D	0.775	C	-0.059	NO	1.002	F	0.935	E	-0.067	NO
	[a]	SAT	0.904	E	0.815	D	-0.089	NO	1.069	F	0.988	E	-0.081	NO
5	Las Flores Canyon Road/	AM	0.684	B	0.689	B	0.005	NO	0.685	B	0.689	B	0.004	NO
	Pacific Coast Highway (SR-1)	PM	0.715	C	0.733	C	0.018	NO	0.873	D	0.890	D	0.017	NO
	[a]	SAT	0.786	C	0.805	D	0.019	NO	0.829	D	0.842	D	0.013	NO
6	Topanga Canyon Boulevard (SR-27)/	AM	0.977	E	0.979	E	0.002	NO	1.029	F	1.030	F	0.001	NO
	Pacific Coast Highway (SR-1)	PM	0.843	D	0.852	D	0.009	NO	0.942	E	0.948	E	0.006	NO
	[c]	SAT	0.822	D	0.832	D	0.010	NO	0.765	C	0.769	C	0.004	NO
7	Malibu Canyon Road/	AM	0.523	A	0.527	A	0.004	NO	0.748	C	0.755	C	0.007	NO
	Civic Center Way	PM	0.538	A	0.547	A	0.009	NO	0.874	D	0.886	D	0.012	NO
	[a]	SAT	0.432	A	0.445	A	0.013	NO	0.649	B	0.664	B	0.015	NO
8	Stuart Ranch Road - Webb Way/	AM	13.00	B	13.34	B	0.34	NO	0.730 [e]	C	0.559 [e]	A	-0.171	NO
	Civic Center Way	PM	22.40	C	25.09	D	2.69	NO	0.947 [e]	E	0.896 [e]	D	-0.051	NO
	[b]	SAT	14.60	B	16.25	C	1.65	NO	0.604 [e]	B	0.554 [e]	A	-0.050	NO
9	Cross Creek Road/	AM	8.85	A	9.39	A	0.34	NO	0.589 [e]	A	0.648 [e]	B	0.059	NO
	Civic Center Way	PM	10.72	B	12.63	B	2.69	NO	0.755 [e]	C	0.864 [e]	D	0.109	YES
	[b]	SAT	11.64	B	14.47	B	1.65	NO	0.660 [e]	B	0.761 [e]	C	0.101	NO

[a] City of Malibu signalized intersection impact threshold criteria is as follows:

Pre-Project v/c	LOS	Project Related Increase in v/c
0.71 - 0.80	C	0.04 or more
0.81 - 0.90	D	0.02 or more
0.91 or more	E / F	0.01 or more

[b] City of Malibu unsignalized intersection impact threshold criteria is as follows:

Final LOS
Degrades the LOS to LOS D or worse
or
Project Related Increase in Delay
Increases delay by 5 seconds or more

[c] County of Los Angeles signalized intersection impact threshold criteria is as follows:

Pre-Project v/c	LOS	Project Related Increase in v/c
0.71 to 0.80	C	0.04 or more
0.81 to 0.90	D	0.02 or more
0.91 or more	E / F	0.01 or more

[d] Source: *Traffic and Circulation Study for the Malibu La Paz Project,* Kaku Associates, April 2005.

[e] Intersection is analyzed as signalized to determine project impacts.

- Webb Way / Pacific Coast Highway. The 2019 Project Modifications is expected to cause a significant traffic impact at this intersection during the Saturday MD peak hour. However, with incorporation of the identified traffic mitigation measure, *Table 11–1* shows the resultant traffic impact due to the 2019 Project Modifications would be less than significant. The 2005 Analyzed Project was also identified to have a significant traffic impact at the Webb Way / Pacific Coast Highway intersection, however, the impacts were identified for the weekday AM and PM peak hours, as well as the Saturday MD peak hour. The Kaku traffic study determined that traffic impact due to the 2005 Analyzed Project would be completely mitigated by the identified mitigation measure.

- Cross Creek Road / Pacific Coast Highway. The 2019 Project Modifications is expected to a cause significant traffic impact at this intersection during the weekday PM peak hour and Saturday MD peak hour. However, with incorporation of the identified traffic mitigation measure, *Table 11–1* shows the resultant traffic impact due to the 2019 Project Modifications would be less than significant. The 2005 Analyzed Project was also identified to have a significant traffic impact at the Cross Creek Road / Pacific Coast Highway intersection, however, the impacts were identified for the weekday AM and PM peak hours, as well as the Saturday MD peak hour. The Kaku traffic study determined that traffic impact due to the 2005 Analyzed Project would be completely mitigated by the identified mitigation measure.

- Webb Way / Civic Center Way. As shown in *Table 11–1*, the 2019 Project Modifications is not expected to cause significant traffic impacts at this intersection. The 2005 Analyzed Project was identified to have a significant traffic impact at the Webb Way / Civic Center Way intersection during the weekday PM peak hour. The Kaku traffic study determined that the traffic impact due to the 2005 Analyzed Project would be completely mitigated by the identified mitigation measure.

- Cross Creek Road / Civic Center Way. As shown in *Table 11–1*, the 2019 Project Modifications is not expected to cause significant traffic impacts at this intersection based on the analysis conducted using school-time traffic counts. The 2005 Analyzed Project was identified to have a significant traffic impact at the Cross Creek Road / Civic Center Way intersection during the weekday PM peak hour. Further, as the Kaku traffic study determined that no feasible mitigation measures were available, a significant and unmitigated traffic impact was identified at this intersection related to the 2005 Analyzed Project. As previously discussed, the 2019 Project Modification is determined to cause a significant traffic impact at this intersection based on summertime traffic counts during the Saturday midday peak hour. The Kaku traffic study did not provide a traffic analysis based on summertime traffic counts, so no direct comparison is provided. See Section 10.5 above and the analysis provided in *Appendix H* for further discussion.

As also previously noted, the 2008 Approved Project provides a slightly modified development program as compared to the 2005 Analyzed Project. The Kaku traffic study did not directly evaluate the potential traffic impacts of the 2008 Approved Project. However, because of the relatively minor changes in trip generation potential between the 2005 Analyzed Project and 2008 Approved Project, the relative traffic impacts of the 2008 Approved Project would be the same as the 2005 Analyzed Project. Accordingly, the 2019 Project Modifications would result in reduced traffic impacts as compared to the 2005 Analyzed Project and the 2008 Approved Project based on the expected reduced number of intersections significantly impacted by the 2019 Project Modifications.

12.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the California State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2010 Congestion Management Program for Los Angeles County, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2010 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, 2010.

According to Section D.9.1 (Appendix D, page D-6) of the 2010 CMP manual, the criteria for determining a significant transportation impact is listed below:

> "A significant transportation impact occurs when the proposed Project increases traffic demand on a CMP facility by 2% of capacity (V/C $\geq$ 0.02), causing or worsening LOS F (V/C > 1.00)."

The CMP impact criteria apply for analysis of both intersection and freeway monitoring locations.

12.1 Intersections

The following CMP intersection monitoring locations in the 2019 Project Modifications vicinity have been identified:

CMP Station	Intersection
No. 97	Topanga Canyon Boulevard / Pacific Coast Highway (Study Int. 6)
No. 107	Kanan Dume Road / Pacific Coast Highway (Study Int. 1)
No. 108	Las Flores Canyon Road / Pacific Coast Highway (Study Int. 5)
No. 109	Malibu Canyon Road / Pacific Coast Highway (Study Int. 2)

The CMP TIA guidelines require that intersection monitoring locations must be examined if a development project will add 50 or more trips during either the AM or PM weekday peak hours. As shown in *Figures 7–3*, *7–4*, and *7–5*, the weekday AM and PM, and Saturday MD forecast trips due to the 2019 Project Modifications anticipated at each of the four locations are as follows:

- No. 97: Topanga Canyon Boulevard / Pacific Coast Highway (Study Int. No. 6)
  AM Peak Hour: 31 trips; PM peak hour: 64 trips; SAT peak hour: 65 trips

- No. 107: Kanan Dume Road / Pacific Coast Highway (Study Int. No. 1)
  AM Peak Hour: 31 trips; PM peak hour: 64 trips; SAT peak hour: 65 trips

- No. 108: Las Flores Canyon Road / Pacific Coast Highway (Study Int. No. 5)
  AM Peak Hour: 47 trips; PM peak hour: 95 trips; SAT peak hour: 96 trips

- No. 109: Malibu Canyon Road / Pacific Coast Highway (Study Int. No. 2)
  AM Peak Hour: 53 trips; PM peak hour: 77 trips; SAT peak hour: 78 trips

Per the CMP guidelines indicate additional review is required of the potential impacts at the intersection monitoring location where the 2019 Project Modifications will add 50 or more trips during either the AM or PM weekday peak hours. The criteria indicates that a significant impact occurs when the traffic from the 2019 Project Modifications increases demand at a CMP arterial; monitoring location by 2 percent of capacity (i.e., *v/c* increase > or equal to 0.02), causing the location to operate at LOS F (v/c >1.00). Under the CMP TIA Criteria, a project would not have a significant impact if the analyzed monitoring location is operating at LOS E or better after the addition of traffic from the 2019 Project Modifications.

The CMP monitoring intersections were evaluated using the previously described ICU method that determines the *v/c* ratios on the critical lane basis. As shown on *Tables 9–1* and *9–2*, the CMP monitoring intersections are forecast to operate at the following LOS during the analyzed peak hours with the addition of traffic from the 2019 Project Modifications:

- No. 97: Topanga Canyon Boulevard / Pacific Coast Highway (Study Int. No. 6)
  School Time: AM Peak Hour: LOS E; PM peak hour: LOS D; SAT peak hour: LOS D
  Summertime: AM Peak Hour: LOS E; PM peak hour: LOS D; SAT peak hour: LOS D

- No. 107: Kanan Dume Road / Pacific Coast Highway (Study Int. No. 1)
  School Time: AM Peak Hour: LOS A; PM peak hour: LOS B; SAT peak hour: LOS D
  Summertime: AM Peak Hour: LOS A; PM peak hour: LOS C; SAT peak hour: LOS E

- No. 108: Las Flores Canyon Road / Pacific Coast Highway (Study Int. No. 5)
  School Time: AM Peak Hour: LOS B; PM peak hour: LOS C; SAT peak hour: LOS D
  Summertime: AM Peak Hour: LOS B; PM peak hour: LOS C; SAT peak hour: LOS D

- No. 109: Malibu Canyon Road / Pacific Coast Highway (Study Int. No. 2)
  School Time: AM Peak Hour: LOS B; PM peak hour: LOS C; SAT peak hour: LOS D
  Summertime: AM Peak Hour: LOS B; PM peak hour: LOS D; SAT peak hour: LOS D

The four monitoring locations are forecasted to operate at LOS E or better during the analyzed peak hours. Therefore, no CMP traffic impacts due to the 2019 Project Modifications are anticipated at the CMP monitoring intersections.

12.2 Freeways

No CMP freeway monitoring locations have been identified within the Project site vicinity. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

12.3 Transit Impact Review

As required by the *2010 Congestion Management Program for Los Angeles County*, a review has been made of the potential impacts of the Project on transit service. As discussed in Subsection 4.4 herein, existing transit service is provided in the vicinity of the Project site.

The Project trip generation, as shown in *Table 7–1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed 2019 Project Modifications is forecast to generate demand for 6 transit trips during the weekday AM peak hour, 13 transit trips during the weekday PM peak hour, and 13 transit trips during the Saturday MD peak hour. Therefore, the calculations are as follows:

- Weekday AM Peak Hour = $126 \times 1.4 \times 0.035 = 6$ Transit Trips
- Weekday PM Peak Hour = $258 \times 1.4 \times 0.035 = 13$ Transit Trips
- Saturday MD Peak Hour = $260 \times 1.4 \times 0.035 = 13$ Transit Trips

As shown in *Table 4–1*, one bus transit line is provided in close proximity the Project site. As outlined in *Table 4–1*, under the "No. of Buses During Peak Hour" column, the public transit line provides services for an average of (i.e., average of the directional number of buses during the peak hours) generally 13 buses during the weekday AM peak hour and roughly 11 buses during the PM peak hour. On a typical Saturday, this transit line provides services for an average of five buses during the Saturday MD peak hour. Therefore, based on the above calculated AM and PM peak hour trips, this would correspond to a nominal number of additional transit trips per bus generated by the 2019 Project Modifications. It is anticipated that the existing local transit service will adequately accommodate the increase of transit trips generated by the 2019 Project Modifications.

13.0 CONCLUSIONS

This addendum traffic analysis has been conducted to identify and compare the potential traffic impacts of a proposed 2019 Project Modifications to the 2005 Analyzed Project and the 2008 Approved Project located at 23465 Civic Center Way in the City of Malibu.

The 2005 Analyzed Project evaluated in the Kaku traffic study consisted of 53,825 square feet of office floor area, 67,110 square feet of retail floor area, and 10,000 square feet of restaurant floor area. The 2008 Approved Project consists of 62,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area, which represents a slight modification to the development description evaluated in the Kaku traffic study.

Since the Applicant seeks to develop the 2008 Approved Project with the 2019 Project Modifications, there is no change in the 2008 Approved Project-related traffic as a result of the 2019 Project Modifications; accordingly, this addendum traffic study is provided for informational purposes

While the Applicant seeks to develop 42,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area, to provide for the future possibility of reducing retail square footage for additional restaurant square footage, this addendum traffic analysis evaluates the potential traffic impacts of 62,556 square feet of office floor area (inclusive of the 20,000 square feet of municipal use), 49,502 square feet of retail floor area, and 20,000 square feet of restaurant floor area. As with the 2008 Approved Project and 2019 Project Modifications, the retail and restaurant uses total 69,502 square feet of shopping center floor area. Under the ITE *Trip Generation Manual*, retail and restaurant uses are combined for trip generation purposes when evaluating shopping centers. Accordingly, for purposes of this addendum traffic study, the analysis of the 2019 Project Modifications assumes 62,556 square feet of office floor area and 69,502 square feet of shopping center floor area (either the square footage the Applicant currently seeks to develop of 59,502 square feet of retail floor area and 10,000 square feet of restaurant floor area, or the future possibility of 49,502 square feet of retail floor area and 20,000 square feet of restaurant floor area).

As noted above, the Kaku traffic study concluded the 2005 Analyzed Project would result in significant traffic impacts at five intersections: Webb Way / Pacific Coast Highway, Cross Creek Road / Civic Center Way, Cross Creek Road / Civic Center Way, Webb Way / Civic Center Way, and Malibu Canyon Road / Pacific Coast Highway. This addendum traffic study concludes that the 2019 Project Modifications is forecast to result in significant traffic impacts at three of the five study intersections significantly impacted by the 2005 Analyzed Project: Webb Way / Pacific Coast Highway, Cross Creek Road / Pacific Coast Highway and Cross Creek Road / Civic Center Way. Traffic mitigation measures previously identified for the 2008 Approved Project (and funded for construction by the Applicant of the 2019 Project Modifications) would completely mitigate the significant traffic impacts at two of the intersections as described below:

- Webb Way / Pacific Coast Highway. As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at this intersection. A traffic mitigation measure previously identified in the Kaku traffic study – and funded for construction by the Applicant of the 2019 Project Modifications – was determined to completely mitigate the significant traffic impact due to the 2019 Project Modifications.

- Cross Creek Road / Pacific Coast Highway. As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at this intersection. A traffic mitigation measure previously identified in the Kaku traffic study – and funded for construction by the Applicant of the 2019 Project Modifications – was determined to completely mitigate the significant traffic impact due to the 2019 Project Modifications.

As with the 2005 Analyzed Project, the 2019 Project Modifications is expected to cause a significant traffic impact at the Cross Creek Road / Civic Center Way intersection during the Saturday MD peak hour based on summertime traffic counts. The Kaku traffic study determined that the 2005 Analyzed Project would cause a significant traffic impact during the weekday PM peak hour based on school-time traffic counts (this addendum traffic study concludes that the impacts due the 2019 Project Modifications would be less than significant during this same time period using school-time traffic counts). Consistent with the findings of the Kaku traffic study for the 2005 Analyzed Project, it is concluded that no feasible mitigation measures are available. It is noted that the Kaku traffic study did not evaluate the impacts of the 2005 Analyzed Project based on summertime traffic counts. However, this addendum traffic study concludes that had the Kaku traffic study provided a traffic analysis based on summertime traffic counts, it would have concluded that both the 2005 Analyzed Project and 2008 Approved Project would result in relatively greater increases in motorist delay at the Cross Creek Road / Civic Center Way intersection during all peak hours as compared to the 2019 Project Modifications.

At the Webb Way / Civic Center Way intersection, the 2019 Project Modifications is not expected to cause a significant traffic impact at this intersection. However, the 2005 Analyzed Project was identified to have a significant traffic impact at the Webb Way / Civic Center Way intersection. The traffic mitigation measure identified in the Kaku traffic study for this intersection has been funded for construction by the Applicant of the 2019 Project Modifications.

At the Malibu Canyon Road / Pacific Coast Highway intersection, the 2019 Project Modifications is not expected to cause a significant traffic impact at this intersection. The 2005 Analyzed Project was identified to have a significant traffic impact at the intersection, however, the Kaku traffic study determined that no feasible mitigation measures were available.

In summary, it is concluded in this addendum traffic study that the 2019 Project Modifications would not cause any new traffic impacts on the local street system that were not previously identified for the 2005 Analyzed Project in the Kaku traffic study. Further, the 2019 Project Modifications would result in reduced traffic impacts as compared to the 2005 Analyzed Project based on the reduced number of intersections significantly impacted by the 2019 Project Modifications. This addendum traffic study concludes that the 2019 Project Modifications will cause a significant traffic impact at the Cross Creek Road / Civic Center Way intersection during the Saturday MD peak hour (even though the intersection is expected to operate at a good LOS C during the affected hour), for which there is no feasible mitigation. However, it is also concluded that had the Kaku traffic study provided a traffic analysis based on summertime traffic counts, it would have concluded that both the 2005 Analyzed Project and 2008 Approved Project would result in relatively greater increases in motorist delay at the intersection during the Saturday MD peak hour as compared to the 2019 Project Modifications.

As noted above, the 2008 Approved Project provides a slightly modified development program as compared to the 2005 Analyzed Project. The Kaku traffic study did not directly evaluate the potential traffic impacts of the 2008 Approved Project. However, because of the relatively minor changes in trip generation potential between the 2005 Analyzed Project and 2008 Approved Project, the relative traffic impacts of the 2008 Approved Project would be the same as the 2005 Analyzed Project. Accordingly, the 2019 Project Modifications would result in reduced traffic impacts as compared to the 2005 Analyzed Project and the 2008 Approved Project based on the expected reduced number of intersections significantly impacted by the 2019 Project Modifications.

APPENDIX A

MANUAL TRAFFIC COUNT DATA

Prepared by National Data & Surveying Services

Kanan Dume Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-001
City: Malibu

Day: Tuesday
Date: 04/10/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Kanan Dume Rd)

AM	325	0	262	13	261	AM
NOON	0	0	0	0	0	NOON
PM	264	0	137	4	492	PM
	1.5	0	1.5	0		

EASTBOUND (Pacific Coast Hwy)

AM	NOON	PM	
1048	0	1357	
0	0	0	0
174	0	284	1
872	0	863	2
0	0	0	0
AM	NOON	PM	

WESTBOUND (Pacific Coast Hwy)

PM	NOON	AM	
204	0	74	1
1093	0	723	2
0	0	0	0
0	0	0	0
1000	0	1134	
PM	NOON	AM	

NORTHBOUND (Kanan Dume Rd)

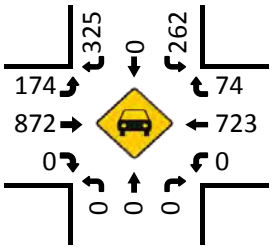
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
	0	0	0	0		

CONTROL

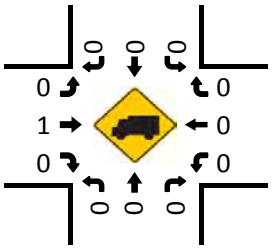
Signalized

TEV	2443 AM	0 NOON	2849 PM
PHF	0.88		0.98

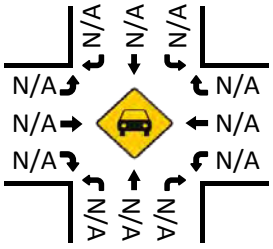
Total Vehicles (AM)



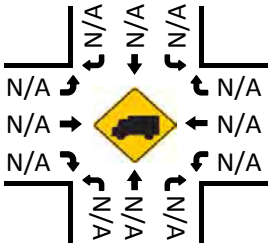
Bikes (AM)



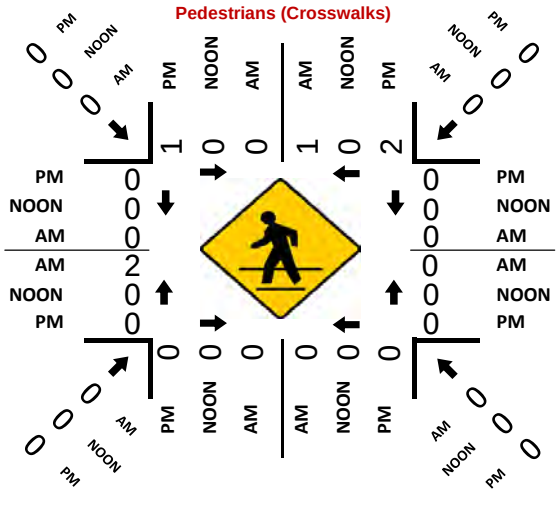
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
1
0
0
1
0
2
0
0
0
0
0
0

National Data & Surveying Services Intersection Turning Movement Count

Location: Kanan Dume Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-001
Date: 4/10/2018

Total

NS/EW Streets:	Kanan Dume Rd				Kanan Dume Rd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	53	0	71	0	26	176	0	0	0	142	20	0	488
7:15 AM	0	0	0	0	55	0	81	4	38	201	0	0	0	148	26	0	553
7:30 AM	0	0	0	0	76	0	103	4	43	213	0	0	0	244	15	0	698
7:45 AM	0	0	0	0	66	0	66	4	53	259	0	0	0	161	15	0	624
8:00 AM	0	0	0	0	65	0	75	1	40	199	0	0	0	170	18	0	568
8:15 AM	0	0	0	0	65	0	43	1	54	189	0	0	0	136	20	0	508
8:30 AM	0	0	0	0	73	0	88	0	54	224	0	0	0	120	24	0	583
8:45 AM	0	0	0	0	56	0	81	1	48	236	0	0	0	165	29	0	616
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	509	0	608	15	356	1697	0	0	0	1286	167	0	4638
APPROACH %'s :					44.96%	0.00%	53.71%	1.33%	17.34%	82.66%	0.00%	0.00%	0.00%	88.51%	11.49%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	262	0	325	13	174	872	0	0	0	723	74	0	2443
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.862	0.000	0.789	0.813	0.821	0.842	0.000	0.000	0.000	0.741	0.712	0.000	0.875
					0.820				0.838				0.769				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	33	0	59	0	73	218	0	0	0	260	55	0	698
4:15 PM	0	0	0	0	35	0	59	2	72	227	0	0	0	286	44	0	725
4:30 PM	0	0	0	0	35	0	81	0	68	210	0	0	0	257	56	0	707
4:45 PM	0	0	0	0	34	0	65	2	71	208	0	0	0	290	49	0	719
5:00 PM	0	0	0	0	36	0	61	1	85	206	0	0	0	254	46	0	689
5:15 PM	0	0	0	0	47	0	68	2	84	191	0	0	0	265	68	0	725
5:30 PM	0	0	0	0	39	0	53	1	71	228	0	0	0	242	67	0	701
5:45 PM	0	0	0	0	33	0	55	0	72	236	0	0	0	234	45	0	675
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	292	0	501	8	596	1724	0	0	0	2088	430	0	5639
APPROACH %'s :					36.45%	0.00%	62.55%	1.00%	25.69%	74.31%	0.00%	0.00%	0.00%	82.92%	17.08%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	137	0	264	4	284	863	0	0	0	1093	204	0	2849
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.979	0.000	0.815	0.500	0.973	0.950	0.000	0.000	0.000	0.942	0.911	0.000	0.982
					0.873				0.959				0.956				

Prepared by National Data & Surveying Services

Kanan Dume Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-001
City: Malibu

Day: Saturday
Date: 04/14/2018

PEAK HOURS

AM	NONE
NOON	01:00 PM - 02:00 PM
PM	NONE

COUNT PERIODS

AM	NONE
NOON	12:00 PM - 02:00 PM
PM	NONE

Kanan Dume Rd — SOUTHBOUND

	Left	Thru	Right	U-Turn	
AM	0	0	0	0	AM
NOON	650	0	234	4	NOON
PM	0	0	0	0	PM

Pacific Coast Hwy — EASTBOUND

	Left	Thru	Right	
AM	0	0	0	0
NOON	0	327	0	1
PM	0	959	0	2
	0	0	0	0

AM	NOON	PM
0	1839	0

Pacific Coast Hwy — WESTBOUND

	Left	Thru	Right	
PM	0	0	0	0
NOON	0	1189	0	2
AM	0	190	0	1
	0	0	0	0

PM	NOON	AM
0	1193	0

Kanan Dume Rd — NORTHBOUND

	Left	Thru	Right	U-Turn	
PM	0	0	0	0	PM
NOON	0	0	0	0	NOON
AM	0	0	0	0	AM

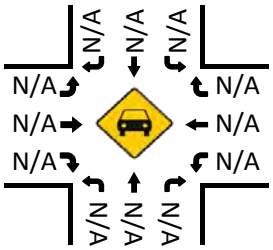
CONTROL: Signalized

	AM	NOON	PM
TEV	0	3553	0
PHF		0.96	

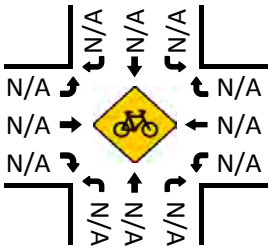
1.5 0 1.5 0

0 0 0 0

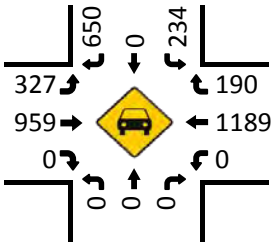
Total Vehicles (AM)



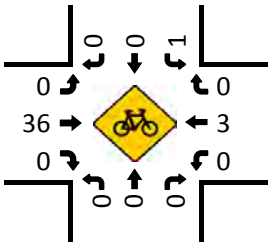
Bikes (AM)



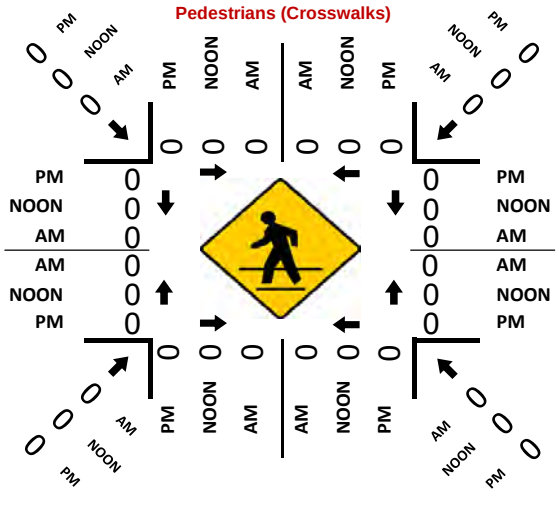
Total Vehicles (NOON)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
0
0
0
0
0

National Data & Surveying Services Intersection Turning Movement Count

Location: Kanan Dume Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-001
Date: 2018-04-14

Total

NS/EW Streets:	Kanan Dume Rd				Kanan Dume Rd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	54	0	156	4	61	241	0	0	0	284	39	0	839
12:15 PM	0	0	0	0	61	0	157	2	81	243	0	0	0	276	44	0	864
12:30 PM	0	0	0	0	53	0	154	2	77	249	0	0	0	269	45	0	849
12:45 PM	0	0	0	0	54	0	170	3	91	265	0	0	0	248	43	0	874
1:00 PM	0	0	0	0	46	0	134	2	67	225	0	0	0	340	43	0	857
1:15 PM	0	0	0	0	65	0	199	0	81	252	0	0	0	277	48	0	922
1:30 PM	0	0	0	0	64	0	156	1	82	223	0	0	0	284	45	0	855
1:45 PM	0	0	0	0	59	0	161	1	97	259	0	0	0	288	54	0	919
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	456	0	1287	15	637	1957	0	0	0	2266	361	0	6979
APPROACH %'s :					25.94%	0.00%	73.21%	0.85%	24.56%	75.44%	0.00%	0.00%	0.00%	86.26%	13.74%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	234	0	650	4	327	959	0	0	0	1189	190	0	3553
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.900	0.000	0.817	0.500	0.843	0.926	0.000	0.000	0.000	0.874	0.880	0.000	0.963
					0.841				0.903				0.900				

Prepared by National Data & Surveying Services

Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-002
City: Malibu

Day: Tuesday
Date: 04/10/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Malibu Canyon Rd/Winter Mesa Dr — SOUTHBOUND

AM	236	16	762	0	499	AM
NOON	0	0	0	0	0	NOON
PM	165	17	375	0	593	PM
	1	0.5	1.5	0		

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
955	0	1334	
0	0	0	0
207	0	310	2
921	0	1085	2
18	0	23	0
AM	NOON	PM	

WESTBOUND — Pacific Coast Hwy

PM	NOON	AM	
270	0	282	1
1160	0	700	2
36	0	18	1
0	0	0	0
1485	0	1707	
PM	NOON	AM	

CONTROL

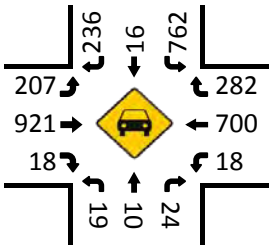
Signalized

TEV	3213	0	3488
	AM	NOON	PM
PHF	0.98		0.97

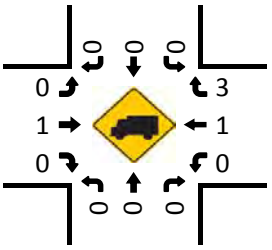
Malibu Canyon Rd/Winter Mesa Dr — NORTHBOUND

PM	76	0	9	13	25	PM
NOON	0	0	0	0	0	NOON
AM	52	0	19	10	24	AM
		0	0	2	0	

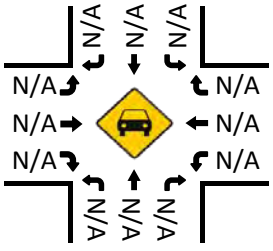
Total Vehicles (AM)



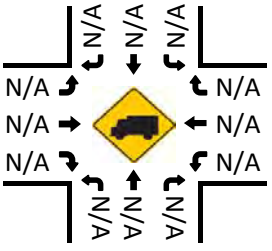
Bikes (AM)



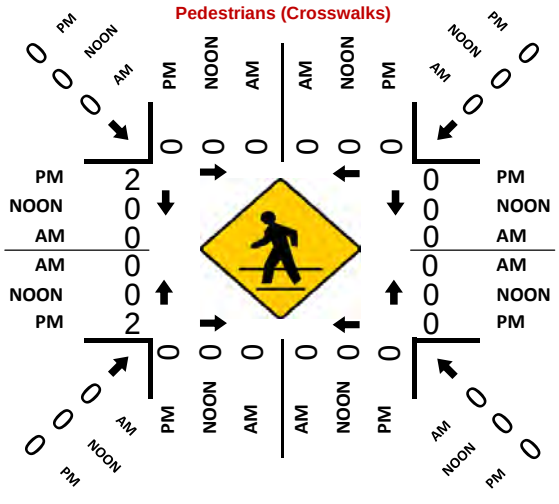
Total Vehicles (Noon)



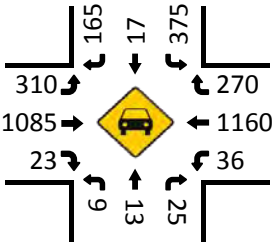
Bikes (NOON)



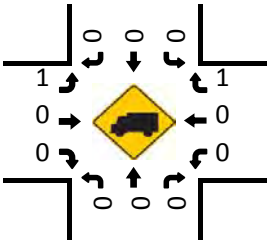
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-002
Date: 4/10/2018

Total

NS/EW Streets:	Malibu Canyon Rd/Winter Mesa Dr				Malibu Canyon Rd/Winter Mesa Dr				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1.5	0.5	1	0	2	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	2	2	0	203	3	66	0	54	264	6	0	5	118	23	0	748
7:15 AM	0	4	0	0	207	6	63	0	39	226	5	0	0	177	35	0	762
7:30 AM	1	6	7	0	177	5	46	0	63	213	3	0	6	219	44	0	790
7:45 AM	2	5	4	0	201	4	61	0	51	204	3	0	3	163	47	0	748
8:00 AM	9	2	6	0	178	2	48	0	47	242	2	0	6	200	61	0	803
8:15 AM	6	5	8	0	195	7	71	0	57	220	6	0	1	144	62	0	782
8:30 AM	0	1	3	0	211	3	56	0	65	218	7	0	4	159	81	0	808
8:45 AM	4	2	7	0	178	4	61	0	38	241	3	0	7	197	78	0	820
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	24	27	37	0	1550	34	472	0	414	1828	35	0	32	1377	431	0	6261
APPROACH %'s :	27.27%	30.68%	42.05%	0.00%	75.39%	1.65%	22.96%	0.00%	18.18%	80.28%	1.54%	0.00%	1.74%	74.84%	23.42%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	19	10	24	0	762	16	236	0	207	921	18	0	18	700	282	0	3213
PEAK HR FACTOR :	0.528	0.500	0.750	0.000	0.903	0.571	0.831	0.000	0.796	0.951	0.643	0.000	0.643	0.875	0.870	0.000	0.980
	0.697				0.929				0.985				0.887				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1.5	0.5	1	0	2	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	6	10	0	75	4	46	0	74	277	8	0	12	290	64	0	868
4:15 PM	1	1	3	0	62	6	33	0	88	316	10	0	7	291	57	0	875
4:30 PM	5	3	7	0	118	4	31	0	88	250	4	0	6	262	70	0	848
4:45 PM	1	3	5	0	120	3	55	0	60	242	1	0	11	317	79	0	897
5:00 PM	5	3	6	0	93	4	39	0	93	259	4	0	4	287	67	0	864
5:15 PM	3	1	2	0	121	2	37	0	55	212	3	0	5	251	69	0	761
5:30 PM	8	2	7	0	110	1	41	0	59	252	6	0	5	291	86	0	868
5:45 PM	9	2	9	0	137	6	28	0	55	220	7	0	7	236	81	0	797
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	21	49	0	836	30	310	0	572	2028	43	0	57	2225	573	0	6778
APPROACH %'s :	32.69%	20.19%	47.12%	0.00%	71.09%	2.55%	26.36%	0.00%	21.64%	76.73%	1.63%	0.00%	2.00%	77.93%	20.07%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	9	13	25	0	375	17	165	0	310	1085	23	0	36	1160	270	0	3488
PEAK HR FACTOR :	0.450	0.542	0.625	0.000	0.781	0.708	0.750	0.000	0.881	0.858	0.575	0.000	0.750	0.915	0.854	0.000	0.972
	0.653				0.782				0.856				0.900				

Prepared by National Data & Surveying Services

Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-002
City: Malibu

Day: Saturday
Date: 04/14/2018

Malibu Canyon Rd/Winter Mesa Dr

SOUTHBOUND

PEAK HOURS		COUNT PERIODS
AM	NONE	AM
NOON	12:30 PM - 01:30 PM	NOON
PM	NONE	PM

AM	0	0	0	0	0	AM
NOON	381	40	490	0	378	NOON
PM	0	0	0	0	0	PM
	1	0.5	1.5	0		

EASTBOUND

AM	NOON	PM	
0	1731	0	
0	1	0	0
0	208	0	2
0	1228	0	2
0	29	0	0
AM	NOON	PM	

WESTBOUND

PM	NOON	AM	
0	146	0	1
0	1340	0	2
0	39	0	1
0	0	0	0
0	1781	0	
PM	NOON	AM	

CONTROL

Signalized

	AM	NOON	PM
TEV	0	3998	0
PHF		0.99	

	0	0	2	0		
PM	0	0	0	0	0	PM
NOON	108	0	9	24	63	NOON
AM	0	0	0	0	0	AM

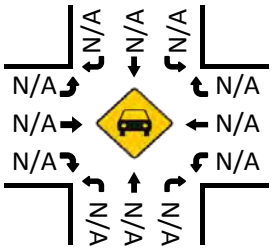
NORTHBOUND

Malibu Canyon Rd/Winter Mesa Dr

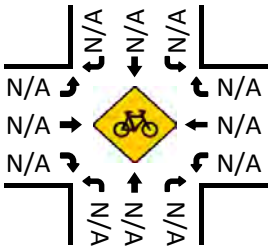
Pacific Coast Hwy (EASTBOUND)

Pacific Coast Hwy (WESTBOUND)

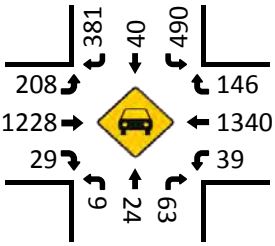
Total Vehicles (AM)



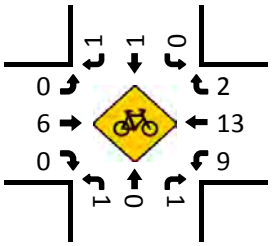
Bikes (AM)



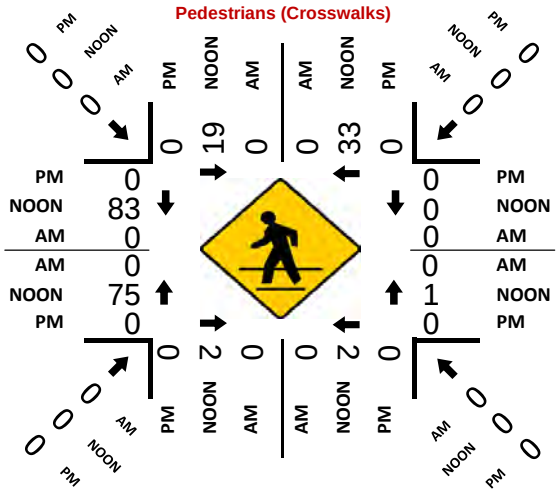
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)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61
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83
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75
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0

National Data & Surveying Services Intersection Turning Movement Count

Location: Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-002
Date: 2018-04-14

Total

NS/EW Streets:	Malibu Canyon Rd/Winter Mesa Dr				Malibu Canyon Rd/Winter Mesa Dr				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1.5	0.5	1	0	2	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	2	5	12	0	113	4	69	0	45	251	5	1	9	346	47	0	909
12:15 PM	0	5	14	0	122	5	100	0	50	316	12	2	6	291	26	0	949
12:30 PM	1	6	16	0	142	11	96	0	51	323	4	0	8	323	33	0	1014
12:45 PM	1	4	17	0	112	5	84	0	49	304	9	0	7	378	37	0	1007
1:00 PM	4	7	15	0	120	16	101	0	56	284	5	0	16	305	34	0	963
1:15 PM	3	7	15	0	116	8	100	0	52	317	11	1	8	334	42	0	1014
1:30 PM	5	6	15	0	113	11	96	0	82	291	5	3	12	312	49	0	1000
1:45 PM	2	4	13	0	97	15	107	0	62	278	6	0	3	321	47	0	955
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	44	117	0	935	75	753	0	447	2364	57	7	69	2610	315	0	7811
APPROACH %'s :	10.06%	24.58%	65.36%	0.00%	53.03%	4.25%	42.71%	0.00%	15.55%	82.23%	1.98%	0.24%	2.30%	87.17%	10.52%	0.00%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	9	24	63	0	490	40	381	0	208	1228	29	1	39	1340	146	0	3998
PEAK HR FACTOR :	0.563	0.857	0.926	0.000	0.863	0.625	0.943	0.000	0.929	0.950	0.659	0.250	0.609	0.886	0.869	0.000	0.986
	0.923				0.915				0.962				0.903				

Prepared by National Data & Surveying Services

Webb Way & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05340-003
City: Malibu

Day: Tuesday
Date: 05/22/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Webb Way

AM	40	60	75	0	446	AM
NOON	0	0	0	0	0	NOON
PM	71	56	118	0	465	PM

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
910	0	1510	
12	0	27	0
138	0	51	1
1370	0	1303	3
77	0	55	1

WESTBOUND — Pacific Coast Hwy

PM	NOON	AM	
344	0	262	1
1305	0	804	2
145	0	126	1
24	0	11	0
1462	0	1470	

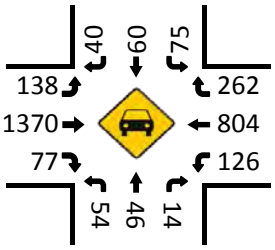
NORTHBOUND — Webb Way

PM	257	1	107	70	17	PM
NOON	0	0	0	0	0	NOON
AM	263	0	54	46	14	AM

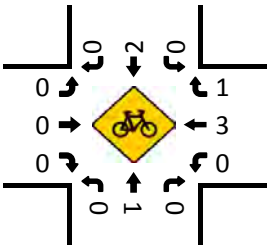
	SOUTHBOUND	EASTBOUND	WESTBOUND	NORTHBOUND
	1	0.5	1.5	0
	0	1	0.5	0.5

CONTROL			
Signalized			
TEV	3089	0	3694
	AM	NOON	PM
PHF	0.95		0.98

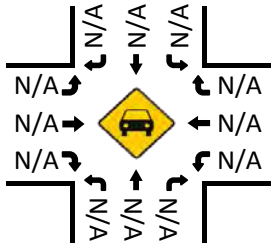
Total Vehicles (AM)



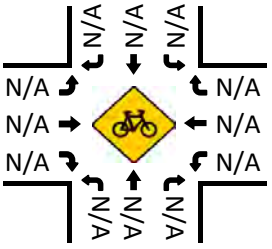
Bikes (AM)



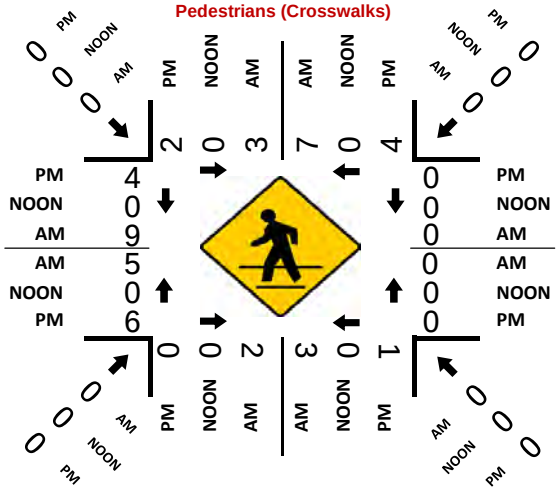
Total Vehicles (Noon)



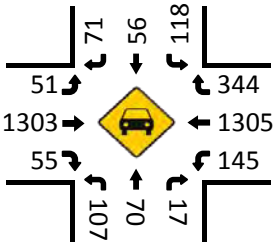
Bikes (NOON)



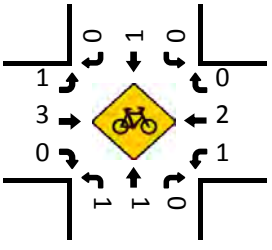
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Webb Way & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05340-003
Date: 5/22/2018

Total

NS/EW Streets:	Webb Way				Webb Way				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	1	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	5	2	0	26	16	12	0	16	435	25	1	38	185	47	3	816
7:15 AM	10	10	2	0	18	4	4	0	25	350	20	1	24	195	37	2	702
7:30 AM	13	13	0	0	12	6	4	0	45	301	21	2	19	170	56	1	663
7:45 AM	10	12	1	0	15	11	17	0	24	319	15	1	21	218	55	3	722
8:00 AM	12	7	3	0	10	21	8	0	32	345	24	2	29	181	49	2	725
8:15 AM	19	14	4	0	8	7	13	0	42	358	13	2	31	212	85	1	809
8:30 AM	9	13	4	0	40	15	8	0	29	321	16	3	39	237	73	2	809
8:45 AM	14	12	3	0	17	17	11	0	35	346	24	5	27	174	55	6	746
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	92	86	19	0	146	97	77	0	248	2775	158	17	228	1572	457	20	5992
APPROACH %'s :	46.70%	43.65%	9.64%	0.00%	45.63%	30.31%	24.06%	0.00%	7.75%	86.77%	4.94%	0.53%	10.01%	69.04%	20.07%	0.88%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	54	46	14	0	75	60	40	0	138	1370	77	12	126	804	262	11	3089
PEAK HR FACTOR :	0.711	0.821	0.875	0.000	0.469	0.714	0.769	0.000	0.821	0.957	0.802	0.600	0.808	0.848	0.771	0.458	0.955
	0.770				0.694				0.962				0.857				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	1	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	41	25	4	0	37	15	14	0	21	308	19	9	34	270	76	2	875
4:15 PM	30	9	3	0	26	12	20	0	11	333	10	6	38	357	84	4	943
4:30 PM	26	26	1	0	23	11	20	0	18	362	14	8	37	310	80	8	944
4:45 PM	25	14	6	1	35	14	21	0	11	300	10	11	46	307	81	8	890
5:00 PM	26	21	7	0	34	19	10	0	11	308	21	2	24	331	99	4	917
5:15 PM	20	12	2	0	42	13	15	0	14	388	12	2	40	279	92	11	942
5:30 PM	26	14	5	0	32	5	22	0	18	330	6	8	43	274	78	5	866
5:45 PM	36	17	4	0	42	8	10	0	16	316	12	10	38	265	82	7	863
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	230	138	32	1	271	97	132	0	120	2645	104	56	300	2393	672	49	7240
APPROACH %'s :	57.36%	34.41%	7.98%	0.25%	54.20%	19.40%	26.40%	0.00%	4.10%	90.43%	3.56%	1.91%	8.79%	70.09%	19.68%	1.44%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	107	70	17	1	118	56	71	0	51	1303	55	27	145	1305	344	24	3694
PEAK HR FACTOR :	0.892	0.673	0.607	0.250	0.843	0.737	0.845	0.000	0.708	0.900	0.655	0.614	0.788	0.914	0.869	0.750	0.978
	0.903				0.875				0.893				0.941				

Prepared by National Data & Surveying Services

Webb Way & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05340-003
City: Malibu

Day: Saturday
Date: 05/19/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:45 PM - 01:45 PM	12:00 PM - 02:00 PM
NONE	NONE

Webb Way — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	63	77	93	0	340	NOON
PM	0	0	0	0	0	PM
	1	0.5	1.5	0		

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
0	1568	0	
0	36	0	0
0	111	0	1
0	1352	0	3
0	90	0	1
AM	NOON	PM	

Pacific Coast Hwy — WESTBOUND

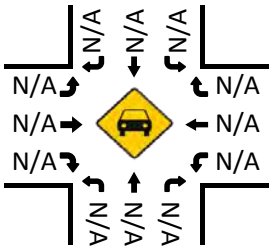
PM	NOON	AM	
0	167	0	1
0	1355	0	2
0	143	0	1
0	28	0	0
0	1515	0	
PM	NOON	AM	

Webb Way — NORTHBOUND

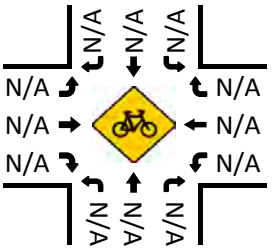
	0	1	0.5	0.5		
PM	0	0	0	0	0	PM
NOON	310	0	114	62	42	NOON
AM	0	0	0	0	0	AM

CONTROL			
Signalized			
TEV	0 AM	3733 NOON	0 PM
PHF		0.97	

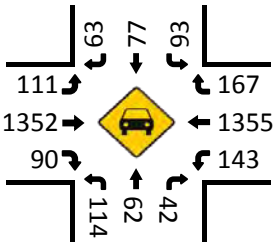
Total Vehicles (AM)



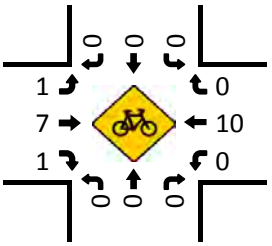
Bikes (AM)



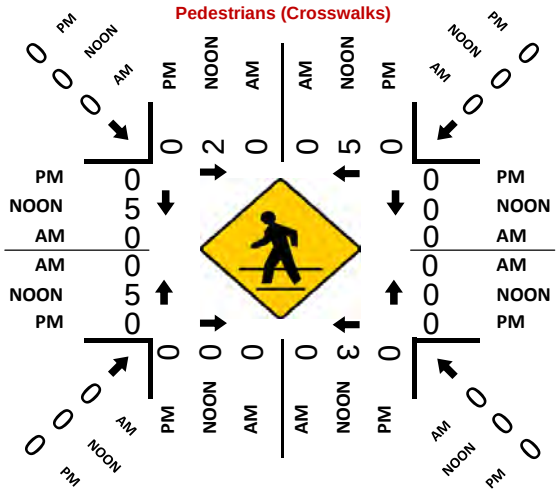
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
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National Data & Surveying Services

Intersection Turning Movement Count

Location: Webb Way & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05340-003
Date: 2018-05-19

Total

NS/EW Streets:	Webb Way				Webb Way				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	1	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	34	18	7	0	25	22	9	0	16	373	14	4	39	336	25	8	930
12:15 PM	30	21	12	0	22	15	9	0	20	358	26	3	34	351	27	7	935
12:30 PM	17	9	12	0	22	15	20	0	12	344	15	4	32	332	36	3	873
12:45 PM	33	10	7	0	25	23	15	0	27	318	24	8	33	318	44	8	893
1:00 PM	22	18	12	0	23	16	16	0	36	357	17	11	34	359	37	8	966
1:15 PM	33	17	10	0	23	19	11	0	22	336	27	5	36	336	41	9	925
1:30 PM	26	17	13	0	22	19	21	0	26	341	22	12	40	342	45	3	949
1:45 PM	33	22	5	0	30	27	15	0	24	313	17	7	36	320	38	6	893
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	228	132	78	0	192	156	116	0	183	2740	162	54	284	2694	293	52	7364
APPROACH %'s :	52.05%	30.14%	17.81%	0.00%	41.38%	33.62%	25.00%	0.00%	5.83%	87.29%	5.16%	1.72%	8.55%	81.07%	8.82%	1.56%	
PEAK HR :	12:45 PM - 01:45 PM																TOTAL
PEAK HR VOL :	114	62	42	0	93	77	63	0	111	1352	90	36	143	1355	167	28	3733
PEAK HR FACTOR :	0.864	0.861	0.808	0.000	0.930	0.837	0.750	0.000	0.771	0.947	0.833	0.750	0.894	0.944	0.928	0.778	0.966
	0.908				0.925				0.944				0.966				

Prepared by National Data & Surveying Services

Cross Creek Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05340-004
City: Malibu

Day: Tuesday
Date: 05/22/2018

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

SOUTHBOUND — Cross Creek Rd

AM	67	0	94	0	231	AM
NOON	0	0	0	0	0	NOON
PM	90	3	157	0	206	PM
	1	0.5	1.5	0		

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
1191	0	1767	
0	0	0	0
103	0	70	1
1382	0	1586	2
6	0	11	0

WESTBOUND — Pacific Coast Hwy

	PM	NOON	AM
0	133	0	128
2	1666	0	1121
1	13	0	2
0	0	0	0
	1756	0	1477

NORTHBOUND — Cross Creek Rd

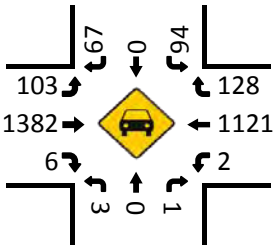
	0	0.5	0.5	1		
PM	27	0	11	3	13	PM
NOON	0	0	0	0	0	NOON
AM	8	0	3	0	1	AM

CONTROL

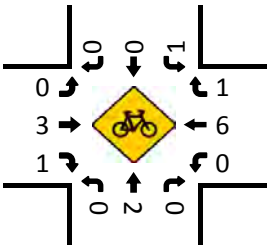
Signalized

TEV	2907 AM	0 NOON	3756 PM
PHF	0.87		0.98

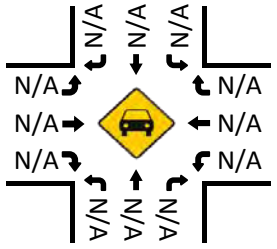
Total Vehicles (AM)



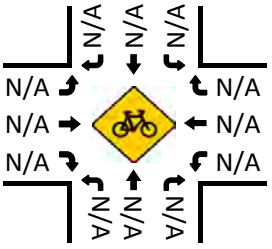
Bikes (AM)



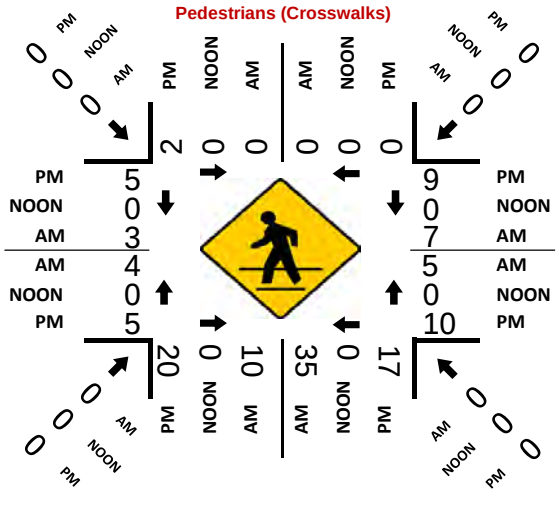
Total Vehicles (NOON)



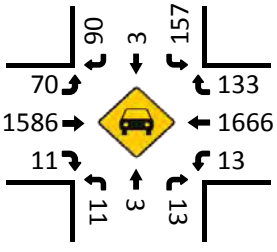
Bikes (NOON)



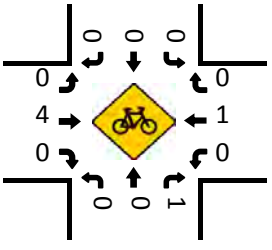
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05340-004
Date: 5/22/2018

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	22	0	7	0	8	471	1	0	0	269	26	0	804
7:15 AM	1	0	0	0	24	0	18	0	14	367	0	0	0	233	33	0	690
7:30 AM	0	0	0	0	27	0	10	0	13	336	1	0	0	239	21	0	647
7:45 AM	0	0	0	0	15	0	17	0	13	356	0	0	0	274	19	0	694
8:00 AM	0	0	1	0	21	0	16	0	27	342	0	0	0	234	27	0	668
8:15 AM	2	0	0	0	19	0	12	0	25	302	3	0	1	314	27	0	705
8:30 AM	1	0	0	0	20	0	19	0	23	398	1	0	1	326	44	0	833
8:45 AM	0	0	0	0	34	0	20	0	28	340	2	0	0	247	30	0	701
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	4	0	1	0	182	0	119	0	151	2912	8	0	2	2136	227	0	5742
APPROACH %'s :	80.00%	0.00%	20.00%	0.00%	60.47%	0.00%	39.53%	0.00%	4.92%	94.82%	0.26%	0.00%	0.08%	90.32%	9.60%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	3	0	1	0	94	0	67	0	103	1382	6	0	2	1121	128	0	2907
PEAK HR FACTOR :	0.375	0.000	0.250	0.000	0.691	0.000	0.838	0.000	0.920	0.868	0.500	0.000	0.500	0.860	0.727	0.000	0.872
	0.500				0.745				0.883				0.843				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	1	3	0	40	2	27	0	15	359	5	0	0	395	34	0	882
4:15 PM	1	3	5	0	58	1	33	0	23	324	2	0	3	379	36	0	868
4:30 PM	5	0	3	0	39	1	24	0	16	403	2	0	2	434	28	0	957
4:45 PM	3	1	1	0	33	1	25	0	11	385	3	0	3	447	40	0	953
5:00 PM	2	0	3	0	49	1	21	0	25	367	2	0	3	418	33	0	924
5:15 PM	1	2	6	0	36	0	20	0	18	431	4	0	5	367	32	0	922
5:30 PM	0	1	1	0	52	0	14	0	20	315	1	0	3	391	19	0	817
5:45 PM	5	1	2	0	25	0	18	0	13	374	5	0	2	376	34	0	855
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	9	24	0	332	6	182	0	141	2958	24	0	21	3207	256	0	7178
APPROACH %'s :	35.29%	17.65%	47.06%	0.00%	63.85%	1.15%	35.00%	0.00%	4.51%	94.72%	0.77%	0.00%	0.60%	92.05%	7.35%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	11	3	13	0	157	3	90	0	70	1586	11	0	13	1666	133	0	3756
PEAK HR FACTOR :	0.550	0.375	0.542	0.000	0.801	0.750	0.900	0.000	0.700	0.920	0.688	0.000	0.650	0.932	0.831	0.000	0.981
	0.750				0.880				0.920				0.924				

Prepared by National Data & Surveying Services

Cross Creek Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05340-004
City: Malibu

Day: Saturday
Date: 05/19/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
NONE	NONE

SOUTHBOUND (Cross Creek Rd)

AM	0	0	0	0	0	AM
NOON	134	2	219	0	314	NOON
PM	0	0	0	0	0	PM

EASTBOUND (Pacific Coast Hwy)

AM	NOON	PM	
0	1667	0	
0	0	0	0
0	144	0	1
0	1450	0	2
0	18	0	0
AM	NOON	PM	

WESTBOUND (Pacific Coast Hwy)

PM	NOON	AM	
0	161	0	0
0	1517	0	2
0	20	0	1
0	0	0	0
0	1690	0	
PM	NOON	AM	

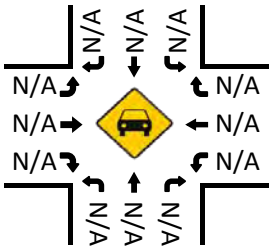
NORTHBOUND (Cross Creek Rd)

PM	0	0	0	0	0	PM
NOON	40	0	16	9	21	NOON
AM	0	0	0	0	0	AM

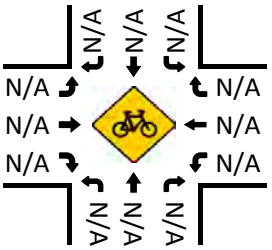
	1	0.5	1.5	0
	0	0.5	0.5	1

CONTROL			
Signalized			
TEV	0 AM	3711 NOON	0 PM
PHF		0.98	

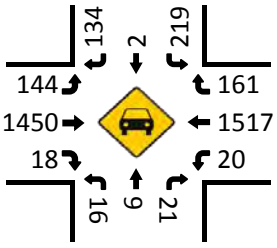
Total Vehicles (AM)



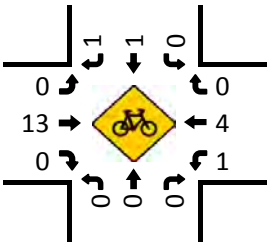
Bikes (AM)



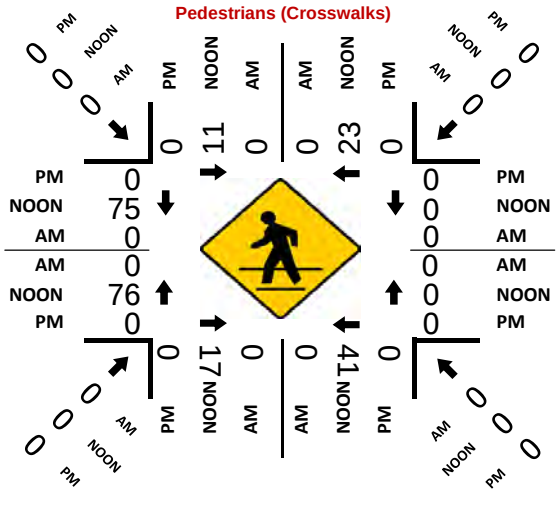
Total Vehicles (Noon)



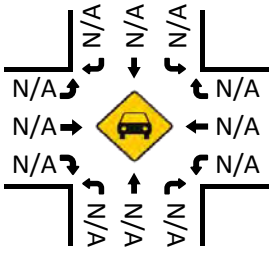
Bikes (NOON)



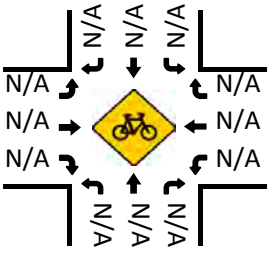
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05340-004
Date: 2018-05-19

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	2	0	7	0	40	1	27	0	38	385	5	0	5	370	55	0	935
12:15 PM	1	0	5	0	50	0	35	0	34	384	3	0	3	390	35	0	940
12:30 PM	2	1	5	0	41	1	28	0	31	362	4	0	1	376	32	0	884
12:45 PM	2	1	4	0	42	0	51	0	29	344	4	0	3	341	45	0	866
1:00 PM	5	5	8	0	53	0	32	0	39	362	7	0	8	379	39	0	937
1:15 PM	4	0	3	0	48	0	34	0	41	347	2	0	4	387	35	0	905
1:30 PM	3	2	5	0	49	1	36	0	37	346	7	0	6	390	44	0	926
1:45 PM	4	2	5	0	69	1	32	0	27	395	2	0	2	361	43	0	943
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	23	11	42	0	392	4	275	0	276	2925	34	0	32	2994	328	0	7336
APPROACH %'s :	30.26%	14.47%	55.26%	0.00%	58.42%	0.60%	40.98%	0.00%	8.53%	90.42%	1.05%	0.00%	0.95%	89.27%	9.78%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	16	9	21	0	219	2	134	0	144	1450	18	0	20	1517	161	0	3711
PEAK HR FACTOR :	0.800	0.450	0.656	0.000	0.793	0.500	0.931	0.000	0.878	0.918	0.643	0.000	0.625	0.972	0.915	0.000	0.984
	0.639				0.870				0.950				0.965				

Prepared by National Data & Surveying Services

Las Flores Canyon Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-003
City: Malibu

Day: Tuesday
Date: 04/10/2018

PEAK HOURS	
AM	07:00 AM - 08:00 AM
NOON	NONE
PM	04:15 PM - 05:15 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Las Flores Canyon Rd — SOUTHBOUND

AM	48	0	53	0	59	AM
NOON	0	0	0	0	0	NOON
PM	35	0	40	0	79	PM

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM		
1226	0	1678	⇦	
0	0	2	↶	0
27	0	33	↱	1
1677	0	1687	→	2
7	0	22	↷	0
AM	NOON	PM		

Pacific Coast Hwy — WESTBOUND

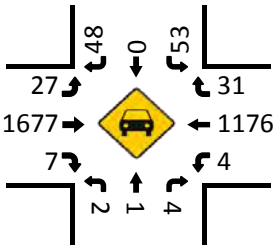
PM	NOON	AM		
42	0	31	↶	1
1632	0	1176	←	2
19	0	4	↰	1
0	0	0	↷	0
1744	0	1734	⇨	
PM	NOON	AM		

Las Flores Canyon Rd — NORTHBOUND

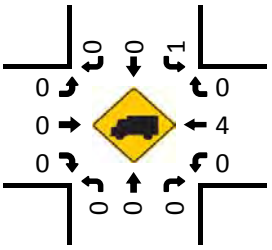
PM	41	0	9	4	17	PM
NOON	0	0	0	0	0	NOON
AM	11	0	2	1	4	AM

CONTROL			
Signalized			
TEV	3030 AM	0 NOON	3542 PM
PHF	0.93		0.95

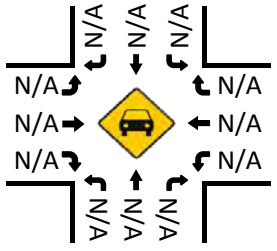
Total Vehicles (AM)



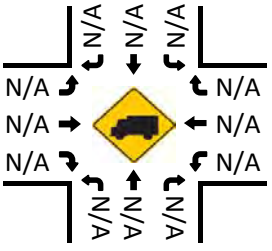
Bikes (AM)



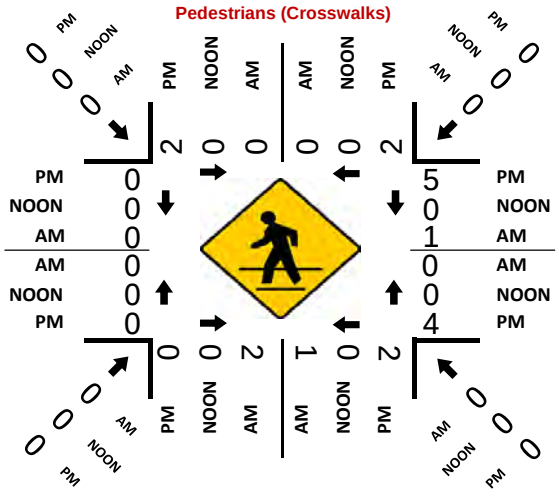
Total Vehicles (Noon)



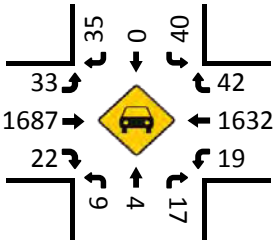
Bikes (NOON)



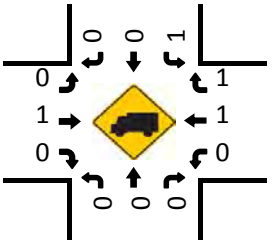
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Las Flores Canyon Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-003
Date: 4/10/2018

Total

NS/EW Streets:	Las Flores Canyon Rd				Las Flores Canyon Rd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	11	0	19	0	10	510	3	0	2	242	7	0	804
7:15 AM	2	1	1	0	16	0	10	0	5	462	0	0	1	311	7	0	816
7:30 AM	0	0	3	0	12	0	7	0	6	341	2	0	1	291	7	0	670
7:45 AM	0	0	0	0	14	0	12	0	6	364	2	0	0	332	10	0	740
8:00 AM	0	0	0	0	8	0	10	0	6	350	1	0	0	307	11	0	693
8:15 AM	1	0	2	0	7	0	14	0	7	329	1	0	1	344	12	0	718
8:30 AM	1	0	0	0	5	0	15	0	13	377	0	0	2	366	16	0	795
8:45 AM	1	0	0	0	16	0	22	0	12	352	0	1	1	340	14	0	759
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	1	6	0	89	0	109	0	65	3085	9	1	8	2533	84	0	5995
APPROACH %'s :	41.67%	8.33%	50.00%	0.00%	44.95%	0.00%	55.05%	0.00%	2.06%	97.63%	0.28%	0.03%	0.30%	96.50%	3.20%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	2	1	4	0	53	0	48	0	27	1677	7	0	4	1176	31	0	3030
PEAK HR FACTOR :	0.250	0.250	0.333	0.000	0.828	0.000	0.632	0.000	0.675	0.822	0.583	0.000	0.500	0.886	0.775	0.000	0.928
	0.438				0.842				0.818				0.885				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	3	1	5	0	14	0	7	0	11	426	5	0	4	375	11	0	862
4:15 PM	1	3	2	0	13	0	9	0	5	450	3	0	5	430	10	0	931
4:30 PM	2	0	6	0	7	0	7	0	6	407	8	1	2	405	11	0	862
4:45 PM	2	0	7	0	7	0	12	0	9	425	3	1	4	396	6	0	872
5:00 PM	4	1	2	0	13	0	7	0	13	405	8	0	8	401	15	0	877
5:15 PM	4	0	5	0	7	1	7	0	6	424	1	1	4	416	14	0	890
5:30 PM	0	0	4	0	7	0	8	0	9	363	7	0	8	404	13	0	823
5:45 PM	1	0	3	0	5	0	4	0	14	371	7	0	3	395	15	0	818
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	17	5	34	0	73	1	61	0	73	3271	42	3	38	3222	95	0	6935
APPROACH %'s :	30.36%	8.93%	60.71%	0.00%	54.07%	0.74%	45.19%	0.00%	2.15%	96.52%	1.24%	0.09%	1.13%	96.04%	2.83%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	9	4	17	0	40	0	35	0	33	1687	22	2	19	1632	42	0	3542
PEAK HR FACTOR :	0.563	0.333	0.607	0.000	0.769	0.000	0.729	0.000	0.635	0.937	0.688	0.500	0.594	0.949	0.700	0.000	0.951
	0.833				0.852				0.952				0.951				

Prepared by National Data & Surveying Services

Las Flores Canyon Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-003
City: Malibu

Day: Saturday
Date: 04/14/2018

PEAK HOURS		COUNT PERIODS
NONE		NONE
12:15 PM - 01:15 PM		12:00 PM - 02:00 PM
NONE		NONE

Las Flores Canyon Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	29	0	18	0	73	NOON
PM	0	0	0	0	0	PM

0 1 0 0

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
0	1889	0	
0	2	0	0
0	27	0	1
0	1555	0	2
0	48	0	0
AM	NOON	PM	

Pacific Coast Hwy — WESTBOUND

	PM	NOON	AM
1	0	45	0
2	0	1834	0
1	0	69	0
0	0	0	0
	0	1611	0
	PM	NOON	AM

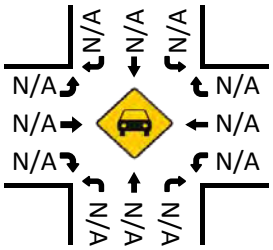
CONTROL			
Signalized			
TEV	0 AM	3690 NOON	0 PM
PHF		0.97	

0 0 1 0

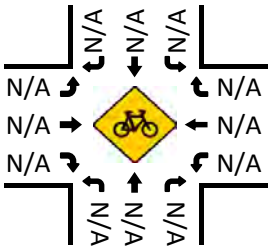
Las Flores Canyon Rd — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	117	0	24	1	38	NOON
AM	0	0	0	0	0	AM

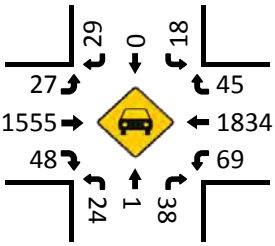
Total Vehicles (AM)



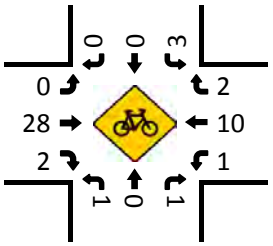
Bikes (AM)



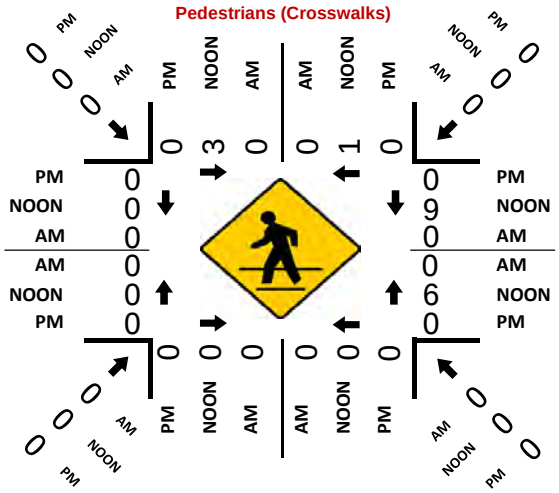
Total Vehicles (Noon)



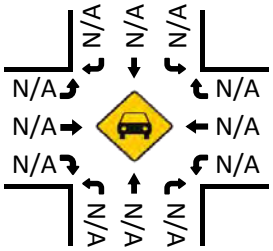
Bikes (NOON)



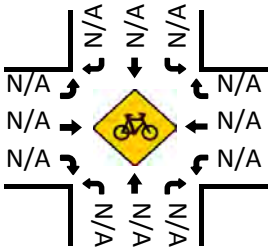
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Las Flores Canyon Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-003
Date: 2018-04-14

Total

NS/EW Streets:	Las Flores Canyon Rd				Las Flores Canyon Rd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	2	0	5	0	6	0	3	0	6	301	6	0	11	466	7	0	813
12:15 PM	2	0	3	0	6	0	6	0	4	384	11	0	22	477	10	0	925
12:30 PM	8	0	14	0	2	0	9	0	5	386	10	1	19	456	19	0	929
12:45 PM	11	1	10	0	6	0	9	0	8	385	15	0	16	418	7	0	886
1:00 PM	3	0	11	0	4	0	5	0	10	400	12	1	12	483	9	0	950
1:15 PM	14	0	11	0	7	0	5	0	6	364	12	0	11	417	9	0	856
1:30 PM	11	0	5	0	4	3	15	0	5	373	11	0	6	465	6	0	904
1:45 PM	8	0	17	0	5	0	6	0	8	398	13	1	10	404	12	0	882
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	59	1	76	0	40	3	58	0	52	2991	90	3	107	3586	79	0	7145
APPROACH %'s :	43.38%	0.74%	55.88%	0.00%	39.60%	2.97%	57.43%	0.00%	1.66%	95.38%	2.87%	0.10%	2.84%	95.07%	2.09%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	24	1	38	0	18	0	29	0	27	1555	48	2	69	1834	45	0	3690
PEAK HR FACTOR :	0.545	0.250	0.679	0.000	0.750	0.000	0.806	0.000	0.675	0.972	0.800	0.500	0.784	0.949	0.592	0.000	0.971
	0.716				0.783				0.965				0.957				

Prepared by National Data & Surveying Services

Topanga Canyon Blvd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-004
City: Malibu

Day: Tuesday
Date: 04/10/2018

PEAK HOURS	
AM	07:00 AM - 08:00 AM
NOON	NONE
PM	04:15 PM - 05:15 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Topanga Canyon Blvd — SOUTHBOUND

AM	52	0	1154	0	227	AM
NOON	0	0	0	0	0	NOON
PM	70	0	234	0	1135	PM
	1	0	2	0		

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
1226	0	1763	
0	0	0	0
18	0	159	1
1545	0	1740	2
0	0	0	0
AM	NOON	PM	

CONTROL

Signalized

	AM	NOON	PM
TEV	4152	0	4872
PHF	0.98	NOON	0.99

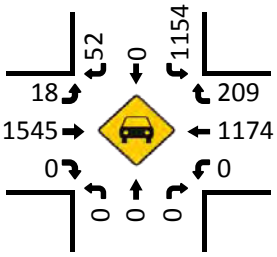
Pacific Coast Hwy — WESTBOUND

PM	NOON	AM	
976	0	209	0.5
1693	0	1174	2.5
0	0	0	0
0	0	0	0
1974	0	2699	
PM	NOON	AM	

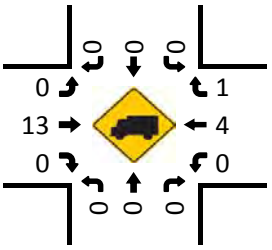
			0	0	0	0
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

Topanga Canyon Blvd — NORTHBOUND

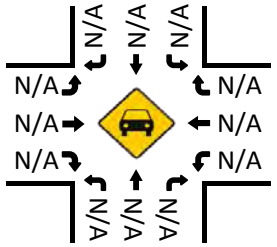
Total Vehicles (AM)



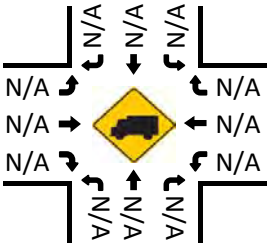
Bikes (AM)



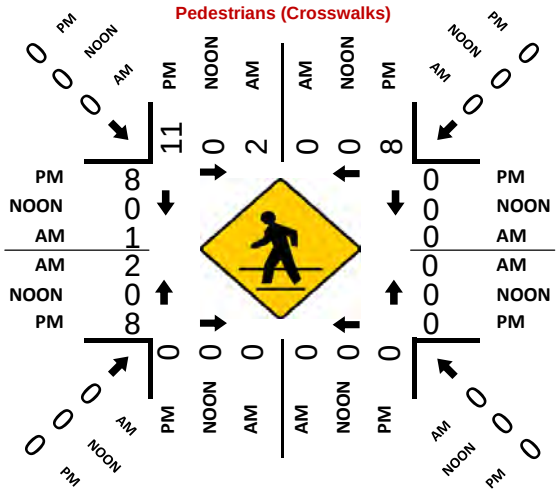
Total Vehicles (Noon)



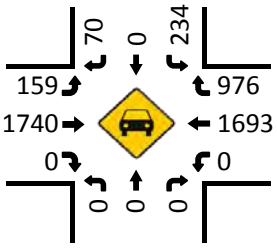
Bikes (NOON)



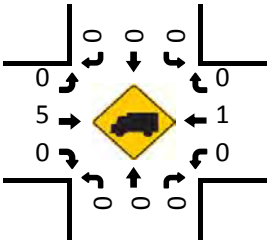
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services Intersection Turning Movement Count

Location: Topanga Canyon Blvd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-004
Date: 4/10/2018

Total

NS/EW Streets:	Topanga Canyon Blvd				Topanga Canyon Blvd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	1	2	0	0	0	2.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	316	0	14	0	8	386	0	0	0	274	40	0	1038
7:15 AM	0	0	0	0	276	0	12	0	2	389	0	0	0	276	59	0	1014
7:30 AM	0	0	0	0	286	0	15	0	3	394	0	0	0	291	53	0	1042
7:45 AM	0	0	0	0	276	0	11	0	5	376	0	0	0	333	57	0	1058
8:00 AM	0	0	0	0	221	0	12	0	3	360	0	0	0	347	50	0	993
8:15 AM	0	0	0	0	247	0	10	0	13	362	0	0	0	346	69	0	1047
8:30 AM	0	0	0	0	209	0	8	0	7	350	0	0	0	380	61	0	1015
8:45 AM	0	0	0	0	265	0	5	0	5	310	0	0	0	347	64	0	996
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2096	0	87	0	46	2927	0	0	0	2594	453	0	8203
APPROACH %'s :					96.01%	0.00%	3.99%	0.00%	1.55%	98.45%	0.00%	0.00%	0.00%	85.13%	14.87%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1154	0	52	0	18	1545	0	0	0	1174	209	0	4152
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.913	0.000	0.867	0.000	0.563	0.980	0.000	0.000	0.000	0.881	0.886	0.000	0.981
					0.914				0.984				0.887				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	1	2	0	0	0	2.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	45	0	18	0	36	411	0	0	0	400	256	0	1166
4:15 PM	0	0	0	0	57	0	14	0	37	489	0	0	0	416	213	0	1226
4:30 PM	0	0	0	0	58	0	20	0	56	413	0	0	0	414	236	0	1197
4:45 PM	0	0	0	0	64	0	19	0	28	394	0	0	0	438	270	0	1213
5:00 PM	0	0	0	0	55	0	17	0	38	444	0	0	0	425	257	0	1236
5:15 PM	0	0	0	0	82	0	11	0	30	418	0	0	0	413	242	0	1196
5:30 PM	0	0	0	0	69	0	19	0	42	380	0	0	0	407	248	0	1165
5:45 PM	0	0	0	0	63	0	15	0	32	377	0	0	0	423	255	0	1165
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	493	0	133	0	299	3326	0	0	0	3336	1977	0	9564
APPROACH %'s :					78.75%	0.00%	21.25%	0.00%	8.25%	91.75%	0.00%	0.00%	0.00%	62.79%	37.21%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	234	0	70	0	159	1740	0	0	0	1693	976	0	4872
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.914	0.000	0.875	0.000	0.710	0.890	0.000	0.000	0.000	0.966	0.904	0.000	0.985
					0.916				0.903				0.942				

Prepared by National Data & Surveying Services

Topanga Canyon Blvd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05212-004
City: Malibu

Day: Saturday
Date: 04/14/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:45 PM - 01:45 PM	12:00 PM - 02:00 PM
NONE	NONE

Topanga Canyon Blvd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	196	0	465	0	461	NOON
PM	0	0	0	0	0	PM

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
0	2078	0	
0	0	0	0
0	134	0	1
0	1599	0	2
0	0	0	0
AM	NOON	PM	

Pacific Coast Hwy — WESTBOUND

PM	NOON	AM	
0	327	0	0.5
0	1882	0	2.5
0	0	0	0
0	0	0	0
0	2064	0	
PM	NOON	AM	

Topanga Canyon Blvd — NORTHBOUND

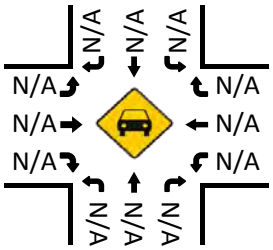
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

	1	0	2	0
	0	0	0	0

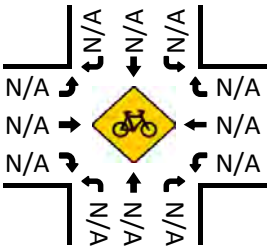
CONTROL: Signalized

	AM	NOON	PM
TEV	0	4603	0
PHF		0.95	

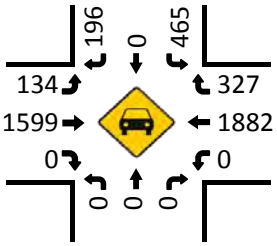
Total Vehicles (AM)



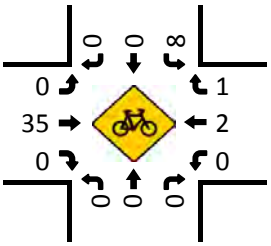
Bikes (AM)



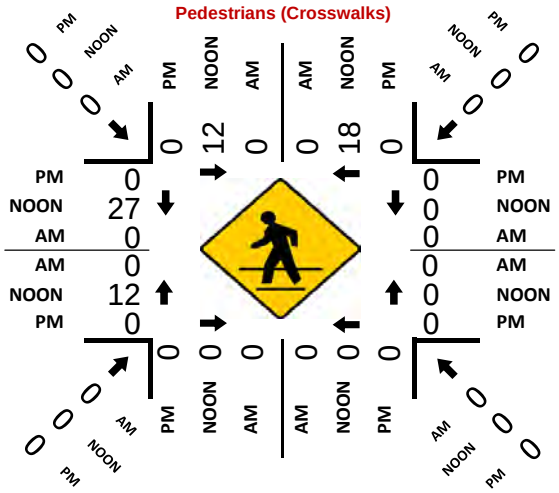
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
0
0
0
12
0
18
0
0
27
0
0
0
0
0
12
0
0
0
0
0
0

National Data & Surveying Services Intersection Turning Movement Count

Location: Topanga Canyon Blvd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05212-004
Date: 2018-04-14

Total

NS/EW Streets:	Topanga Canyon Blvd				Topanga Canyon Blvd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	1	2	0	0	0	2.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	129	0	43	0	22	310	0	0	0	516	60	0	1080
12:15 PM	0	0	0	0	120	0	50	0	24	365	0	0	0	500	67	0	1126
12:30 PM	0	0	0	0	154	0	43	0	39	364	0	0	0	430	70	0	1100
12:45 PM	0	0	0	0	94	0	41	0	25	438	0	0	0	525	88	0	1211
1:00 PM	0	0	0	0	134	0	59	0	39	362	0	0	0	438	66	0	1098
1:15 PM	0	0	0	0	92	0	45	0	28	419	0	0	0	513	82	0	1179
1:30 PM	0	0	0	0	145	0	51	0	42	380	0	0	0	406	91	0	1115
1:45 PM	0	0	0	0	93	0	49	0	34	377	0	0	0	483	91	0	1127
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	961	0	381	0	253	3015	0	0	0	3811	615	0	9036
APPROACH %'s :					71.61%	0.00%	28.39%	0.00%	7.74%	92.26%	0.00%	0.00%	0.00%	86.10%	13.90%	0.00%	
PEAK HR :	12:45 PM - 01:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	465	0	196	0	134	1599	0	0	0	1882	327	0	4603
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.802	0.000	0.831	0.000	0.798	0.913	0.000	0.000	0.000	0.896	0.898	0.000	0.950
					0.843				0.936				0.901				

Prepared by National Data & Surveying Services

Malibu Canyon Rd & Seaver Dr/Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05212-005
City: Malibu

Day: Tuesday
Date: 04/10/2018

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

Malibu Canyon Rd — SOUTHBOUND

AM	365	976	37	0	531	AM
NOON	0	0	0	0	0	NOON
PM	74	521	162	0	1362	PM
	1	2	1	0		

Seaver Dr/Civic Center Way — EASTBOUND

AM	NOON	PM	
543	0	185	
0	0	0	0
30	0	267	1.5
58	0	118	0.5
14	0	93	1
AM	NOON	PM	

CONTROL

Signalized

TEV	2376 AM	0 NOON	2486 PM
PHF	0.90		0.93

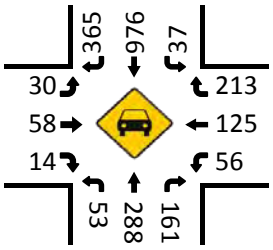
Seaver Dr/Civic Center Way — WESTBOUND

PM	NOON	AM	
576	0	213	0.5
84	0	125	0.5
20	0	56	1
0	0	0	0
305	0	256	
PM	NOON	AM	

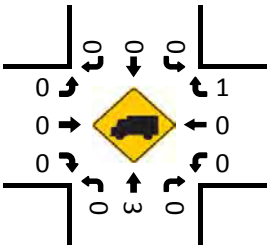
Malibu Canyon Rd — NORTHBOUND

PM	634	0	27	519	25	PM
NOON	0	0	0	0	0	NOON
AM	1046	0	53	288	161	AM
		0	1	2	1	

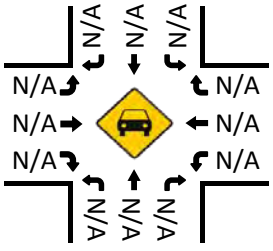
Total Vehicles (AM)



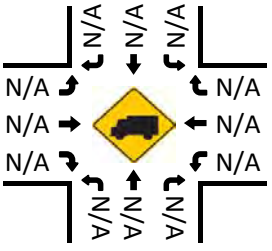
Bikes (AM)



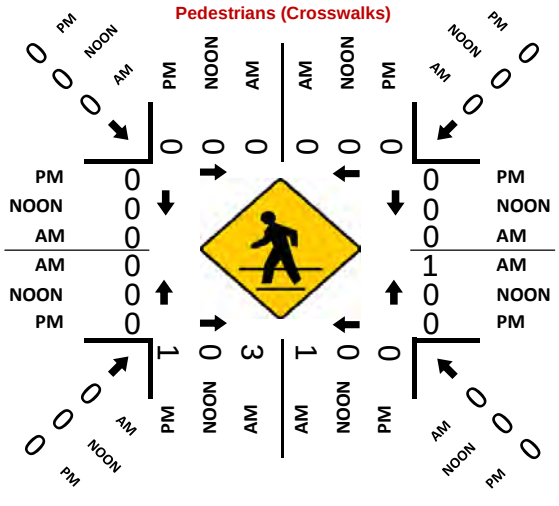
Total Vehicles (Noon)



Bikes (NOON)



Pedestrians (Crosswalks)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National Data & Surveying Services Intersection Turning Movement Count

Location: Malibu Canyon Rd & Seaver Dr/Civic Center Way
City: Malibu
Control: Signalized

Project ID: 18-05212-005
Date: 4/10/2018

Total

NS/EW Streets:	Malibu Canyon Rd				Malibu Canyon Rd				Seaver Dr/Civic Center Way				Seaver Dr/Civic Center Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	42	37	0	13	273	45	0	4	5	5	0	3	3	26	0	461
7:15 AM	8	35	32	0	8	258	82	0	7	7	2	0	6	10	43	0	498
7:30 AM	8	73	39	0	8	229	109	0	13	5	6	0	7	25	39	0	561
7:45 AM	17	50	39	0	7	239	133	0	7	10	4	0	17	42	46	0	611
8:00 AM	13	82	23	0	10	227	65	0	12	3	2	0	8	26	51	0	522
8:15 AM	10	75	47	0	6	253	77	0	4	24	5	0	9	19	56	0	585
8:30 AM	13	81	52	0	14	257	90	0	7	21	3	0	22	38	60	0	658
8:45 AM	17	88	13	0	31	230	71	0	8	5	3	0	8	29	77	0	580
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	526	282	0	97	1966	672	0	62	80	30	0	80	192	398	0	4476
APPROACH %'s :	10.12%	58.51%	31.37%	0.00%	3.55%	71.88%	24.57%	0.00%	36.05%	46.51%	17.44%	0.00%	11.94%	28.66%	59.40%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	53	288	161	0	37	976	365	0	30	58	14	0	56	125	213	0	2376
PEAK HR FACTOR :	0.779	0.878	0.774	0.000	0.661	0.949	0.686	0.000	0.625	0.604	0.700	0.000	0.636	0.744	0.888	0.000	0.903
	0.860				0.909				0.773				0.821				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	134	8	0	33	93	16	0	90	26	21	0	7	19	127	0	576
4:15 PM	4	132	10	0	32	92	20	0	49	19	8	0	9	20	121	0	516
4:30 PM	4	151	4	0	30	136	16	0	55	21	13	0	8	20	142	0	600
4:45 PM	4	133	5	0	44	133	15	0	59	13	19	0	8	18	138	0	589
5:00 PM	7	147	9	0	32	121	14	0	104	34	26	0	6	17	148	0	665
5:15 PM	5	106	5	0	49	126	14	0	65	34	23	0	6	19	158	0	610
5:30 PM	9	140	5	0	33	138	25	0	51	22	27	0	6	29	131	0	616
5:45 PM	6	126	6	0	48	136	21	0	47	28	17	0	2	19	139	0	595
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	41	1069	52	0	301	975	141	0	520	197	154	0	52	161	1104	0	4767
APPROACH %'s :	3.53%	92.00%	4.48%	0.00%	21.24%	68.81%	9.95%	0.00%	59.70%	22.62%	17.68%	0.00%	3.95%	12.22%	83.83%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	27	519	25	0	162	521	74	0	267	118	93	0	20	84	576	0	2486
PEAK HR FACTOR :	0.750	0.883	0.694	0.000	0.827	0.944	0.740	0.000	0.642	0.868	0.861	0.000	0.833	0.724	0.911	0.000	0.935
	0.876				0.923				0.729				0.929				

Prepared by National Data & Surveying Services

Malibu Canyon Rd & Seaver Dr/Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05212-005
City: Malibu

Day: Saturday
Date: 04/14/2018

PEAK HOURS

AM	NOON	PM
NONE	01:00 PM - 02:00 PM	NONE

COUNT PERIODS

AM	NOON	PM
NONE	12:00 PM - 02:00 PM	NONE

Malibu Canyon Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	70	798	215	1	602	NOON
PM	0	0	0	0	0	PM

Seaver Dr/Civic Center Way — EASTBOUND

AM	NOON	PM		
0	174	0		
0	0	0	0	
0	69	0	1.5	
0	49	0	0.5	
0	50	0	1	
AM	NOON	PM		

Seaver Dr/Civic Center Way — WESTBOUND

PM	NOON	AM	
0	203	0	0.5
0	74	0	0.5
0	53	0	1
0	1	0	0
0	344	0	
PM	NOON	AM	

Malibu Canyon Rd — NORTHBOUND

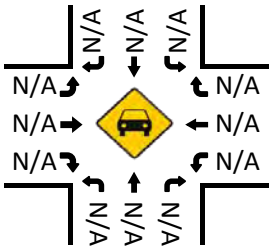
PM	0	0	0	0	0	PM
NOON	901	0	30	329	79	NOON
AM	0	0	0	0	0	AM

	1	2	1	0
	0	1	2	1

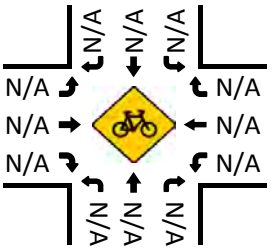
CONTROL: Signalized

	AM	NOON	PM
TEV	0	2021	0
PHF		0.94	

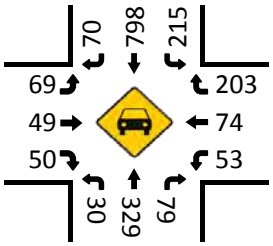
Total Vehicles (AM)



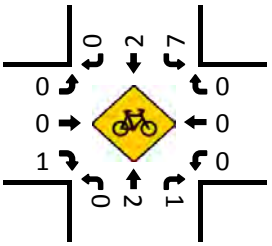
Bikes (AM)



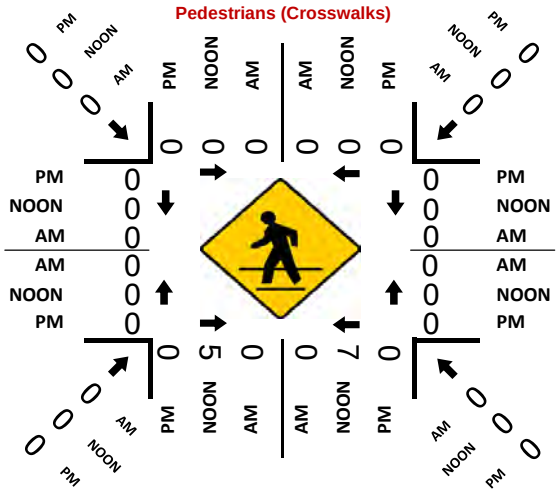
Total Vehicles (NOON)



Bikes (NOON)



Pedestrians (Crosswalks)


PM
NOON
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National Data & Surveying Services Intersection Turning Movement Count

Location: Malibu Canyon Rd & Seaver Dr/Civic Center Way
City: Malibu
Control: Signalized

Project ID: 18-05212-005
Date: 2018-04-14

Total

NS/EW Streets:	Malibu Canyon Rd				Malibu Canyon Rd				Seaver Dr/Civic Center Way				Seaver Dr/Civic Center Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	8	79	14	0	49	184	22	0	6	18	11	0	5	20	40	1	457
12:15 PM	3	67	7	0	56	195	13	0	8	6	9	0	7	14	42	1	428
12:30 PM	10	68	16	0	72	225	12	0	12	11	13	0	11	13	34	0	497
12:45 PM	8	71	16	0	68	191	21	0	18	11	20	0	8	15	35	0	482
1:00 PM	8	69	13	0	47	200	11	0	15	18	18	0	9	16	57	0	481
1:15 PM	7	75	17	0	57	204	8	0	20	10	10	0	18	24	46	0	496
1:30 PM	6	97	21	0	59	208	26	1	17	9	12	0	15	15	53	1	540
1:45 PM	9	88	28	0	52	186	25	0	17	12	10	0	11	19	47	0	504
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	59	614	132	0	460	1593	138	1	113	95	103	0	84	136	354	3	3885
APPROACH %'s :	7.33%	76.27%	16.40%	0.00%	20.99%	72.67%	6.30%	0.05%	36.33%	30.55%	33.12%	0.00%	14.56%	23.57%	61.35%	0.52%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	30	329	79	0	215	798	70	1	69	49	50	0	53	74	203	1	2021
PEAK HR FACTOR :	0.833	0.848	0.705	0.000	0.911	0.959	0.673	0.250	0.863	0.681	0.694	0.000	0.736	0.771	0.890	0.250	0.936
	0.876				0.922				0.824				0.940				

Prepared by National Data & Surveying Services

Stuart Ranch Rd-Webb Way & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05340-008
City: Malibu

Day: Tuesday
Date: 05/22/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

Stuart Ranch Rd-Webb Way — SOUTHBOUND

AM	2	11	6	0	59
NOON	0	0	0	0	0
PM	21	30	4	0	11

EASTBOUND — Civic Center Way

AM	NOON	PM	
357	0	612	
0	0	0	0
14	0	3	0
95	0	75	1
123	0	145	1

WESTBOUND — Civic Center Way

PM	NOON	AM	
3	0	6	0
187	0	59	1
89	0	57	1
0	0	0	0
154	0	210	

CONTROL

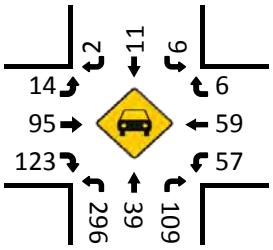
4-Way Stop

	AM	NOON	PM
TEV	818	0	1042
PHF	0.91		0.91

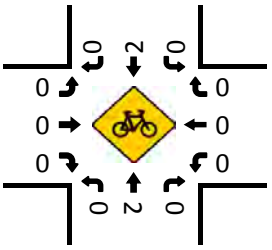
Stuart Ranch Rd-Webb Way — NORTHBOUND

PM	265	1	404	5	75
NOON	0	0	0	0	0
AM	192	1	296	39	109

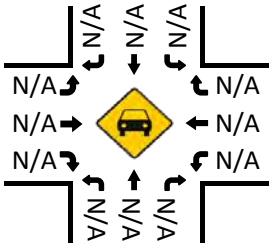
Total Vehicles (AM)



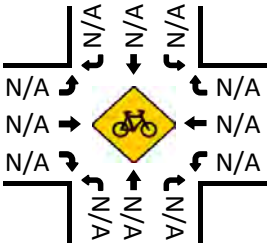
Bikes (AM)



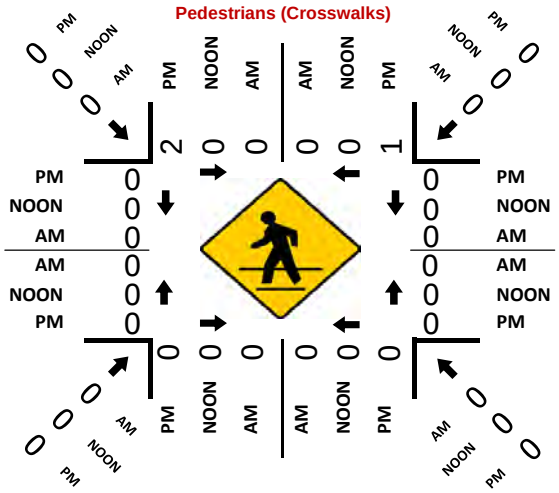
Total Vehicles (Noon)



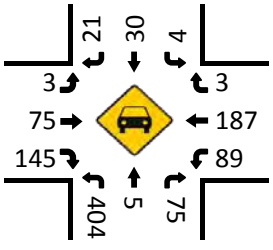
Bikes (NOON)



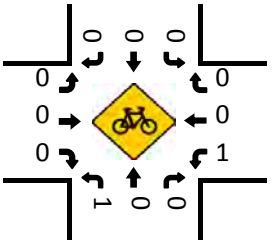
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Stuart Ranch Rd-Webb Way & Civic Center Way
City: Malibu
Control: 4-Way Stop

Project ID: 18-05340-008
Date: 5/22/2018

Total

NS/EW Streets:	Stuart Ranch Rd-Webb Way				Stuart Ranch Rd-Webb Way				Civic Center Way				Civic Center Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	42	10	18	0	0	0	0	0	6	35	39	0	6	4	3	0	163
7:15 AM	45	7	16	0	1	0	0	0	3	28	18	0	11	17	2	0	148
7:30 AM	65	25	19	0	0	1	0	0	5	16	14	0	9	10	3	0	167
7:45 AM	56	14	13	0	0	2	0	0	2	25	25	0	17	13	3	0	170
8:00 AM	54	10	21	0	1	3	0	0	6	21	20	0	19	13	0	0	168
8:15 AM	99	10	36	0	1	1	1	0	3	10	23	0	13	18	2	0	217
8:30 AM	78	5	24	0	0	1	1	0	2	36	52	0	11	12	2	0	224
8:45 AM	65	14	28	1	4	6	0	0	3	28	28	0	14	16	2	0	209
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	504	95	175	1	7	14	2	0	30	199	219	0	100	103	17	0	1466
APPROACH %'s :	65.03%	12.26%	22.58%	0.13%	30.43%	60.87%	8.70%	0.00%	6.70%	44.42%	48.88%	0.00%	45.45%	46.82%	7.73%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	296	39	109	1	6	11	2	0	14	95	123	0	57	59	6	0	818
PEAK HR FACTOR :	0.747	0.696	0.757	0.250	0.375	0.458	0.500	0.000	0.583	0.660	0.591	0.000	0.750	0.819	0.750	0.000	0.913
	0.767				0.475				0.644				0.924				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	87	5	15	0	2	10	4	0	3	28	31	0	26	64	0	0	275
4:15 PM	92	3	20	0	1	7	2	0	1	16	36	0	23	45	0	0	246
4:30 PM	109	0	14	0	1	7	4	0	1	22	41	0	17	51	1	0	268
4:45 PM	92	0	21	0	0	5	7	0	1	22	28	0	16	49	1	0	242
5:00 PM	111	2	20	1	2	11	8	0	0	15	40	0	33	42	1	0	286
5:15 PM	89	2	19	0	1	6	7	0	1	17	30	0	11	45	0	0	228
5:30 PM	115	1	12	0	1	16	15	0	1	19	37	0	20	35	3	0	275
5:45 PM	95	2	6	0	1	6	12	0	2	19	35	0	14	39	5	0	236
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	790	15	127	1	9	68	59	0	10	158	278	0	160	370	11	0	2056
APPROACH %'s :	84.67%	1.61%	13.61%	0.11%	6.62%	50.00%	43.38%	0.00%	2.24%	35.43%	62.33%	0.00%	29.57%	68.39%	2.03%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	404	5	75	1	4	30	21	0	3	75	145	0	89	187	3	0	1042
PEAK HR FACTOR :	0.910	0.417	0.893	0.250	0.500	0.682	0.656	0.000	0.750	0.852	0.884	0.000	0.674	0.917	0.750	0.000	0.911
	0.905				0.655				0.871				0.918				

Prepared by National Data & Surveying Services

Stuart Ranch Rd-Webb Way & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05340-008
City: Malibu

Day: Saturday
Date: 05/19/2018

PEAK HOURS		COUNT PERIODS
NONE	AM	NONE
01:00 PM - 02:00 PM	NOON	12:00 PM - 02:00 PM
NONE	PM	NONE

Stuart Ranch Rd-Webb Way — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	3	20	2	0	29	NOON
PM	0	0	0	0	0	PM

0 1 0 0

Civic Center Way — EASTBOUND

AM	NOON	PM	
0	329	0	
0	0	0	0
0	6	0	0
0	99	0	1
0	106	0	1

Civic Center Way — WESTBOUND

	PM	NOON	AM
0	0	6	0
1	0	114	0
1	0	101	0
0	0	0	0
	0	198	0

CONTROL

4-Way Stop

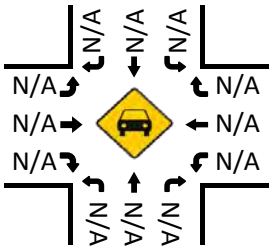
	AM	NOON	PM
TEV	0	786	0
PHF		0.88	

0 0 1 1

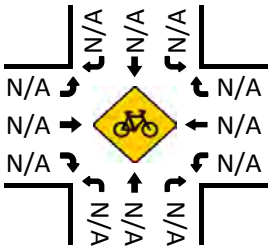
Stuart Ranch Rd-Webb Way — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	230	3	212	17	97	NOON
AM	0	0	0	0	0	AM

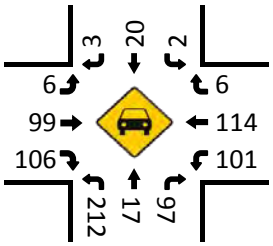
Total Vehicles (AM)



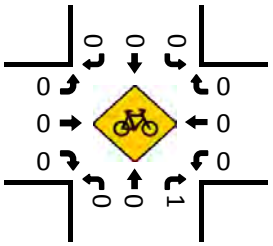
Bikes (AM)



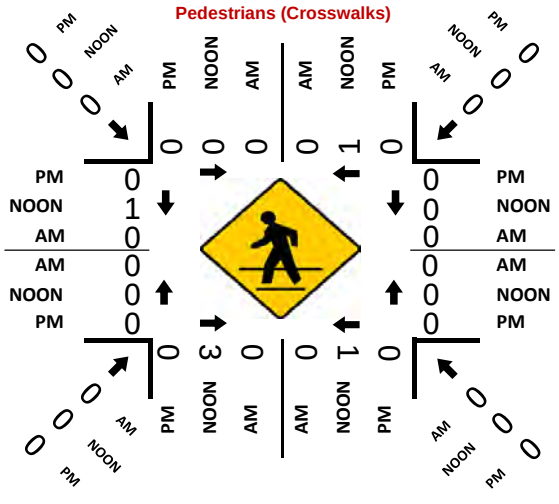
Total Vehicles (Noon)



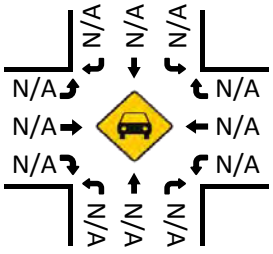
Bikes (NOON)



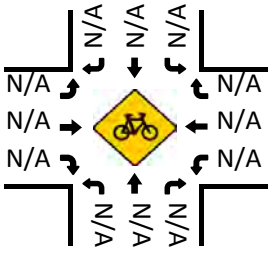
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Stuart Ranch Rd-Webb Way & Civic Center Way
City: Malibu
Control: 4-Way Stop

Project ID: 18-05340-008
Date: 2018-05-19

Total

NS/EW Streets:	Stuart Ranch Rd-Webb Way				Stuart Ranch Rd-Webb Way				Civic Center Way				Civic Center Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	30	4	19	1	1	3	3	0	1	40	26	0	17	21	1	0	167
12:15 PM	39	3	23	2	1	1	2	0	2	30	24	0	15	14	0	0	156
12:30 PM	42	4	11	0	0	2	1	0	3	30	30	0	21	32	2	0	178
12:45 PM	46	8	21	1	3	6	2	0	4	34	34	0	28	24	1	0	212
1:00 PM	50	5	31	0	1	4	2	0	0	20	25	0	22	26	1	0	187
1:15 PM	51	3	20	1	1	5	0	0	2	27	28	0	14	21	4	0	177
1:30 PM	54	3	27	0	0	7	0	0	1	19	18	0	31	39	0	0	199
1:45 PM	57	6	19	2	0	4	1	0	3	33	35	0	34	28	1	0	223
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	369	36	171	7	7	32	11	0	16	233	220	0	182	205	10	0	1499
APPROACH %'s :	63.29%	6.17%	29.33%	1.20%	14.00%	64.00%	22.00%	0.00%	3.41%	49.68%	46.91%	0.00%	45.84%	51.64%	2.52%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	212	17	97	3	2	20	3	0	6	99	106	0	101	114	6	0	786
PEAK HR FACTOR :	0.930	0.708	0.782	0.375	0.500	0.714	0.375	0.000	0.500	0.750	0.757	0.000	0.743	0.731	0.375	0.000	0.881
	0.956				0.893				0.743				0.789				

Prepared by National Data & Surveying Services

Cross Creek Rd & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05340-009
City: Malibu

Day: Tuesday
Date: 05/22/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:15 PM - 05:15 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Cross Creek Rd

AM	54	50	0	0	101	AM
NOON	0	0	0	0	0	NOON
PM	42	51	0	0	66	PM

EASTBOUND — Civic Center Way

AM	NOON	PM		
150	0	217	⇦	
0	0	0	↶	0
48	0	29	↱	0
3	0	0	→	2
80	0	134	↷	0

WESTBOUND — Civic Center Way

PM	NOON	AM		
0	0	0	↶	0
5	0	1	←	1
4	0	1	↰	0
0	0	0	↶	0
4	0	4	⇨	

NORTHBOUND — Cross Creek Rd

PM	190	1	170	37	4	PM
NOON	0	0	0	0	0	NOON
AM	131	0	95	53	1	AM

⇩	↶	↰	↑	↱
	0	0	1	0

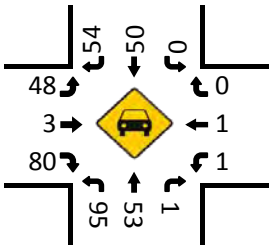
PM	NOON	AM
0	0	0
1	0	0
0	0	0
0	0	0
4	0	4

CONTROL

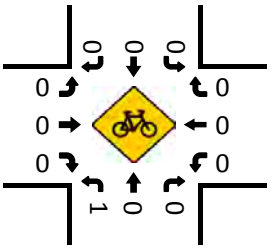
3-Way Stop(NB/SB/EB)

TEV	386 AM	0 NOON	477 PM
PHF	0.94		0.92

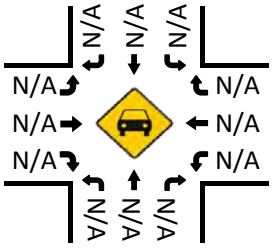
Total Vehicles (AM)



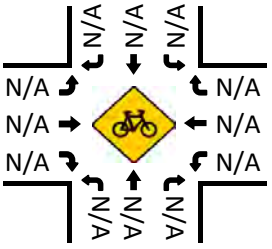
Bikes (AM)



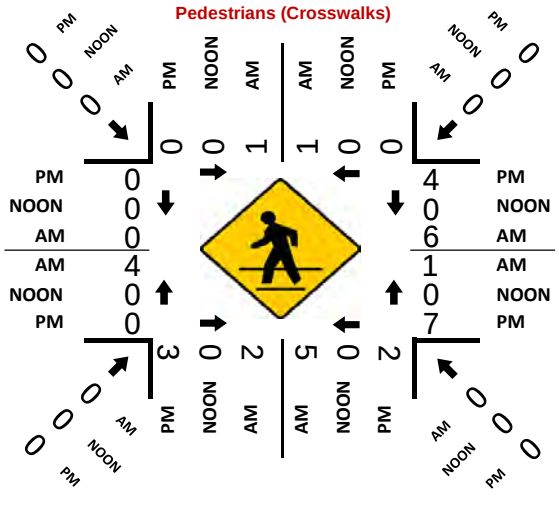
Total Vehicles (Noon)



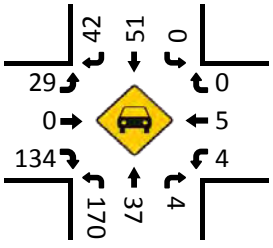
Bikes (NOON)



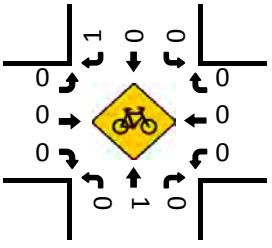
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Civic Center Way
City: Malibu
Control: 3-Way Stop(NB/SB/EB)

Project ID: 18-05340-009
Date: 5/22/2018

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Civic Center Way				Civic Center Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	14	12	0	0	0	6	14	0	16	0	27	0	0	0	0	0	89
7:15 AM	13	16	0	0	0	8	6	0	9	1	20	0	0	0	0	0	73
7:30 AM	24	6	2	0	0	6	9	0	16	0	16	0	0	0	1	0	80
7:45 AM	18	7	1	1	0	7	10	0	24	0	21	0	0	0	0	0	89
8:00 AM	19	11	0	0	0	10	17	0	11	0	18	0	0	0	0	0	86
8:15 AM	20	11	1	0	0	14	16	0	14	1	21	0	1	0	0	0	99
8:30 AM	33	17	0	0	0	13	6	0	9	1	18	0	0	1	0	0	98
8:45 AM	23	14	0	0	0	13	15	0	14	1	23	0	0	0	0	0	103
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	164	94	4	1	0	77	93	0	113	4	164	0	1	1	1	0	717
APPROACH %'s :	62.36%	35.74%	1.52%	0.38%	0.00%	45.29%	54.71%	0.00%	40.21%	1.42%	58.36%	0.00%	33.33%	33.33%	33.33%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	95	53	1	0	0	50	54	0	48	3	80	0	1	1	0	0	386
PEAK HR FACTOR :	0.720	0.779	0.250	0.000	0.000	0.893	0.794	0.000	0.857	0.750	0.870	0.000	0.250	0.250	0.000	0.000	0.937
	0.745				0.867				0.862				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	32	8	1	0	0	6	12	0	6	0	38	0	0	3	0	0	106
4:15 PM	38	10	1	0	0	14	14	0	9	0	43	0	1	0	0	0	130
4:30 PM	49	5	2	0	0	15	10	0	9	0	29	0	1	0	0	0	120
4:45 PM	34	8	0	1	0	10	11	0	4	0	25	0	0	5	0	0	98
5:00 PM	49	14	1	0	0	12	7	0	7	0	37	0	2	0	0	0	129
5:15 PM	41	8	0	1	0	9	19	0	7	2	22	0	1	0	0	0	110
5:30 PM	21	6	0	0	0	8	12	0	2	1	38	0	1	2	0	0	91
5:45 PM	36	6	2	0	0	7	8	0	5	1	33	0	0	0	0	0	98
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	300	65	7	2	0	81	93	0	49	4	265	0	6	10	0	0	882
APPROACH %'s :	80.21%	17.38%	1.87%	0.53%	0.00%	46.55%	53.45%	0.00%	15.41%	1.26%	83.33%	0.00%	37.50%	62.50%	0.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	170	37	4	1	0	51	42	0	29	0	134	0	4	5	0	0	477
PEAK HR FACTOR :	0.867	0.661	0.500	0.250	0.000	0.850	0.750	0.000	0.806	0.000	0.779	0.000	0.500	0.250	0.000	0.000	0.917
	0.828				0.830				0.784				0.450				

Prepared by National Data & Surveying Services

Cross Creek Rd & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05340-009
City: Malibu

Day: Saturday
Date: 05/19/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:45 PM - 01:45 PM	12:00 PM - 02:00 PM
NONE	NONE

SOUTHBOUND — Cross Creek Rd

AM	0	0	0	0	0	AM
NOON	31	32	0	0	48	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Civic Center Way

AM	NOON	PM	
0	196	0	
0	1	0	0
0	25	0	0
0	2	0	2
0	168	0	0
AM	NOON	PM	

WESTBOUND — Civic Center Way

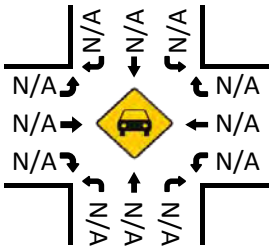
PM	NOON	AM	
0	0	0	0
0	2	0	1
0	7	0	0
0	0	0	0
0	11	0	
PM	NOON	AM	

NORTHBOUND — Cross Creek Rd

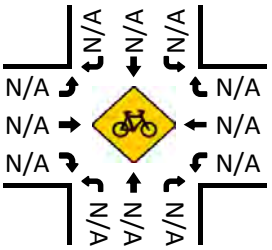
PM	0	0	0	0	0	PM
NOON	210	3	162	23	9	NOON
AM	0	0	0	0	0	AM

CONTROL			
3-Way Stop(NB/SB/EB)			
TEV	0 AM	465 NOON	0 PM
PHF		0.82	

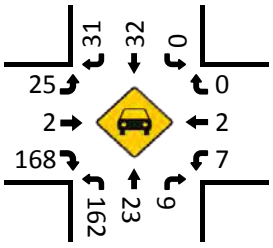
Total Vehicles (AM)



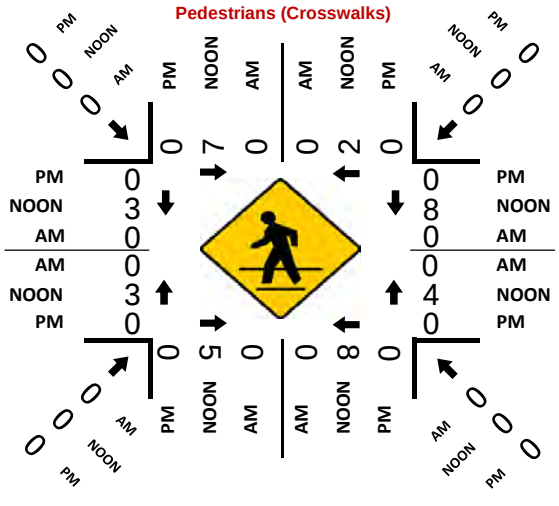
Bikes (AM)



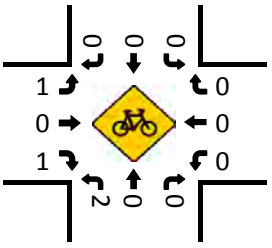
Total Vehicles (Noon)



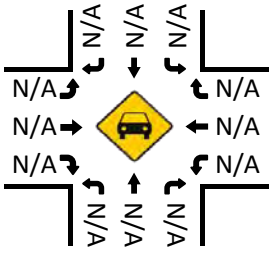
Pedestrians (Crosswalks)



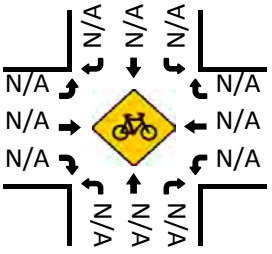
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Civic Center Way
City: Malibu
Control: 3-Way Stop(NB/SB/EB)

Project ID: 18-05340-009
Date: 2018-05-19

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Civic Center Way				Civic Center Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	2	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	33	9	2	0	0	7	9	0	9	4	45	0	0	1	0	0	119
12:15 PM	34	5	1	1	0	14	6	0	8	0	39	0	3	0	0	0	111
12:30 PM	38	6	1	1	0	1	14	0	3	1	27	0	0	0	0	0	92
12:45 PM	45	7	2	1	0	12	8	0	6	1	55	0	4	0	0	0	141
1:00 PM	33	5	3	0	0	8	6	0	6	0	46	0	0	1	0	0	108
1:15 PM	35	6	1	0	0	7	8	0	9	0	33	1	0	0	0	0	100
1:30 PM	49	5	3	2	0	5	9	0	4	1	34	0	3	1	0	0	116
1:45 PM	46	9	1	2	0	7	10	0	11	2	44	0	1	1	0	0	134
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	313	52	14	7	0	61	70	0	56	9	323	1	11	4	0	0	921
APPROACH %'s :	81.09%	13.47%	3.63%	1.81%	0.00%	46.56%	53.44%	0.00%	14.40%	2.31%	83.03%	0.26%	73.33%	26.67%	0.00%	0.00%	
PEAK HR :	12:45 PM - 01:45 PM																TOTAL
PEAK HR VOL :	162	23	9	3	0	32	31	0	25	2	168	1	7	2	0	0	465
PEAK HR FACTOR :	0.827	0.821	0.750	0.375	0.000	0.667	0.861	0.000	0.694	0.500	0.764	0.250	0.438	0.500	0.000	0.000	0.824
	0.835				0.788				0.790				0.563				

Prepared by National Data & Surveying Services

Kanan Dume Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-001
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	04:15 PM - 05:15 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Kanan Dume Rd — SOUTHBOUND

AM	340	0	188	4	307
NOON	0	0	0	0	0
PM	287	0	158	6	634

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
907	0	1414	
0	0	0	0
178	0	417	1
768	0	974	2
0	0	0	0

WESTBOUND — Pacific Coast Hwy

	PM	NOON	AM
1	211	0	125
2	1127	0	567
0	0	0	0
0	0	0	0
	1132	0	956

CONTROL

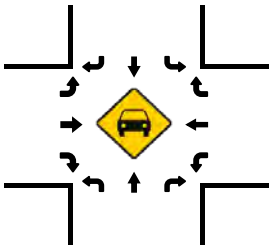
Signalized

	AM	NOON	PM
TEV	2170	0	3180
PHF	0.90		0.94

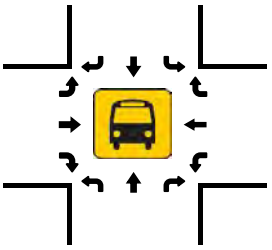
Kanan Dume Rd — NORTHBOUND

PM	0	0	0	0	0
NOON	0	0	0	0	0
AM	0	0	0	0	0

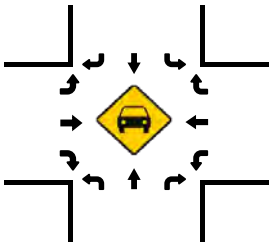
Total Vehicles (AM)



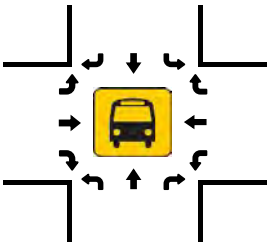
Total Vehicles (AM)



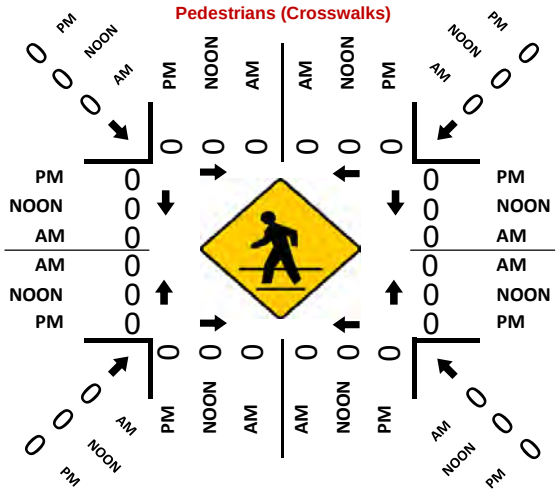
Total Vehicles (NOON)



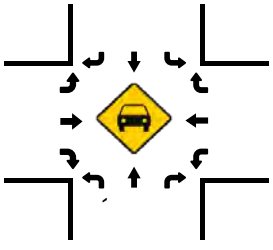
Total Vehicles (NOON)



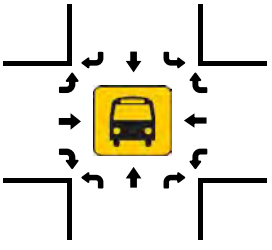
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Kanan Dume Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-001
Date: 7/31/2018

Total

NS/EW Streets:	Kanan Dume Rd				Kanan Dume Rd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	53	0	59	1	38	167	0	0	0	100	13	0	431
7:15 AM	0	0	0	0	63	0	58	2	30	179	0	0	0	108	15	0	455
7:30 AM	0	0	0	0	56	0	56	2	32	192	0	0	0	114	18	0	470
7:45 AM	0	0	0	0	36	0	78	0	22	161	0	0	0	135	23	0	455
8:00 AM	0	0	0	0	54	0	61	2	33	191	0	0	0	121	32	0	494
8:15 AM	0	0	0	0	42	0	77	2	55	190	0	0	0	157	32	0	555
8:30 AM	0	0	0	0	39	0	93	0	46	175	0	0	0	137	27	0	517
8:45 AM	0	0	0	0	53	0	109	0	44	212	0	0	0	152	34	0	604
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	396	0	591	9	300	1467	0	0	0	1024	194	0	3981
APPROACH %'s :					39.76%	0.00%	59.34%	0.90%	16.98%	83.02%	0.00%	0.00%	0.00%	84.07%	15.93%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	188	0	340	4	178	768	0	0	0	567	125	0	2170
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.870	0.000	0.780	0.500	0.809	0.906	0.000	0.000	0.000	0.903	0.919	0.000	0.898
							0.821				0.924				0.915		

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	43	0	70	1	105	234	0	0	0	317	45	0	815
4:15 PM	0	0	0	0	45	0	54	1	110	231	0	0	0	308	55	0	804
4:30 PM	0	0	0	0	35	0	88	3	99	246	0	0	0	258	53	0	782
4:45 PM	0	0	0	0	37	0	68	0	92	231	0	0	0	270	48	0	746
5:00 PM	0	0	0	0	41	0	77	2	116	266	0	0	0	291	55	0	848
5:15 PM	0	0	0	0	34	0	87	1	96	223	0	0	0	287	64	0	792
5:30 PM	0	0	0	0	36	0	73	4	81	193	0	0	0	253	52	0	692
5:45 PM	0	0	0	0	32	0	76	0	94	217	0	0	0	263	49	0	731
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	303	0	593	12	793	1841	0	0	0	2247	421	0	6210
APPROACH %'s :					33.37%	0.00%	65.31%	1.32%	30.11%	69.89%	0.00%	0.00%	0.00%	84.22%	15.78%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	0	0	0	0	158	0	287	6	417	974	0	0	0	1127	211	0	3180
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.878	0.000	0.815	0.500	0.899	0.915	0.000	0.000	0.000	0.915	0.959	0.000	0.938
							0.895				0.910				0.921		

Prepared by National Data & Surveying Services

Kanan Dume Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-001
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
NONE	NONE

Kanan Dume Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	685	0	256	2	579	NOON
PM	0	0	0	0	0	PM

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM		
0	1862	0		
0	0	0	0	
0	412	0	1	
0	961	0	2	
0	0	0	0	
AM	NOON	PM		

Pacific Coast Hwy — WESTBOUND

PM	NOON	AM	
0	165	0	1
0	1177	0	2
0	0	0	0
0	0	0	0
0	1217	0	
PM	NOON	AM	

1.5 0 1.5 0

0 0 0 0

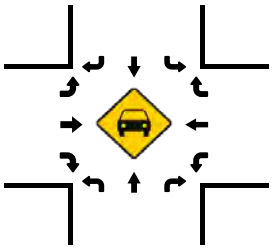
CONTROL: Signalized

	AM	NOON	PM
TEV	0	3658	0
PHF		0.99	

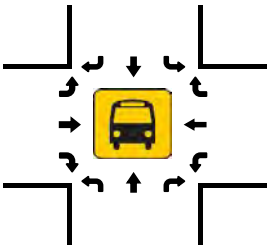
Kanan Dume Rd — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

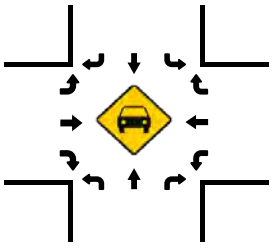
Total Vehicles (AM)



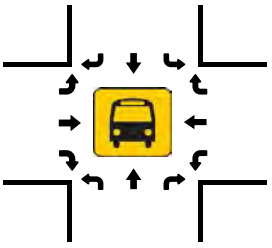
Total Vehicles (AM)



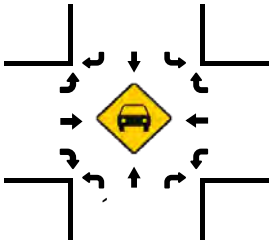
Total Vehicles (NOON)



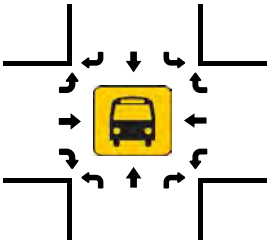
Total Vehicles (NOON)



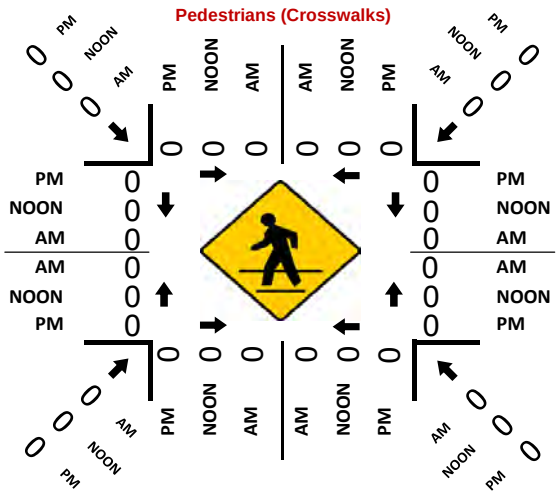
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Kanan Dume Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-001
Date: 2018-08-04

Total

NS/EW Streets:	Kanan Dume Rd				Kanan Dume Rd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1.5	0	1.5	0	1	2	0	0	0	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	61	0	178	0	77	241	0	0	0	283	47	0	887
12:15 PM	0	0	0	0	53	0	196	2	62	214	0	0	0	309	31	0	867
12:30 PM	0	0	0	0	51	0	200	2	103	238	0	0	0	287	45	0	926
12:45 PM	0	0	0	0	45	0	169	2	90	242	0	0	0	300	46	0	894
1:00 PM	0	0	0	0	63	0	180	0	100	242	0	0	0	306	37	0	928
1:15 PM	0	0	0	0	64	0	163	1	80	251	0	0	0	294	42	0	895
1:30 PM	0	0	0	0	68	0	189	1	106	219	0	0	0	290	42	0	915
1:45 PM	0	0	0	0	61	0	153	0	126	249	0	0	0	287	44	0	920
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	466	0	1428	8	744	1896	0	0	0	2356	334	0	7232
APPROACH %'s :					24.50%	0.00%	75.08%	0.42%	28.18%	71.82%	0.00%	0.00%	0.00%	87.58%	12.42%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	256	0	685	2	412	961	0	0	0	1177	165	0	3658
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.941	0.000	0.906	0.500	0.817	0.957	0.000	0.000	0.000	0.962	0.938	0.000	0.985
					0.914				0.915				0.978				

Prepared by National Data & Surveying Services

Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-002
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Malibu Canyon Rd/Winter Mesa Dr — SOUTHBOUND

AM	219	12	839	0	324 AM
NOON	0	0	0	0	0 NOON
PM	172	12	405	0	613 PM
	1	0.5	1.5	0	

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
916	0	1453	
0	0	0	0
125	0	356	2
862	0	1169	2
18	0	19	0

CONTROL

Signalized

	AM	NOON	PM
TEV	3001	0	3699
PHF	0.97		0.93

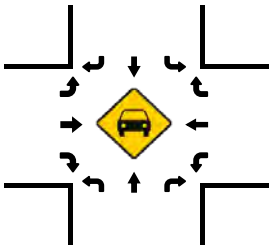
WESTBOUND — Pacific Coast Hwy

PM	NOON	AM	
238	0	186	1
1270	0	686	2
14	0	8	1
0	0	0	0
1588	0	1723	

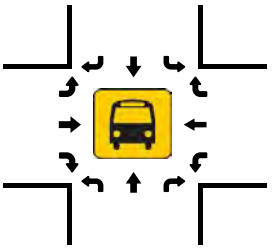
Malibu Canyon Rd/Winter Mesa Dr — NORTHBOUND

	0	0	2	0	
PM	45	0	11	19	14 PM
NOON	0	0	0	0	0 NOON
AM	38	0	11	13	22 AM

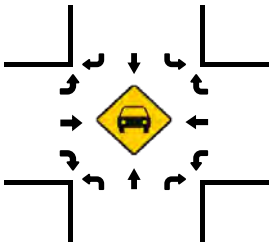
Total Vehicles (AM)



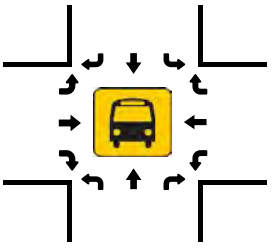
Total Vehicles (AM)



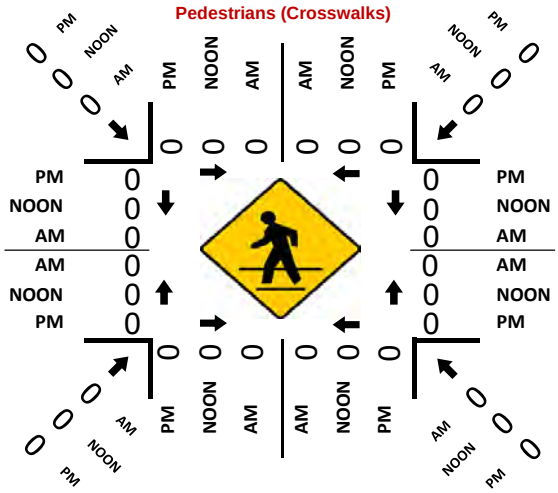
Total Vehicles (NOON)



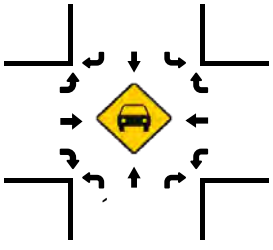
Total Vehicles (NOON)



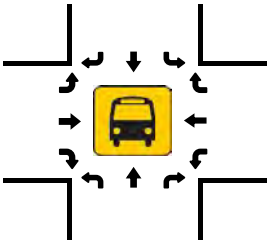
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-002
Date: 7/31/2018

Total

NS/EW Streets:	Malibu Canyon Rd/Winter Mesa Dr				Malibu Canyon Rd/Winter Mesa Dr				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1.5	0.5	1	0	2	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	0	1	0	247	2	54	0	15	203	7	0	6	139	16	0	692
7:15 AM	1	2	0	0	236	3	34	0	18	208	2	0	3	151	29	0	687
7:30 AM	1	1	3	0	226	3	51	0	19	223	5	0	1	137	45	0	715
7:45 AM	0	3	3	0	212	3	41	0	36	197	0	0	2	183	46	0	726
8:00 AM	7	4	10	0	210	4	38	0	24	215	6	0	5	171	50	0	744
8:15 AM	2	3	3	0	215	2	49	0	27	232	7	0	2	192	35	0	769
8:30 AM	1	4	6	0	214	4	65	0	32	194	1	0	0	145	48	0	714
8:45 AM	1	2	3	0	200	2	67	0	42	221	4	0	1	178	53	0	774
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	15	19	29	0	1760	23	399	0	213	1693	32	0	20	1296	322	0	5821
APPROACH %'s :	23.81%	30.16%	46.03%	0.00%	80.66%	1.05%	18.29%	0.00%	10.99%	87.36%	1.65%	0.00%	1.22%	79.12%	19.66%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	11	13	22	0	839	12	219	0	125	862	18	0	8	686	186	0	3001
PEAK HR FACTOR :	0.393	0.813	0.550	0.000	0.976	0.750	0.817	0.000	0.744	0.929	0.643	0.000	0.400	0.893	0.877	0.000	0.969
	0.548				0.945				0.941				0.948				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1.5	0.5	1	0	2	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	7	5	0	95	5	41	0	107	319	5	0	2	331	76	0	994
4:15 PM	2	2	5	0	100	3	32	0	80	279	3	0	7	323	45	0	881
4:30 PM	5	4	2	0	98	3	40	0	78	275	6	0	3	324	57	0	895
4:45 PM	3	6	2	0	112	1	59	0	91	296	5	0	2	292	60	0	929
5:00 PM	2	4	11	0	117	3	67	0	81	303	6	0	5	281	68	0	948
5:15 PM	5	2	11	0	97	2	36	0	90	297	5	0	2	271	69	0	887
5:30 PM	3	4	3	0	107	1	48	0	50	206	3	0	4	314	72	0	815
5:45 PM	0	2	6	0	109	5	27	0	62	253	2	0	3	276	68	0	813
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	21	31	45	0	835	23	350	0	639	2228	35	0	28	2412	515	0	7162
APPROACH %'s :	21.65%	31.96%	46.39%	0.00%	69.12%	1.90%	28.97%	0.00%	22.02%	76.77%	1.21%	0.00%	0.95%	81.62%	17.43%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	11	19	14	0	405	12	172	0	356	1169	19	0	14	1270	238	0	3699
PEAK HR FACTOR :	0.550	0.679	0.700	0.000	0.904	0.600	0.729	0.000	0.832	0.916	0.792	0.000	0.500	0.959	0.783	0.000	0.930
	0.846				0.856				0.896				0.930				

Prepared by National Data & Surveying Services

Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-002
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
NONE	NONE

Malibu Canyon Rd/Winter Mesa Dr — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	381	20	311	0	432	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
0	1763	0	
0	0	0	0
0	230	0	2
0	1121	0	2
0	18	0	0

WESTBOUND — Pacific Coast Hwy

PM	NOON	AM	
0	187	0	1
0	1374	0	2
0	27	0	1
0	0	0	0
0	1472	0	

	1	0.5	1.5	0

	0	0	2	0

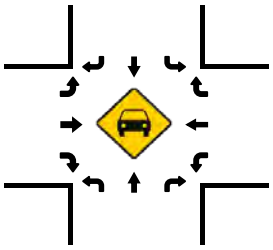
CONTROL: Signalized

	AM	NOON	PM
TEV	0	3732	0
PHF		0.94	

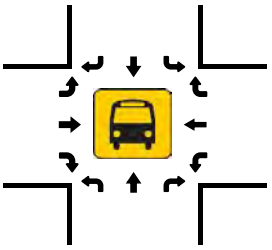
Malibu Canyon Rd/Winter Mesa Dr — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	65	0	8	15	40	NOON
AM	0	0	0	0	0	AM

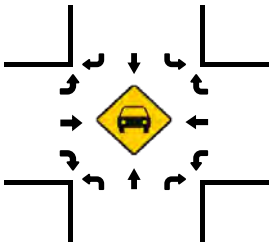
Total Vehicles (AM)



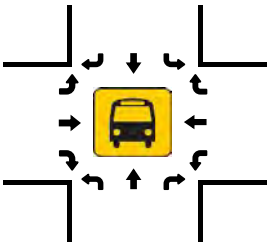
Total Vehicles (AM)



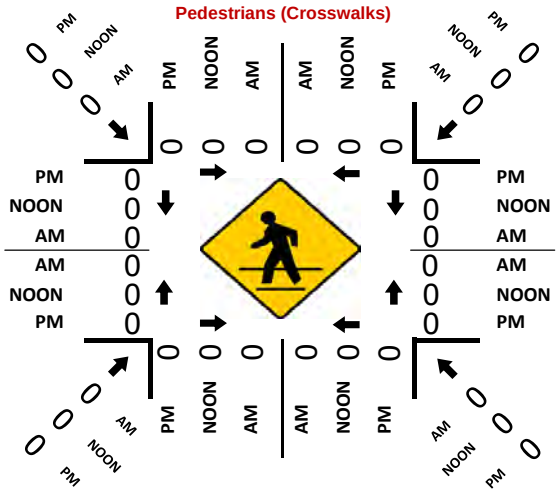
Total Vehicles (NOON)



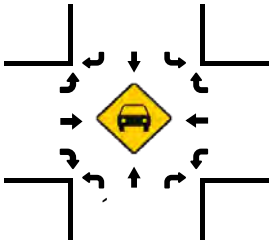
Total Vehicles (NOON)



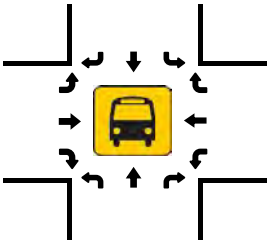
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Malibu Canyon Rd/Winter Mesa Dr & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-002
Date: 2018-08-04

Total

NS/EW Streets:	Malibu Canyon Rd/Winter Mesa Dr				Malibu Canyon Rd/Winter Mesa Dr				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1.5	0.5	1	0	2	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	5	4	10	0	100	7	117	0	53	271	4	0	4	304	38	0	917
12:15 PM	1	2	8	0	106	7	83	0	40	299	5	0	1	310	34	0	896
12:30 PM	1	2	5	0	87	7	87	0	46	304	3	0	8	344	30	0	924
12:45 PM	1	2	7	0	86	7	109	0	65	274	5	0	5	293	22	0	876
1:00 PM	3	4	11	0	89	8	97	0	57	294	3	0	9	363	54	0	992
1:15 PM	1	6	10	0	81	4	96	0	57	276	3	0	3	338	48	0	923
1:30 PM	2	0	4	0	79	5	94	0	49	281	6	0	3	352	39	0	914
1:45 PM	2	5	15	0	62	3	94	0	67	270	6	0	12	321	46	0	903
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	16	25	70	0	690	48	777	0	434	2269	35	0	45	2625	311	0	7345
APPROACH %'s :	14.41%	22.52%	63.06%	0.00%	45.54%	3.17%	51.29%	0.00%	15.85%	82.87%	1.28%	0.00%	1.51%	88.06%	10.43%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	8	15	40	0	311	20	381	0	230	1121	18	0	27	1374	187	0	3732
PEAK HR FACTOR :	0.667	0.625	0.667	0.000	0.874	0.625	0.982	0.000	0.858	0.953	0.750	0.000	0.563	0.946	0.866	0.000	0.941
	0.716				0.918				0.967				0.932				

Prepared by National Data & Surveying Services

Webb Way & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-003
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

Webb Way — SOUTHBOUND

AM	51	33	25	0	342	AM
NOON	0	0	0	0	0	NOON
PM	76	76	122	0	477	PM
	1	0.5	1.5	0		

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
903	0	1495	
7	0	26	0
110	0	72	1
1499	0	1371	3
80	0	63	1
AM	NOON	PM	

CONTROL

Signalized

TEV	2999 AM	0 NOON	3831 PM
PHF	0.93		0.98

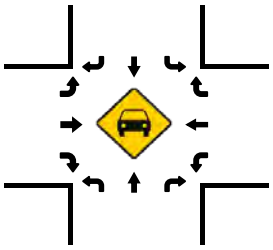
Pacific Coast Hwy — WESTBOUND

PM	NOON	AM	
325	0	199	1
1277	0	814	2
163	0	97	1
25	0	8	0
1554	0	1543	
PM	NOON	AM	

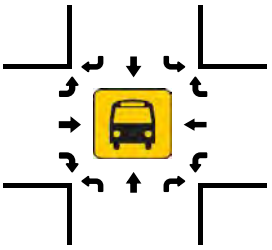
Webb Way — NORTHBOUND

	0	1	0.5	0.5	
PM	305	3	116	80	36	PM
NOON	0	0	0	0	0	NOON
AM	211	1	31	33	11	AM

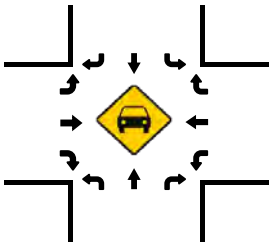
Total Vehicles (AM)



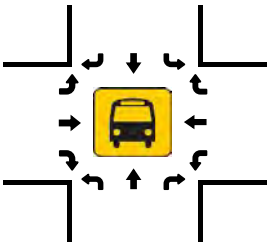
Total Vehicles (AM)



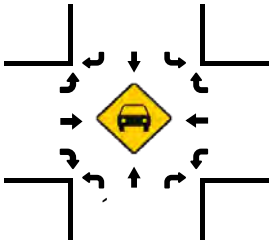
Total Vehicles (NOON)



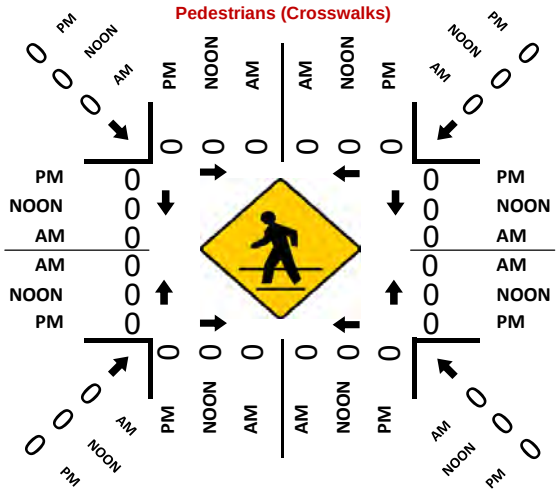
Total Vehicles (NOON)



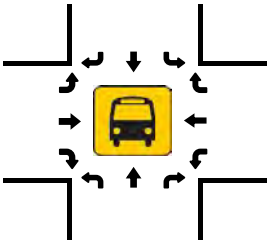
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Webb Way & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-003
Date: 7/31/2018

Total

NS/EW Streets:	Webb Way				Webb Way				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	1	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	3	2	0	12	8	11	0	21	370	22	0	40	127	27	1	649
7:15 AM	4	8	3	0	7	5	8	0	19	403	24	0	24	188	28	1	722
7:30 AM	11	13	1	0	10	5	5	0	30	362	18	0	27	151	48	3	684
7:45 AM	4	4	5	1	4	3	10	0	26	397	20	1	34	244	53	1	807
8:00 AM	10	11	2	0	6	10	13	0	27	339	19	2	15	202	53	3	712
8:15 AM	9	9	1	0	5	6	8	0	34	412	24	2	24	210	45	4	793
8:30 AM	8	9	3	0	10	14	20	0	23	351	17	2	24	158	48	0	687
8:45 AM	19	6	4	1	12	9	6	0	32	338	21	1	30	213	55	5	752
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	70	63	21	2	66	60	81	0	212	2972	165	8	218	1493	357	18	5806
APPROACH %'s :	44.87%	40.38%	13.46%	1.28%	31.88%	28.99%	39.13%	0.00%	6.32%	88.53%	4.92%	0.24%	10.45%	71.57%	17.11%	0.86%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	31	33	11	1	25	33	51	0	110	1499	80	7	97	814	199	8	2999
PEAK HR FACTOR :	0.775	0.750	0.550	0.250	0.625	0.589	0.638	0.000	0.809	0.910	0.833	0.875	0.713	0.834	0.939	0.500	0.929
	0.826				0.619				0.898				0.842				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	1	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	29	29	6	1	43	18	28	0	17	356	11	5	26	325	81	6	981
4:15 PM	29	24	7	0	25	14	16	0	19	355	19	7	56	331	70	10	982
4:30 PM	30	16	13	1	31	27	14	0	12	310	16	9	38	300	93	3	913
4:45 PM	28	11	10	1	23	17	18	0	24	350	17	5	43	321	81	6	955
5:00 PM	29	25	5	0	42	22	20	0	23	363	17	4	22	298	78	5	953
5:15 PM	38	27	9	0	28	18	9	0	24	360	12	9	38	286	93	7	958
5:30 PM	28	17	7	0	40	14	19	0	7	308	9	5	33	348	100	10	945
5:45 PM	29	16	7	0	34	16	14	0	21	280	18	9	37	276	83	2	842
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	240	165	64	3	266	146	138	0	147	2682	119	53	293	2485	679	49	7529
APPROACH %'s :	50.85%	34.96%	13.56%	0.64%	48.36%	26.55%	25.09%	0.00%	4.90%	89.37%	3.97%	1.77%	8.36%	70.88%	19.37%	1.40%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	116	80	36	3	122	76	76	0	72	1371	63	26	163	1277	325	25	3831
PEAK HR FACTOR :	0.967	0.690	0.692	0.750	0.709	0.704	0.679	0.000	0.750	0.963	0.829	0.722	0.728	0.965	0.874	0.625	0.975
	0.904				0.770				0.958				0.958				

Prepared by National Data & Surveying Services

Webb Way & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-003
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS		COUNT PERIODS
NONE		NONE
12:30 PM - 01:30 PM		12:00 PM - 02:00 PM
NONE		NONE

Webb Way — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	65	61	93	0	283	NOON
PM	0	0	0	0	0	PM
	1	0.5	1.5	0		

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM	
0	1501	0	
0	29	0	0
0	95	0	1
0	1235	0	3
0	99	0	1
AM	NOON	PM	

Pacific Coast Hwy — WESTBOUND

	PM	NOON	AM
1	0	116	0
2	0	1269	0
1	0	210	0
0	0	33	0
	0	1391	0
	PM	NOON	AM

CONTROL

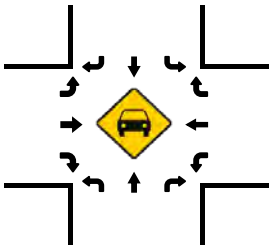
Signalized

	AM	NOON	PM
TEV	0	3545	0
PHF		0.99	

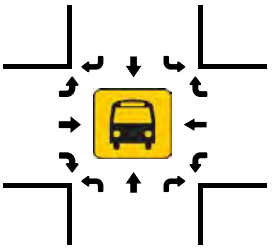
		0	1	0.5	0.5	
PM	0	0	0	0	0	PM
NOON	370	0	138	72	30	NOON
AM	0	0	0	0	0	AM

NORTHBOUND — Webb Way

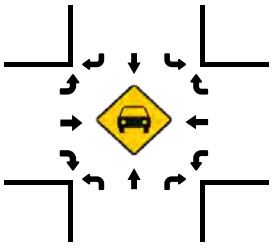
Total Vehicles (AM)



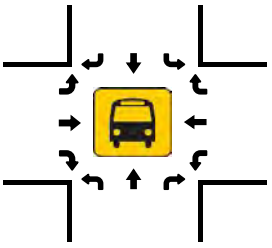
Total Vehicles (AM)



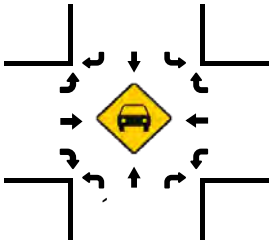
Total Vehicles (NOON)



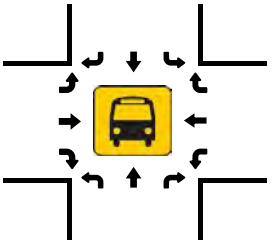
Total Vehicles (NOON)



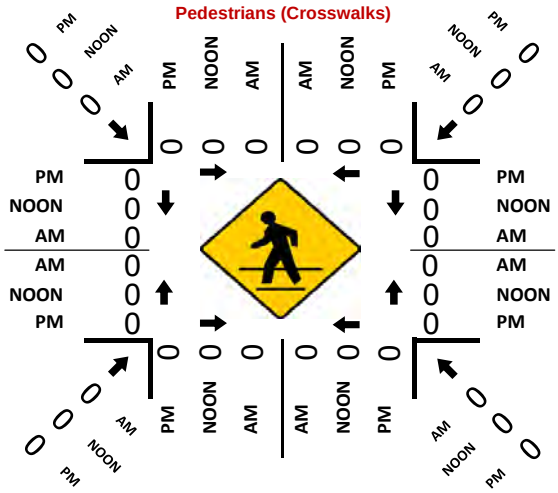
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Webb Way & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-003
Date: 2018-08-04

Total

NS/EW Streets:	Webb Way				Webb Way				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0.5	0.5	0	1.5	0.5	1	0	1	3	1	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	34	16	5	1	20	20	7	0	21	323	16	8	65	306	31	10	883
12:15 PM	22	17	7	0	20	32	15	0	24	322	38	4	34	284	40	6	865
12:30 PM	44	19	10	0	22	16	10	0	28	304	26	10	63	314	20	13	899
12:45 PM	32	19	4	0	18	14	22	0	27	329	25	5	39	309	25	7	875
1:00 PM	33	21	11	0	27	19	22	0	27	271	24	9	59	310	39	7	879
1:15 PM	29	13	5	0	26	12	11	0	13	331	24	5	49	336	32	6	892
1:30 PM	29	30	6	0	27	21	19	0	18	171	46	16	45	300	36	8	772
1:45 PM	33	26	9	0	13	27	21	0	20	211	62	7	34	341	44	5	853
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	256	161	57	1	173	161	127	0	178	2262	261	64	388	2500	267	62	6918
APPROACH %'s :	53.89%	33.89%	12.00%	0.21%	37.53%	34.92%	27.55%	0.00%	6.44%	81.81%	9.44%	2.31%	12.06%	77.71%	8.30%	1.93%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	138	72	30	0	93	61	65	0	95	1235	99	29	210	1269	116	33	3545
PEAK HR FACTOR :	0.784	0.857	0.682	0.000	0.861	0.803	0.739	0.000	0.848	0.933	0.952	0.725	0.833	0.944	0.744	0.635	0.986
	0.822				0.805				0.944				0.962				

Prepared by National Data & Surveying Services

Cross Creek Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-004
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

SOUTHBOUND — Cross Creek Rd

AM	55	2	79	0	187	AM
NOON	0	0	0	0	0	NOON
PM	110	0	194	0	257	PM
	1	0.5	1.5	0		

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
1096	0	1767	
0	0	0	0
80	0	104	1
1529	0	1557	2
5	0	11	0

WESTBOUND — Pacific Coast Hwy

PM	NOON	AM	
148	0	107	0
1643	0	1040	2
19	0	0	1
0	0	0	0
1776	0	1610	

CONTROL

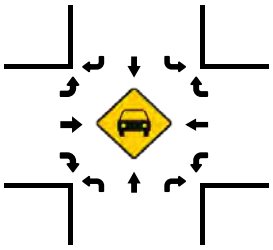
Signalized

TEV	2900	0	3830
	AM	NOON	PM
PHF	0.97		0.92

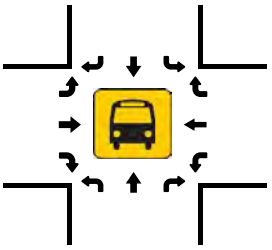
NORTHBOUND — Cross Creek Rd

PM	30	0	14	5	25	PM
NOON	0	0	0	0	0	NOON
AM	7	0	1	0	2	AM
		0	0.5	0.5	1	

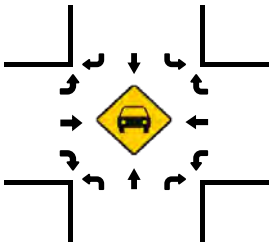
Total Vehicles (AM)



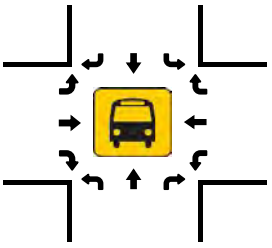
Total Vehicles (AM)



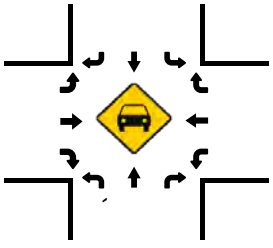
Total Vehicles (NOON)



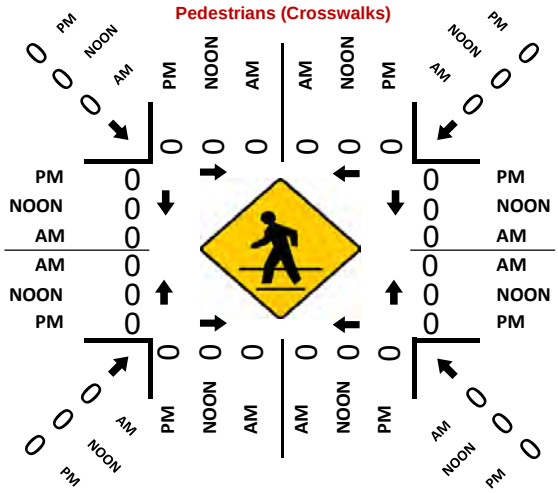
Total Vehicles (NOON)



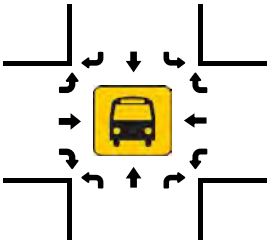
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-004
Date: 7/31/2018

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	23	0	5	0	7	422	0	0	0	181	24	0	662
7:15 AM	0	0	0	0	14	0	8	0	11	366	0	0	0	239	28	0	666
7:30 AM	0	0	2	0	25	0	12	0	16	416	2	0	0	242	31	0	746
7:45 AM	0	0	0	0	17	0	18	0	26	379	0	0	0	283	20	0	743
8:00 AM	0	0	0	0	13	2	13	0	12	383	2	0	0	238	16	0	679
8:15 AM	1	0	0	0	24	0	12	0	26	351	1	0	0	277	40	0	732
8:30 AM	1	0	0	0	20	0	16	0	30	388	2	0	0	217	29	0	703
8:45 AM	0	0	2	0	32	2	25	0	26	327	2	0	1	278	32	0	727
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	0	4	0	168	4	109	0	154	3032	9	0	1	1955	220	0	5658
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%	59.79%	1.42%	38.79%	0.00%	4.82%	94.90%	0.28%	0.00%	0.05%	89.84%	10.11%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	0	2	0	79	2	55	0	80	1529	5	0	0	1040	107	0	2900
PEAK HR FACTOR :	0.250	0.000	0.250	0.000	0.790	0.250	0.764	0.000	0.769	0.919	0.625	0.000	0.000	0.919	0.669	0.000	0.972
	0.375				0.919				0.930				0.905				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	0	5	0	43	0	32	0	25	451	3	0	11	438	36	0	1046
4:15 PM	1	0	14	0	49	0	31	0	28	396	1	0	6	394	44	0	964
4:30 PM	5	0	2	0	51	0	28	0	31	370	0	0	1	398	36	0	922
4:45 PM	6	5	4	0	51	0	19	0	20	340	7	0	1	413	32	0	898
5:00 PM	1	0	6	0	56	0	31	0	30	436	2	0	8	417	43	0	1030
5:15 PM	3	1	1	0	50	0	32	0	37	389	4	0	3	356	23	0	899
5:30 PM	0	0	3	0	39	3	25	0	19	359	2	0	4	479	43	0	976
5:45 PM	4	1	7	0	38	0	28	0	17	320	3	0	4	354	38	0	814
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	22	7	42	0	377	3	226	0	207	3061	22	0	38	3249	295	0	7549
APPROACH %'s :	30.99%	9.86%	59.15%	0.00%	62.21%	0.50%	37.29%	0.00%	6.29%	93.04%	0.67%	0.00%	1.06%	90.70%	8.24%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	14	5	25	0	194	0	110	0	104	1557	11	0	19	1643	148	0	3830
PEAK HR FACTOR :	0.583	0.250	0.446	0.000	0.951	0.000	0.859	0.000	0.839	0.863	0.393	0.000	0.432	0.938	0.841	0.000	0.915
	0.733				0.950				0.873				0.933				

Prepared by National Data & Surveying Services

Cross Creek Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-004
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:15 PM - 01:15 PM	12:00 PM - 02:00 PM
NONE	NONE

SOUTHBOUND — Cross Creek Rd

AM	0	0	0	0	0	AM
NOON	120	4	207	0	368	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Pacific Coast Hwy

AM	NOON	PM	
0	1592	0	
0	0	0	0
0	127	0	1
0	1460	0	2
0	12	0	0

WESTBOUND — Pacific Coast Hwy

PM	NOON	AM	
0	231	0	0
0	1454	0	2
0	57	0	1
0	6	0	0
0	1713	0	

NORTHBOUND — Cross Creek Rd

PM	0	0	0	0	0	PM
NOON	73	0	18	10	40	NOON
AM	0	0	0	0	0	AM

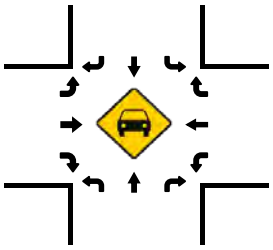
	1	0.5	1.5	0
	0	0.5	0.5	1

CONTROL

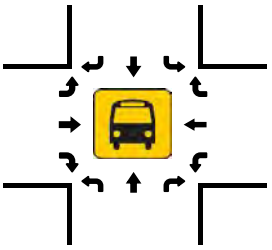
Signalized

	AM	NOON	PM
TEV	0	3746	0
PHF		0.98	

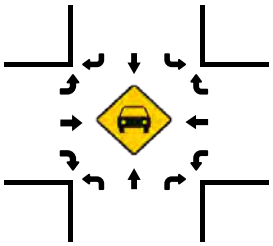
Total Vehicles (AM)



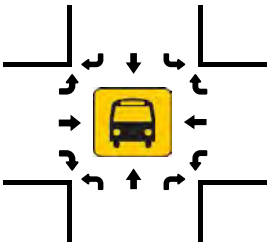
Total Vehicles (AM)



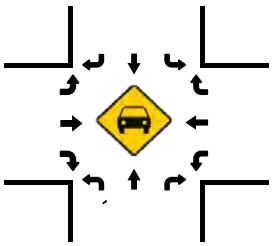
Total Vehicles (NOON)



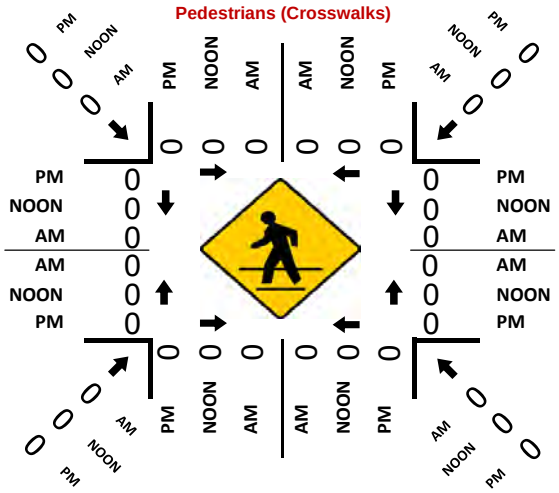
Total Vehicles (NOON)



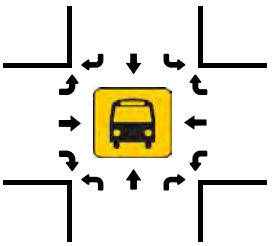
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-004
Date: 2018-08-04

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0.5	0.5	1	0	1.5	0.5	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	3	5	13	0	35	2	26	0	24	314	3	0	8	380	45	1	859
12:15 PM	6	3	5	0	60	2	29	0	20	374	5	0	12	342	62	0	920
12:30 PM	6	5	7	0	41	1	31	0	32	396	3	0	13	362	54	4	955
12:45 PM	5	1	13	0	42	1	25	0	31	374	3	0	19	372	59	0	945
1:00 PM	1	1	15	0	64	0	35	0	44	316	1	0	13	378	56	2	926
1:15 PM	4	0	4	0	43	3	29	0	20	327	0	0	3	407	56	1	897
1:30 PM	5	0	8	0	57	1	42	0	26	207	3	0	13	344	50	2	758
1:45 PM	4	0	8	0	52	0	16	0	22	304	2	0	10	402	59	1	880
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	34	15	73	0	394	10	233	0	219	2612	20	0	91	2987	441	11	7140
APPROACH %'s :	27.87%	12.30%	59.84%	0.00%	61.85%	1.57%	36.58%	0.00%	7.68%	91.62%	0.70%	0.00%	2.58%	84.62%	12.49%	0.31%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	18	10	40	0	207	4	120	0	127	1460	12	0	57	1454	231	6	3746
PEAK HR FACTOR :	0.750	0.500	0.667	0.000	0.809	0.500	0.857	0.000	0.722	0.922	0.600	0.000	0.750	0.962	0.931	0.375	0.981
	0.895				0.836				0.927				0.971				

Prepared by National Data & Surveying Services

Las Flores Canyon Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-005
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS

AM	07:15 AM - 08:15 AM
NOON	NONE
PM	04:00 PM - 05:00 PM

COUNT PERIODS

AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

Las Flores Canyon Rd — SOUTHBOUND

AM	22	1	33	0	48	AM
NOON	0	0	0	0	0	NOON
PM	25	2	43	0	64	PM

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM		
1290	0	1690	⇦	
0	0	2	↶	0
21	0	29	↱	1
1526	0	1801	→	2
2	0	26	↴	0
AM	NOON	PM		

CONTROL

Signalized

TEV	2907	0	3690
	AM	NOON	PM
PHF	0.93		0.99

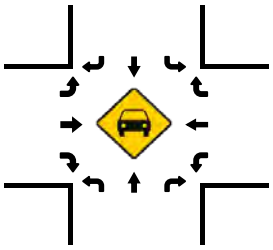
Pacific Coast Hwy — WESTBOUND

PM	NOON	AM		
			⇧	
31	0	27	↰	1
1652	0	1265	←	2
31	0	5	↰	1
0	0	0	↶	0
			⇨	
1877	0	1561		
PM	NOON	AM		

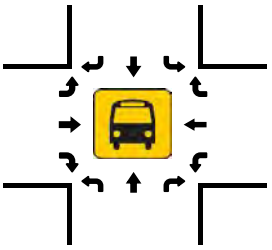
Las Flores Canyon Rd — NORTHBOUND

PM	59	0	11	4	33	PM
NOON	0	0	0	0	0	NOON
AM	8	0	3	0	2	AM

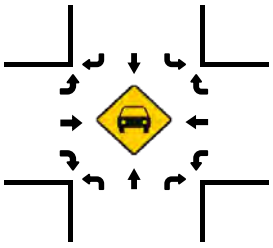
Total Vehicles (AM)



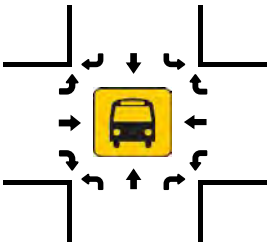
Total Vehicles (AM)



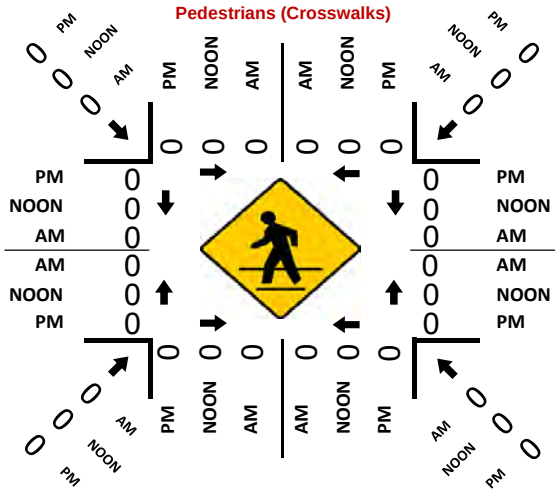
Total Vehicles (NOON)



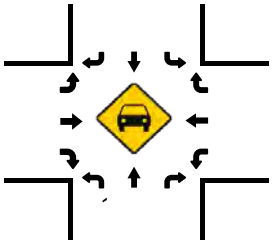
Total Vehicles (NOON)



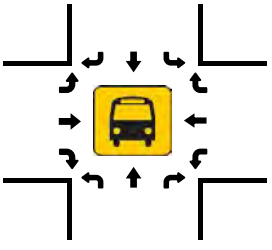
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Las Flores Canyon Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-005
Date: 7/31/2018

Total

NS/EW Streets:	Las Flores Canyon Rd				Las Flores Canyon Rd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	0	1	0	14	0	4	0	6	373	1	1	0	224	6	0	633
7:15 AM	0	0	0	0	6	0	3	0	6	356	0	0	2	293	6	0	672
7:30 AM	1	0	2	0	14	0	8	0	4	429	0	0	2	318	5	0	783
7:45 AM	2	0	0	0	9	0	5	0	5	392	0	0	1	291	8	0	713
8:00 AM	0	0	0	0	4	1	6	0	6	349	2	0	0	363	8	0	739
8:15 AM	1	0	3	0	11	0	6	0	7	340	2	1	0	245	6	0	622
8:30 AM	0	0	1	0	5	0	11	0	5	385	0	0	2	269	5	0	683
8:45 AM	1	0	0	0	12	0	7	0	7	305	0	0	1	289	13	0	635
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	8	0	7	0	75	1	50	0	46	2929	5	2	8	2292	57	0	5480
APPROACH %'s :	53.33%	0.00%	46.67%	0.00%	59.52%	0.79%	39.68%	0.00%	1.54%	98.22%	0.17%	0.07%	0.34%	97.24%	2.42%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	3	0	2	0	33	1	22	0	21	1526	2	0	5	1265	27	0	2907
PEAK HR FACTOR :	0.375	0.000	0.250	0.000	0.589	0.250	0.688	0.000	0.875	0.889	0.250	0.000	0.625	0.871	0.844	0.000	0.928
	0.417				0.636				0.894				0.874				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	1	9	0	10	1	9	0	4	454	4	1	9	412	9	0	925
4:15 PM	5	1	8	0	8	1	8	0	14	446	4	0	8	413	9	0	925
4:30 PM	1	1	9	0	14	0	5	0	7	451	10	1	8	395	10	0	912
4:45 PM	3	1	7	0	11	0	3	0	4	450	8	0	6	432	3	0	928
5:00 PM	4	0	4	0	9	2	7	0	7	416	14	1	7	382	10	0	863
5:15 PM	5	0	4	0	3	1	7	0	10	464	9	0	7	416	10	0	936
5:30 PM	2	0	8	0	9	0	5	0	13	469	10	1	2	414	9	0	942
5:45 PM	2	0	7	0	6	0	7	0	6	368	8	0	5	381	15	0	805
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	24	4	56	0	70	5	51	0	65	3518	67	4	52	3245	75	0	7236
APPROACH %'s :	28.57%	4.76%	66.67%	0.00%	55.56%	3.97%	40.48%	0.00%	1.78%	96.28%	1.83%	0.11%	1.54%	96.23%	2.22%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	11	4	33	0	43	2	25	0	29	1801	26	2	31	1652	31	0	3690
PEAK HR FACTOR :	0.550	1.000	0.917	0.000	0.768	0.500	0.694	0.000	0.518	0.992	0.650	0.500	0.861	0.956	0.775	0.000	0.994
	0.857				0.875				0.990				0.972				

Prepared by National Data & Surveying Services

Las Flores Canyon Rd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-005
City: Malibu

Day: Saturday
Date: 08/04/2018

Las Flores Canyon Rd — SOUTHBOUND

PEAK HOURS	NONE	AM	0	0	0	0	0	AM	NONE	COUNT PERIODS
	12:15 PM - 01:15 PM	NOON	30	3	37	0	73	NOON	12:00 PM - 02:00 PM	
	NONE	PM	0	0	0	0	0	PM	NONE	

EASTBOUND

AM	NOON	PM		
0	1884	0		
0	2	0	0	
0	42	0	1	
0	1427	0	2	
0	61	0	0	
AM	NOON	PM		

WESTBOUND

PM	NOON	AM	
0	30	0	1
0	1832	0	2
0	52	0	1
0	0	0	0
0	1508	0	
PM	NOON	AM	

CONTROL

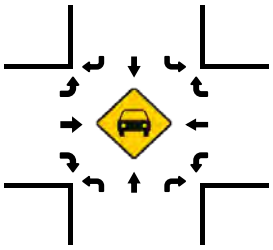
Signalized

	AM	NOON	PM
TEV	0	3581	0
PHF		0.97	

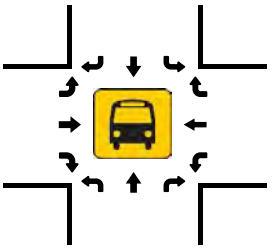
NORTHBOUND — Las Flores Canyon Rd

			0	0	1	0		
PM	0	0	0	0	PM
NOON	116	0	20	1	44	NOON
AM	0	0	0	0	0	AM

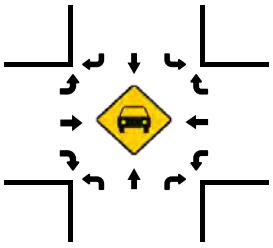
Total Vehicles (AM)



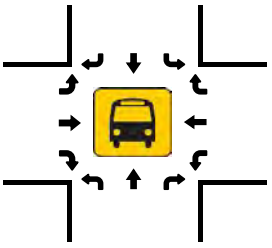
Total Vehicles (AM)



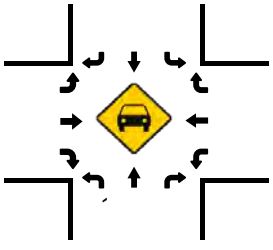
Total Vehicles (NOON)



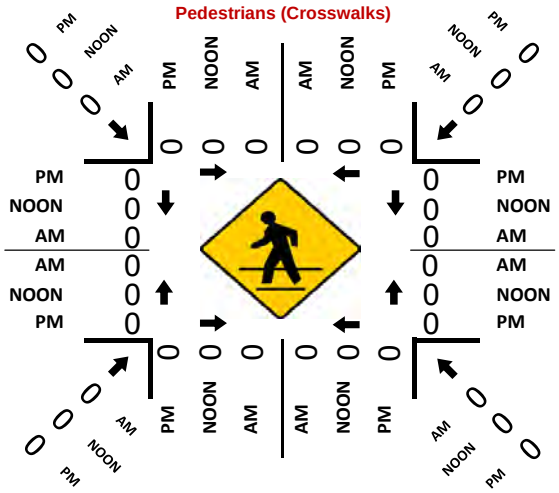
Total Vehicles (NOON)



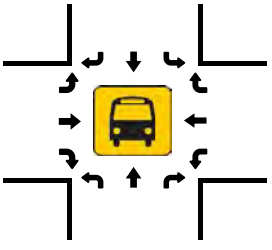
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Las Flores Canyon Rd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-005
Date: 2018-08-04

Total

NS/EW Streets:	Las Flores Canyon Rd				Las Flores Canyon Rd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	5	1	6	0	12	2	6	0	6	284	12	0	13	394	7	0	748
12:15 PM	6	0	9	0	6	1	6	0	12	356	14	0	15	443	8	0	876
12:30 PM	7	1	10	0	16	0	11	0	16	374	11	0	4	468	8	0	926
12:45 PM	4	0	14	0	9	1	7	0	5	326	22	1	21	468	11	0	889
1:00 PM	3	0	11	0	6	1	6	0	9	371	14	1	12	453	3	0	890
1:15 PM	9	0	7	0	7	0	18	0	2	326	12	0	11	441	4	0	837
1:30 PM	10	0	16	0	12	1	10	0	7	280	9	1	13	433	10	0	802
1:45 PM	6	3	15	0	11	0	11	0	5	284	9	0	5	452	9	0	810
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	50	5	88	0	79	6	75	0	62	2601	103	3	94	3552	60	0	6778
APPROACH %'s :	34.97%	3.50%	61.54%	0.00%	49.38%	3.75%	46.88%	0.00%	2.24%	93.93%	3.72%	0.11%	2.54%	95.84%	1.62%	0.00%	
PEAK HR :	12:15 PM - 01:15 PM																TOTAL
PEAK HR VOL :	20	1	44	0	37	3	30	0	42	1427	61	2	52	1832	30	0	3581
PEAK HR FACTOR :	0.714	0.250	0.786	0.000	0.578	0.750	0.682	0.000	0.656	0.954	0.693	0.500	0.619	0.979	0.682	0.000	0.967
	0.903				0.648				0.955				0.957				

Prepared by National Data & Surveying Services

Topanga Canyon Blvd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-006
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS	COUNT PERIODS
07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

SOUTHBOUND (Topanga Canyon Blvd)

AM	45	0	1079	0	219	AM
NOON	0	0	0	0	0	NOON
PM	64	0	266	0	1186	PM
	1	0	2	0		

EASTBOUND (Pacific Coast Hwy)

AM	NOON	PM	
1328	0	1744	
0	0	0	0
27	0	167	1
1560	0	1812	2
0	0	0	0
AM	NOON	PM	

WESTBOUND (Pacific Coast Hwy)

PM	NOON	AM	
1019	0	192	0.5
1680	0	1283	2.5
0	0	0	0
0	0	0	0
2078	0	2639	
PM	NOON	AM	

NORTHBOUND (Topanga Canyon Blvd)

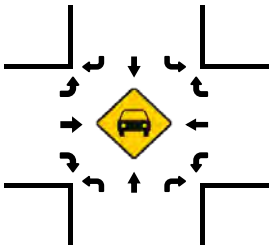
PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM
		0	0	0	0	

CONTROL

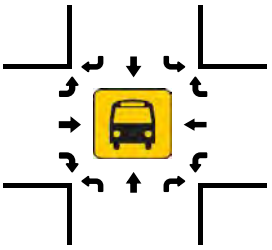
Signalized

TEV	4186 AM	0 NOON	5008 PM
PHF	0.96		0.96

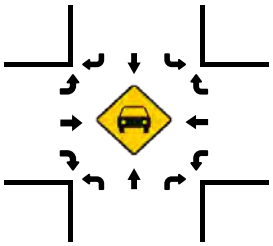
Total Vehicles (AM)



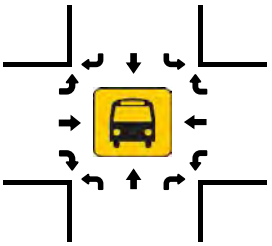
Total Vehicles (AM)



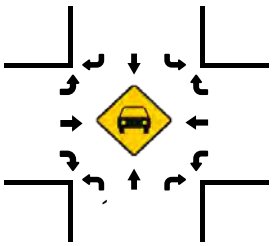
Total Vehicles (NOON)



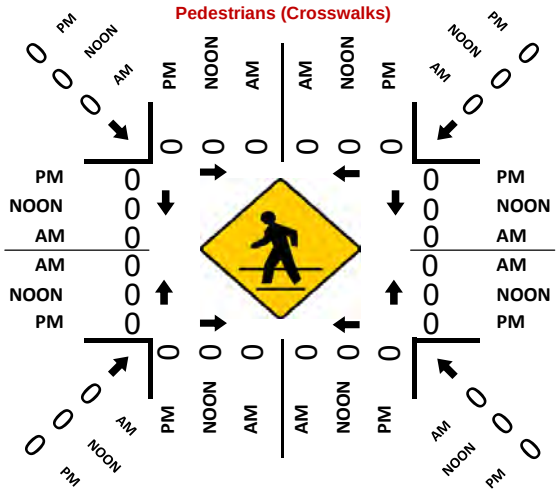
Total Vehicles (NOON)



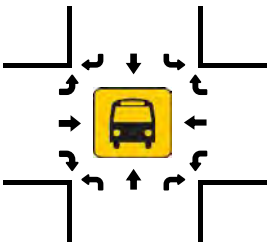
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Topanga Canyon Blvd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-006
Date: 7/31/2018

Total

NS/EW Streets:	Topanga Canyon Blvd				Topanga Canyon Blvd				Pacific Coast Hwy				Pacific Coast Hwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	1	2	0	0	0	2.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	249	0	9	0	6	433	0	0	0	263	35	0	995
7:15 AM	0	0	0	0	279	0	4	0	8	437	0	0	0	296	38	0	1062
7:30 AM	0	0	0	0	297	0	14	0	6	379	0	0	0	351	48	0	1095
7:45 AM	0	0	0	0	267	0	16	0	9	361	0	0	0	304	47	0	1004
8:00 AM	0	0	0	0	236	0	11	0	4	383	0	0	0	332	59	0	1025
8:15 AM	0	0	0	0	290	0	7	0	7	310	0	0	0	294	53	0	961
8:30 AM	0	0	0	0	305	0	3	0	8	341	0	0	0	278	65	0	1000
8:45 AM	0	0	0	0	273	0	16	0	8	334	0	0	0	316	47	0	994
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	2196	0	80	0	56	2978	0	0	0	2434	392	0	8136
APPROACH %'s :					96.49%	0.00%	3.51%	0.00%	1.85%	98.15%	0.00%	0.00%	0.00%	86.13%	13.87%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	0	0	0	1079	0	45	0	27	1560	0	0	0	1283	192	0	4186
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.908	0.000	0.703	0.000	0.750	0.892	0.000	0.000	0.000	0.914	0.814	0.000	0.956
					0.904				0.892				0.924				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	1	2	0	0	0	2.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	73	0	18	0	52	419	0	0	0	412	222	0	1196
4:15 PM	0	0	0	0	73	0	22	0	32	464	0	0	0	437	213	0	1241
4:30 PM	0	0	0	0	49	0	17	0	42	445	0	0	0	418	232	0	1203
4:45 PM	0	0	0	0	68	0	18	0	44	468	0	0	0	430	235	0	1263
5:00 PM	0	0	0	0	73	0	17	0	45	412	0	0	0	398	259	0	1204
5:15 PM	0	0	0	0	77	0	14	0	37	440	0	0	0	425	246	0	1239
5:30 PM	0	0	0	0	48	0	15	0	41	492	0	0	0	427	279	0	1302
5:45 PM	0	0	0	0	76	0	20	0	58	382	0	0	0	395	265	0	1196
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	537	0	141	0	351	3522	0	0	0	3342	1951	0	9844
APPROACH %'s :					79.20%	0.00%	20.80%	0.00%	9.06%	90.94%	0.00%	0.00%	0.00%	63.14%	36.86%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	0	0	0	266	0	64	0	167	1812	0	0	0	1680	1019	0	5008
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.864	0.000	0.889	0.000	0.928	0.921	0.000	0.000	0.000	0.977	0.913	0.000	0.962
					0.907				0.928				0.956				

Prepared by National Data & Surveying Services

Topanga Canyon Blvd & Pacific Coast Hwy

Peak Hour Turning Movement Count

ID: 18-05505-006
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
12:30 PM - 01:30 PM	12:00 PM - 02:00 PM
NONE	NONE

Topanga Canyon Blvd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	196	0	501	0	394	NOON
PM	0	0	0	0	0	PM

Pacific Coast Hwy — EASTBOUND

AM	NOON	PM		
0	2113	0		
0	0	0	0	
0	108	0	1	
0	1476	0	2	
0	0	0	0	
AM	NOON	PM		

CONTROL

Signalized

	AM	NOON	PM
TEV	0	4485	0
PHF		0.95	

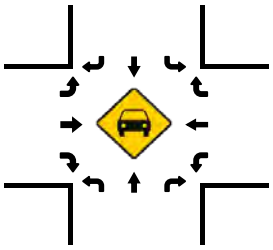
Pacific Coast Hwy — WESTBOUND

PM	NOON	AM		
0	286	0	0.5	
0	1917	0	2.5	
0	0	0	0	
0	1	0	0	
0	1978	0		
PM	NOON	AM		

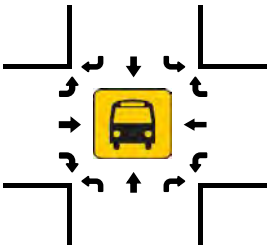
Topanga Canyon Blvd — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

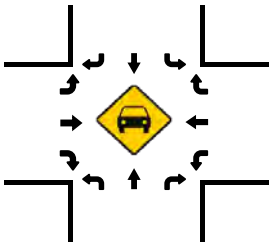
Total Vehicles (AM)



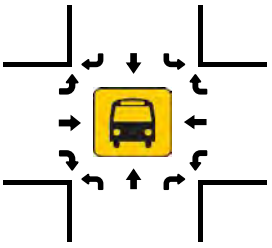
Total Vehicles (AM)



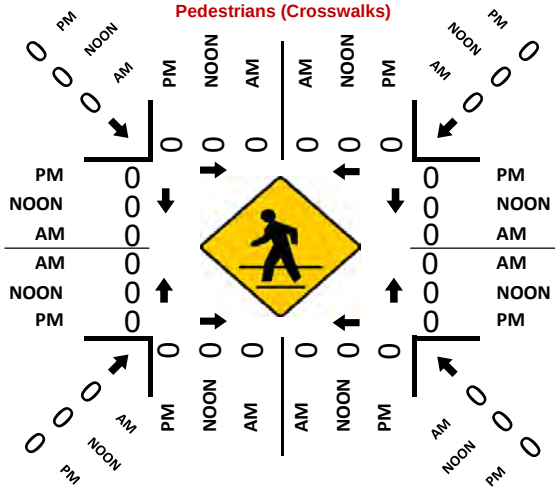
Total Vehicles (NOON)



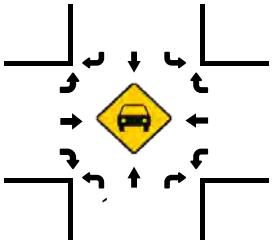
Total Vehicles (NOON)



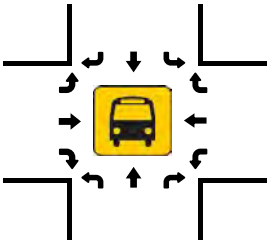
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Topanga Canyon Blvd & Pacific Coast Hwy
City: Malibu
Control: Signalized

Project ID: 18-05505-006
Date: 2018-08-04

Total

NS/EW Streets:	Topanga Canyon Blvd				Topanga Canyon Blvd				Pacific Coast Hwy				Pacific Coast Hwy				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	1	2	0	0	0	2.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	0	0	0	0	160	0	44	0	28	335	0	0	0	412	48	1	1028
12:15 PM	0	0	0	0	96	0	40	0	16	331	0	0	0	519	71	0	1073
12:30 PM	0	0	0	0	124	0	62	0	27	421	0	0	0	483	59	0	1176
12:45 PM	0	0	0	0	140	0	52	0	29	351	0	0	0	477	63	0	1112
1:00 PM	0	0	0	0	134	0	42	0	28	343	0	0	0	464	65	1	1077
1:15 PM	0	0	0	0	103	0	40	0	24	361	0	0	0	493	99	0	1120
1:30 PM	0	0	0	0	127	0	53	0	21	335	0	0	0	468	61	0	1065
1:45 PM	0	0	0	0	86	0	34	0	16	324	0	0	0	516	88	0	1064
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	970	0	367	0	189	2801	0	0	0	3832	554	2	8715
APPROACH %'s :					72.55%	0.00%	27.45%	0.00%	6.32%	93.68%	0.00%	0.00%	0.00%	87.33%	12.63%	0.05%	
PEAK HR :	12:30 PM - 01:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	501	0	196	0	108	1476	0	0	0	1917	286	1	4485
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.895	0.000	0.790	0.000	0.931	0.876	0.000	0.000	0.000	0.972	0.722	0.250	0.953
					0.908				0.884				0.931				

Prepared by National Data & Surveying Services

Malibu Canyon Rd & Seaver Dr/Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05505-007
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

SOUTHBOUND — Malibu Canyon Rd

AM	242	1050	31	0	449	AM
NOON	0	0	0	0	0	NOON
PM	29	526	151	0	1365	PM
	1	2	1	0		

EASTBOUND — Seaver Dr/Civic Center Way

AM	NOON	PM	
330	0	70	
0	0	0	0
24	0	229	1.5
22	0	35	0.5
11	0	75	1
AM	NOON	PM	

WESTBOUND — Seaver Dr/Civic Center Way

PM	NOON	AM	
574	0	200	0.5
29	0	52	0.5
28	0	19	1
0	0	0	0
206	0	109	
PM	NOON	AM	

CONTROL

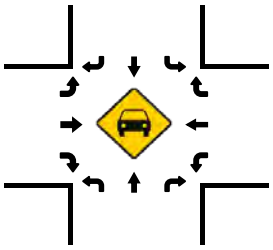
Signalized

		AM	NOON	PM
TEV	1968	0	2270	
PHF		0.97		0.90

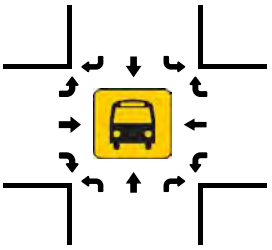
NORTHBOUND — Malibu Canyon Rd

PM	629	0	12	562	20	PM
NOON	0	0	0	0	0	NOON
AM	1080	0	36	225	56	AM
		0	1	2	1	

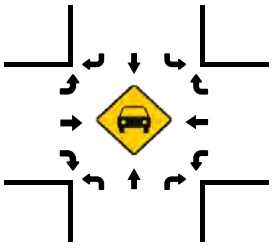
Total Vehicles (AM)



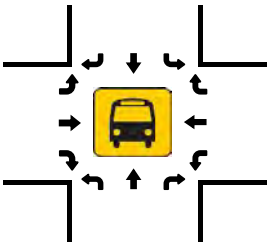
Total Vehicles (AM)



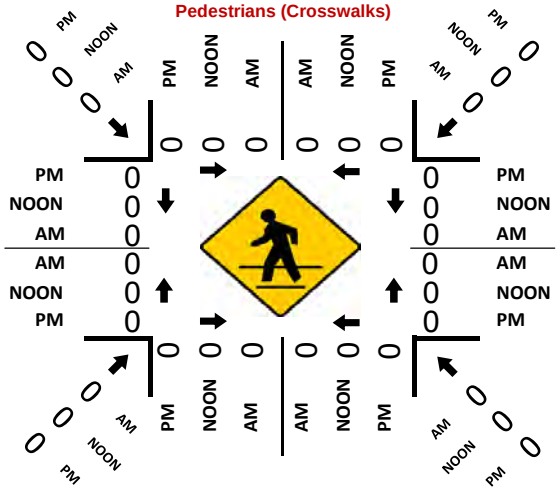
Total Vehicles (NOON)



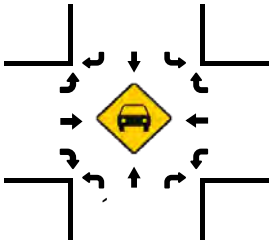
Total Vehicles (NOON)



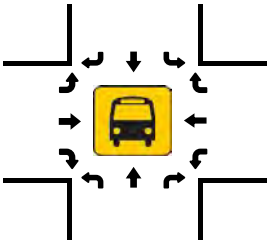
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Malibu Canyon Rd & Seaver Dr/Civic Center Way
City: Malibu
Control: Signalized

Project ID: 18-05505-007
Date: 7/31/2018

Total

NS/EW Streets:	Malibu Canyon Rd				Malibu Canyon Rd				Seaver Dr/Civic Center Way				Seaver Dr/Civic Center Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	5	13	11	0	12	288	25	0	3	2	3	0	7	4	22	0	395
7:15 AM	5	35	15	0	10	273	34	0	6	3	6	1	4	3	23	0	418
7:30 AM	2	56	4	0	5	275	44	0	4	5	0	0	1	11	45	0	452
7:45 AM	15	53	15	0	6	254	76	0	2	7	1	0	4	17	46	0	496
8:00 AM	7	61	12	0	3	223	88	0	6	6	5	0	4	16	52	0	483
8:15 AM	5	52	8	0	8	282	54	0	7	4	3	0	7	9	45	0	484
8:30 AM	9	59	21	0	14	291	24	0	9	5	2	0	4	10	57	0	505
8:45 AM	7	80	16	0	15	247	33	0	5	6	6	0	2	9	43	0	469
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	55	409	102	0	73	2133	378	0	42	38	26	1	33	79	333	0	3702
APPROACH %'s :	9.72%	72.26%	18.02%	0.00%	2.83%	82.55%	14.63%	0.00%	39.25%	35.51%	24.30%	0.93%	7.42%	17.75%	74.83%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	36	225	56	0	31	1050	242	0	24	22	11	0	19	52	200	0	1968
PEAK HR FACTOR :	0.600	0.922	0.667	0.000	0.554	0.902	0.688	0.000	0.667	0.786	0.550	0.000	0.679	0.765	0.877	0.000	0.974
	0.890				0.961				0.838				0.941				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	176	8	0	35	126	4	0	36	8	10	0	5	4	150	0	564
4:15 PM	3	127	7	1	45	128	7	0	19	3	8	0	0	8	144	0	500
4:30 PM	5	128	2	0	34	133	8	0	33	6	7	0	6	5	147	0	514
4:45 PM	3	131	8	0	38	138	7	0	49	7	21	0	9	8	137	0	556
5:00 PM	2	152	1	0	32	150	10	0	98	14	28	0	10	5	130	0	632
5:15 PM	4	155	5	0	36	113	6	0	53	8	17	0	3	9	154	0	563
5:30 PM	3	124	6	0	45	125	6	0	29	6	9	0	6	7	153	0	519
5:45 PM	6	134	2	0	47	147	16	0	14	2	5	0	2	5	149	0	529
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	28	1127	39	1	312	1060	64	0	331	54	105	0	41	51	1164	0	4377
APPROACH %'s :	2.34%	94.31%	3.26%	0.08%	21.73%	73.82%	4.46%	0.00%	67.55%	11.02%	21.43%	0.00%	3.26%	4.06%	92.68%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	12	562	20	0	151	526	29	0	229	35	75	0	28	29	574	0	2270
PEAK HR FACTOR :	0.750	0.906	0.625	0.000	0.839	0.877	0.725	0.000	0.584	0.625	0.670	0.000	0.700	0.806	0.932	0.000	0.898
	0.905				0.919				0.605				0.950				

Prepared by National Data & Surveying Services

Malibu Canyon Rd & Seaver Dr/Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05505-007
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
NONE	NONE

SOUTHBOUND (Malibu Canyon Rd)

AM	0	0	0	0	0	AM
NOON	30	686	206	0	641	NOON
PM	0	0	0	0	0	PM

1 2 1 0

EASTBOUND (Seaver Dr/Civic Center Way)

AM	NOON	PM	
0	85	0	
0	0	0	0
0	41	0	1.5
0	18	0	0.5
0	16	0	1
AM	NOON	PM	

WESTBOUND (Seaver Dr/Civic Center Way)

PM	NOON	AM	
0	234	0	0.5
0	27	0	0.5
0	23	0	1
0	0	0	0
0	261	0	
PM	NOON	AM	

CONTROL

Signalized

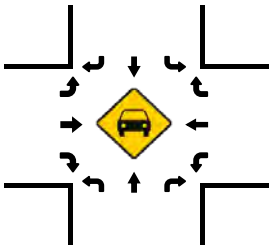
	AM	NOON	PM
TEV	0	1712	0
PHF		0.96	

0 1 2 1

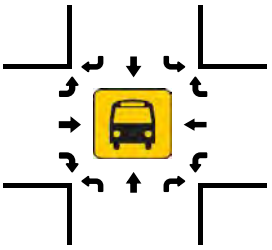
NORTHBOUND (Malibu Canyon Rd)

PM	0	0	0	0	0	PM
NOON	725	0	28	366	37	NOON
AM	0	0	0	0	0	AM

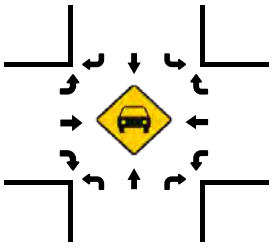
Total Vehicles (AM)



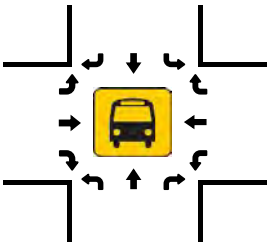
Total Vehicles (AM)



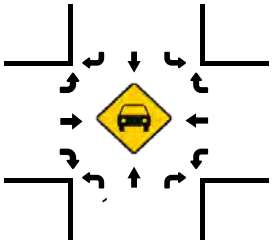
Total Vehicles (NOON)



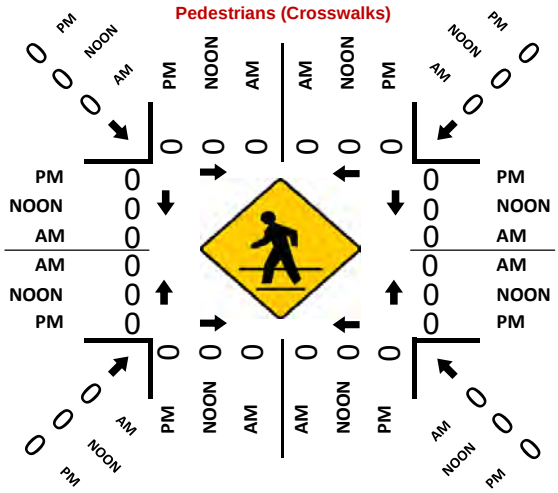
Total Vehicles (NOON)



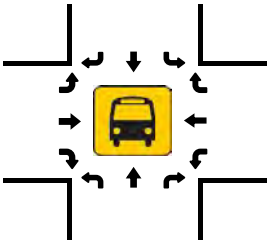
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Malibu Canyon Rd & Seaver Dr/Civic Center Way
City: Malibu
Control: Signalized

Project ID: 18-05505-007
Date: 2018-08-04

Total

NS/EW Streets:	Malibu Canyon Rd				Malibu Canyon Rd				Seaver Dr/Civic Center Way				Seaver Dr/Civic Center Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1.5	0.5	1	0	1	0.5	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	8	76	7	1	55	203	3	0	10	15	6	0	2	12	43	0	441
12:15 PM	4	76	7	0	50	201	9	0	3	4	8	0	7	7	48	0	424
12:30 PM	4	62	9	0	56	159	11	0	15	6	5	0	4	5	34	0	370
12:45 PM	4	78	6	0	36	183	4	0	2	1	7	0	4	5	58	0	388
1:00 PM	7	101	11	0	51	188	7	0	12	3	2	0	5	7	53	0	447
1:15 PM	7	95	7	0	55	192	7	0	11	5	5	0	6	6	51	0	447
1:30 PM	8	69	10	0	52	149	3	0	10	4	4	0	6	5	64	0	384
1:45 PM	6	101	9	0	48	157	13	0	8	6	5	0	6	9	66	0	434
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	48	658	66	1	403	1432	57	0	71	44	42	0	40	56	417	0	3335
APPROACH %'s :	6.21%	85.12%	8.54%	0.13%	21.30%	75.69%	3.01%	0.00%	45.22%	28.03%	26.75%	0.00%	7.80%	10.92%	81.29%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	28	366	37	0	206	686	30	0	41	18	16	0	23	27	234	0	1712
PEAK HR FACTOR :	0.875	0.906	0.841	0.000	0.936	0.893	0.577	0.000	0.854	0.750	0.800	0.000	0.958	0.750	0.886	0.000	0.957
		0.905				0.907				0.893				0.877			

Prepared by National Data & Surveying Services

Stuart Ranch Rd/Webb Way & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05505-008
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Stuart Ranch Rd/Webb Way — SOUTHBOUND

AM	5	14	3	0	84	AM
NOON	0	0	0	0	0	NOON
PM	50	47	11	0	24	PM

EASTBOUND — Civic Center Way

AM	NOON	PM		
249	0	645	⇦	
0	0	0	↶	0
16	0	7	↱	0
76	0	83	→	1
39	0	129	↴	1
AM	NOON	PM		

WESTBOUND — Civic Center Way

PM	NOON	AM		
6	0	11	↰	0
175	0	50	←	1
89	0	59	↰	1
0	0	0	↶	0
174	0	182	⇨	
PM	NOON	AM		

NORTHBOUND — Stuart Ranch Rd/Webb Way

PM	266	1	420	11	80	PM
NOON	0	0	0	0	0	NOON
AM	113	1	194	57	103	AM

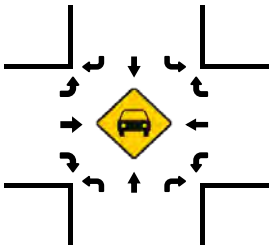
⇩	0	0	1	1
	↶	↰	↑	↱

CONTROL

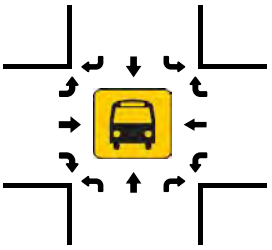
4-Way Stop

TEV	628 AM	0 NOON	1109 PM
PHF	0.90		0.96

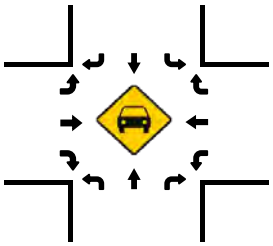
Total Vehicles (AM)



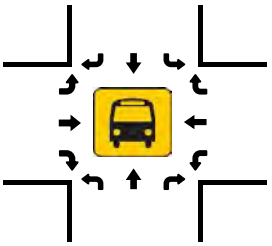
Total Vehicles (AM)



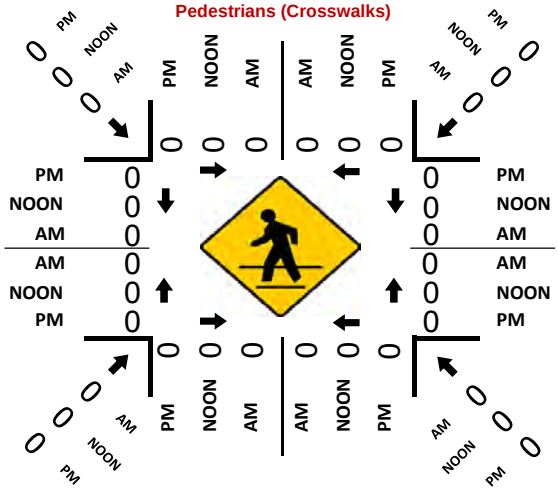
Total Vehicles (NOON)



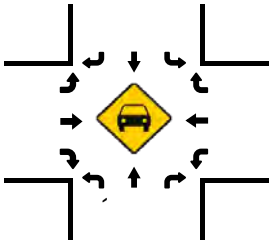
Total Vehicles (NOON)



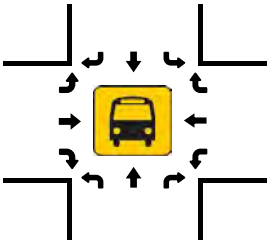
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Stuart Ranch Rd/Webb Way & Civic Center Way
City: Malibu
Control: 4-Way Stop

Project ID: 18-05505-008
Date: 7/31/2018

Total

NS/EW Streets:	Stuart Ranch Rd/Webb Way				Stuart Ranch Rd/Webb Way				Civic Center Way				Civic Center Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	30	6	15	0	0	0	0	0	1	18	11	0	18	11	2	0	112
7:15 AM	27	10	18	1	0	1	0	0	2	15	9	0	10	12	2	0	107
7:30 AM	50	20	19	0	0	0	0	0	3	13	11	0	5	7	1	0	129
7:45 AM	49	20	17	0	0	1	0	0	6	9	7	0	15	14	1	0	139
8:00 AM	53	17	22	0	2	3	2	0	4	11	5	0	16	10	3	0	148
8:15 AM	46	14	28	0	0	4	0	0	3	16	5	0	14	10	3	0	143
8:30 AM	45	7	24	0	1	3	3	0	3	23	18	0	18	16	1	0	162
8:45 AM	50	19	29	1	0	4	0	0	6	26	11	0	11	14	4	0	175
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	350	113	172	2	3	16	5	0	28	131	77	0	107	94	17	0	1115
APPROACH %'s :	54.95%	17.74%	27.00%	0.31%	12.50%	66.67%	20.83%	0.00%	11.86%	55.51%	32.63%	0.00%	49.08%	43.12%	7.80%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	194	57	103	1	3	14	5	0	16	76	39	0	59	50	11	0	628
PEAK HR FACTOR :	0.915	0.750	0.888	0.250	0.375	0.875	0.417	0.000	0.667	0.731	0.542	0.000	0.819	0.781	0.688	0.000	0.897
	0.896				0.786				0.744				0.857				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	94	2	22	0	1	5	3	0	3	15	31	0	36	62	0	0	274
4:15 PM	91	7	19	0	2	8	7	0	0	21	28	0	22	52	2	0	259
4:30 PM	105	7	9	0	1	17	10	0	1	19	33	0	16	43	1	0	262
4:45 PM	98	3	21	0	5	19	7	0	3	27	20	0	24	51	3	0	281
5:00 PM	87	4	28	0	1	11	18	0	1	14	39	0	27	40	2	0	272
5:15 PM	126	2	22	1	5	6	11	0	2	18	32	0	22	41	1	0	289
5:30 PM	109	2	9	0	0	11	14	0	1	24	38	0	16	43	0	0	267
5:45 PM	100	4	15	0	2	13	8	0	0	20	29	0	21	44	0	0	256
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	810	31	145	1	17	90	78	0	11	158	250	0	184	376	9	0	2160
APPROACH %'s :	82.07%	3.14%	14.69%	0.10%	9.19%	48.65%	42.16%	0.00%	2.63%	37.71%	59.67%	0.00%	32.34%	66.08%	1.58%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	420	11	80	1	11	47	50	0	7	83	129	0	89	175	6	0	1109
PEAK HR FACTOR :	0.833	0.688	0.714	0.250	0.550	0.618	0.694	0.000	0.583	0.769	0.827	0.000	0.824	0.858	0.500	0.000	0.959
	0.848				0.871				0.869				0.865				

Prepared by National Data & Surveying Services

Stuart Ranch Rd/Webb Way & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05505-008
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
NONE	NONE

Stuart Ranch Rd/Webb Way — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	10	24	8	0	28	NOON
PM	0	0	0	0	0	PM

Civic Center Way — EASTBOUND

AM	NOON	PM	
0	293	0	
0	0	0	0
0	5	0	0
0	160	0	1
0	105	0	1

WESTBOUND — Civic Center Way

PM	NOON	AM	
0	10	0	0
0	108	0	1
0	119	0	1
0	0	0	0
0	305	0	

CONTROL

4-Way Stop

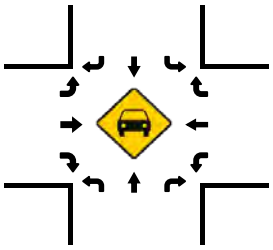
	AM	NOON	PM
TEV	0	878	0
PHF		0.86	

NORTHBOUND — Stuart Ranch Rd/Webb Way

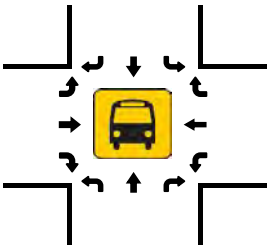
PM	0	0	0	0	0	PM
NOON	252	4	175	13	137	NOON
AM	0	0	0	0	0	AM

0 1 0 0 — 0 0 1 1

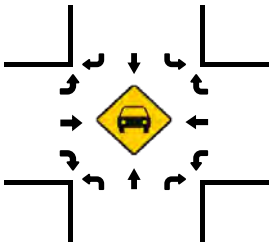
Total Vehicles (AM)



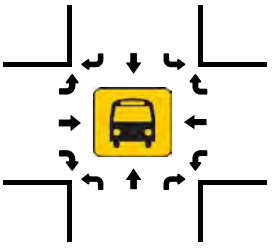
Total Vehicles (AM)



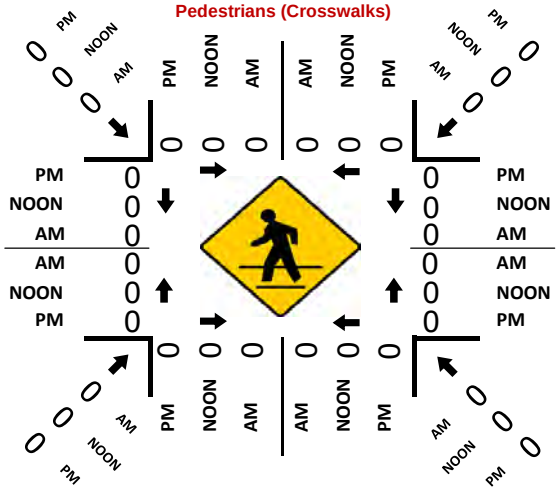
Total Vehicles (NOON)



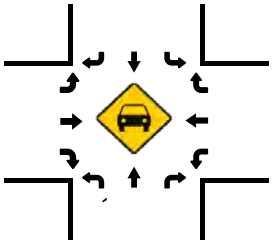
Total Vehicles (NOON)



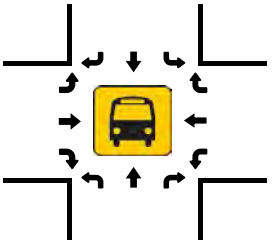
Pedestrians (Crosswalks)



Total Vehicles (PM)



Total Vehicles (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Stuart Ranch Rd/Webb Way & Civic Center Way
City: Malibu
Control: 4-Way Stop

Project ID: 18-05505-008
Date: 2018-08-04

Total

NS/EW Streets:	Stuart Ranch Rd/Webb Way				Stuart Ranch Rd/Webb Way				Civic Center Way				Civic Center Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	1	0	0	1	0	0	0	1	1	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	39	4	28	0	1	5	1	0	2	44	28	0	20	26	0	0	198
12:15 PM	43	2	28	0	2	3	2	0	6	31	25	0	23	23	2	0	190
12:30 PM	30	2	31	0	0	2	1	0	2	40	30	0	20	16	0	0	174
12:45 PM	43	2	28	0	3	9	1	0	3	31	10	0	38	18	2	0	188
1:00 PM	42	3	36	0	4	8	2	0	0	26	34	0	25	24	2	0	206
1:15 PM	38	3	32	1	0	5	3	0	3	46	25	0	27	22	2	0	207
1:30 PM	41	3	28	2	1	4	3	0	1	48	22	0	30	25	1	0	209
1:45 PM	54	4	41	1	3	7	2	0	1	40	24	0	37	37	5	0	256
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	330	23	252	4	14	43	15	0	18	306	198	0	220	191	14	0	1628
APPROACH %'s :	54.19%	3.78%	41.38%	0.66%	19.44%	59.72%	20.83%	0.00%	3.45%	58.62%	37.93%	0.00%	51.76%	44.94%	3.29%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	175	13	137	4	8	24	10	0	5	160	105	0	119	108	10	0	878
PEAK HR FACTOR :	0.810	0.813	0.835	0.500	0.500	0.750	0.833	0.000	0.417	0.833	0.772	0.000	0.804	0.730	0.500	0.000	0.857
	0.823				0.750				0.912				0.750				

Prepared by National Data & Surveying Services

Cross Creek Rd & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05505-009
City: Malibu

Day: Tuesday
Date: 07/31/2018

PEAK HOURS		COUNT PERIODS
08:00 AM - 09:00 AM	AM	07:00 AM - 09:00 AM
NONE	NOON	NONE
04:00 PM - 05:00 PM	PM	04:00 PM - 06:00 PM

Cross Creek Rd — SOUTHBOUND

AM	53	52	1	0	110	AM
NOON	0	0	0	0	0	NOON
PM	67	52	0	0	63	PM
	0	1	0	0		

Civic Center Way — EASTBOUND

AM	NOON	PM	
132	0	246	
1	0	0	0
59	0	34	1
3	0	2	1
82	0	151	0
AM	NOON	PM	

Civic Center Way — WESTBOUND

	PM	NOON	AM
0	0	0	2
1	5	0	1
0	7	0	0
0	0	0	0
	7	0	7
	PM	NOON	AM

CONTROL

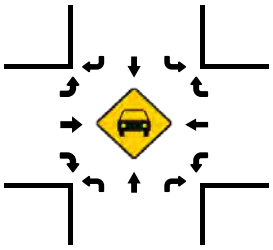
4-Way Stop

	AM	NOON	PM
TEV	383	0	530
PHF	0.86		0.93

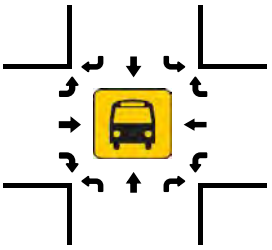
Cross Creek Rd — NORTHBOUND

		0	0	1	0	
PM	214	4	174	29	5	PM
NOON	0	0	0	0	0	NOON
AM	134	0	77	49	3	AM

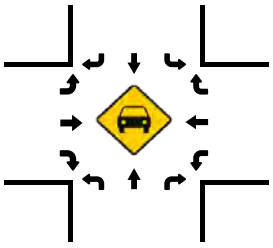
Total Vehicles (AM)



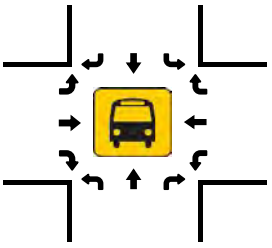
Total Vehicles (AM)



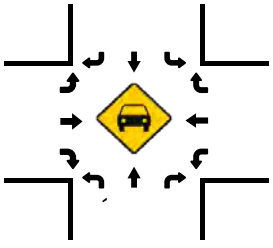
Total Vehicles (NOON)



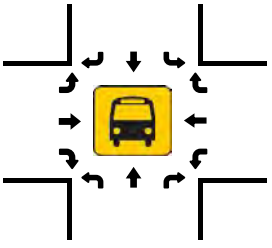
Total Vehicles (NOON)



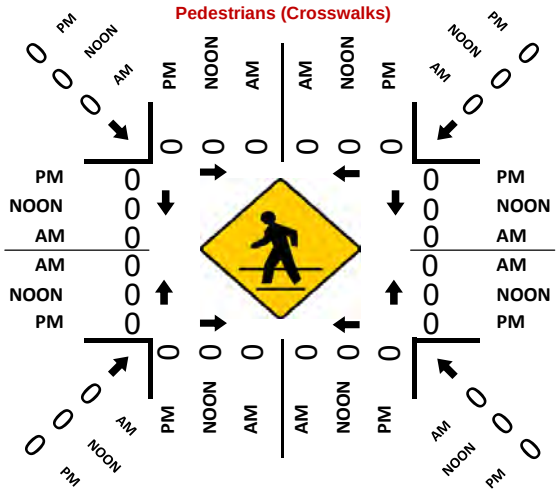
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Civic Center Way
City: Malibu
Control: 4-Way Stop

Project ID: 18-05505-009
Date: 7/31/2018

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Civic Center Way				Civic Center Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	12	8	0	0	0	5	14	0	10	0	15	0	0	0	0	0	64
7:15 AM	15	16	0	0	0	4	5	0	13	2	12	0	0	0	1	0	68
7:30 AM	17	11	1	0	0	10	2	0	11	0	16	0	0	0	0	0	68
7:45 AM	22	12	1	0	0	6	9	0	14	0	16	0	0	0	0	0	80
8:00 AM	8	9	1	0	0	14	15	0	10	0	13	0	0	0	1	0	71
8:15 AM	26	12	1	0	0	11	11	0	17	0	21	0	0	0	1	0	100
8:30 AM	23	15	1	0	0	12	15	0	14	2	18	0	0	1	0	0	101
8:45 AM	20	13	0	0	1	15	12	0	18	1	30	1	0	0	0	0	111
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	143	96	5	0	1	77	83	0	107	5	141	1	0	1	3	0	663
APPROACH %'s :	58.61%	39.34%	2.05%	0.00%	0.62%	47.83%	51.55%	0.00%	42.13%	1.97%	55.51%	0.39%	0.00%	25.00%	75.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	77	49	3	0	1	52	53	0	59	3	82	1	0	1	2	0	383
PEAK HR FACTOR :	0.740	0.817	0.750	0.000	0.250	0.867	0.883	0.000	0.819	0.375	0.683	0.250	0.000	0.250	0.500	0.000	0.863
	0.827				0.914				0.725				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	50	9	0	1	0	14	18	0	9	2	37	0	2	0	0	0	142
4:15 PM	37	6	2	1	0	14	19	0	11	0	40	0	0	3	0	0	133
4:30 PM	40	10	3	1	0	14	9	0	4	0	33	0	2	0	0	0	116
4:45 PM	47	4	0	1	0	10	21	0	10	0	41	0	3	2	0	0	139
5:00 PM	48	4	0	1	0	11	15	0	8	0	43	0	2	2	0	0	134
5:15 PM	29	5	2	0	0	8	12	0	7	0	37	0	0	1	0	0	101
5:30 PM	44	2	1	2	0	3	8	0	5	0	32	0	2	4	0	0	103
5:45 PM	50	2	2	0	0	6	3	0	3	0	23	0	2	2	0	0	93
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	345	42	10	7	0	80	105	0	57	2	286	0	13	14	0	0	961
APPROACH %'s :	85.40%	10.40%	2.48%	1.73%	0.00%	43.24%	56.76%	0.00%	16.52%	0.58%	82.90%	0.00%	48.15%	51.85%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	174	29	5	4	0	52	67	0	34	2	151	0	7	5	0	0	530
PEAK HR FACTOR :	0.870	0.725	0.417	1.000	0.000	0.929	0.798	0.000	0.773	0.250	0.921	0.000	0.583	0.417	0.000	0.000	0.933
	0.883				0.902				0.917				0.600				

Prepared by National Data & Surveying Services

Cross Creek Rd & Civic Center Way

Peak Hour Turning Movement Count

ID: 18-05505-009
City: Malibu

Day: Saturday
Date: 08/04/2018

PEAK HOURS	COUNT PERIODS
NONE	NONE
01:00 PM - 02:00 PM	12:00 PM - 02:00 PM
NONE	NONE

Cross Creek Rd — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	44	39	0	0	74	NOON
PM	0	0	0	0	0	PM

EASTBOUND — Civic Center Way

AM	NOON	PM	
0	257	0	
0	0	0	0
0	38	0	1
0	13	0	1
0	244	0	0

WESTBOUND — Civic Center Way

PM	NOON	AM	
0	1	0	0
0	8	0	1
0	5	0	0
0	0	0	0
0	27	0	

CONTROL

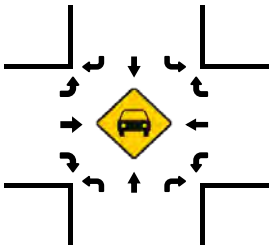
4-Way Stop

	AM	NOON	PM
TEV	0	655	0
PHF		0.93	

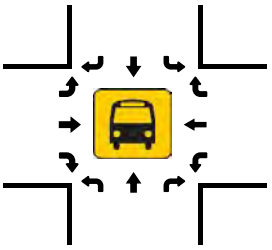
Cross Creek Rd — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	297	9	205	35	14	NOON
AM	0	0	0	0	0	AM

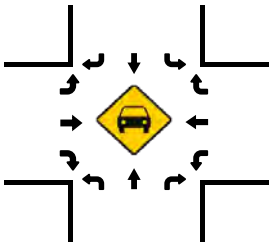
Total Vehicles (AM)



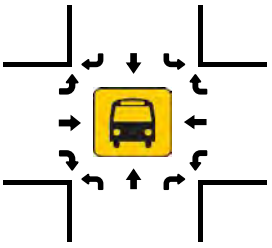
Total Vehicles (AM)



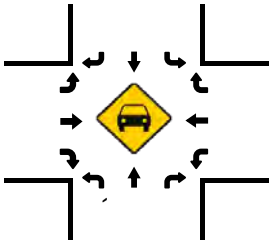
Total Vehicles (NOON)



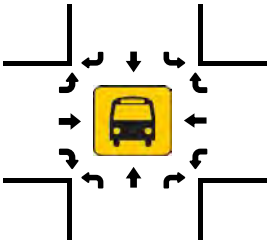
Total Vehicles (NOON)



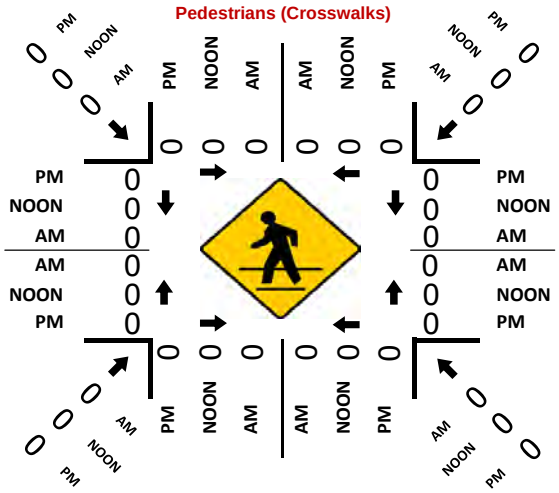
Total Vehicles (PM)



Total Vehicles (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Cross Creek Rd & Civic Center Way
City: Malibu
Control: 4-Way Stop

Project ID: 18-05505-009
Date: 2018-08-04

Total

NS/EW Streets:	Cross Creek Rd				Cross Creek Rd				Civic Center Way				Civic Center Way				
NOON	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
12:00 PM	29	17	3	0	0	7	10	0	10	4	42	0	1	2	0	0	125
12:15 PM	38	3	1	5	0	9	14	0	5	2	53	0	0	0	1	0	131
12:30 PM	39	6	1	3	0	9	9	0	6	3	56	0	1	0	0	0	133
12:45 PM	50	10	2	2	0	7	12	0	9	1	51	1	0	1	0	0	146
1:00 PM	53	7	2	4	0	10	9	0	8	3	58	0	1	0	0	0	155
1:15 PM	48	11	3	2	0	8	12	0	10	4	66	0	1	2	1	0	168
1:30 PM	45	7	4	2	0	7	10	0	15	2	61	0	1	2	0	0	156
1:45 PM	59	10	5	1	0	14	13	0	5	4	59	0	2	4	0	0	176
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	361	71	21	19	0	71	89	0	68	23	446	1	7	11	2	0	1190
APPROACH %'s :	76.48%	15.04%	4.45%	4.03%	0.00%	44.38%	55.63%	0.00%	12.64%	4.28%	82.90%	0.19%	35.00%	55.00%	10.00%	0.00%	
PEAK HR :	01:00 PM - 02:00 PM																TOTAL
PEAK HR VOL :	205	35	14	9	0	39	44	0	38	13	244	0	5	8	1	0	655
PEAK HR FACTOR :	0.869	0.795	0.700	0.563	0.000	0.696	0.846	0.000	0.633	0.813	0.924	0.000	0.625	0.500	0.250	0.000	0.930
	0.877				0.769				0.922				0.583				

APPENDIX B

TRIP GENERATION MEMORANDUM

LINSCOTT
LAW &
GREENSPAN
engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law &
Greenspan, Engineers
20931 Burbank Boulevard
Suite C
Woodland Hills, CA 91367
818.835.8648 T
818.835.8649 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

November 1, 2019

LLG Reference: 5-16-0246-1

Subject: **Malibu La Paz Ranch: Trip Generation Evaluation**

This memorandum has been prepared by Linscott, Law & Greenspan, Engineers (LLG) to provide a discussion of vehicular trip generation forecasting related to the La Paz Ranch Project located at 23465 Civic Center Way in the City of Malibu. The trip generation forecast has been incorporated into the addendum traffic analysis for the La Paz Ranch Project, which evaluated the potential traffic impacts of the proposed 2019 Project Modifications compared to the traffic impacts of the 2005 Analyzed Project and the 2008 Approved Project.[1]

Background – Trip Generation Forecasting

Trip generation forecasts for development projects are typically prepared by traffic engineers based on trip rates provided in the latest edition of the *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE). The trip rates published in the *Trip Generation Manual* are derived by ITE based on driveway traffic counts conducted by traffic engineers at a variety of existing land uses (e.g., office buildings, shopping centers, etc.). Following review and analysis of the driveway traffic count data by ITE, recommended trip rates are published in the *Trip Generation Manual* based on the independent variable deemed statistically appropriate by ITE for each land use. By way of example, for office buildings and shopping centers, the typical independent variable for trip forecasting purposes is the building floor area.

Trip Generation Forecast Provided in Kaku Traffic Study for the 2005 Analyzed Project

A traffic study[2] was prepared by Kaku Associates (the "Kaku traffic study") for the previously proposed La Paz Ranch Project (the "2005 Analyzed Project"). The development analyzed in the Kaku traffic study consisted of 53,825 square feet of office floor area, 67,110 square feet of retail floor area, and 10,000 square feet of restaurant floor area. The Kaku traffic study was incorporated into an Environmental Impact Report prepared and certified for the La Paz Ranch Project.

[1] Descriptions of the 2019 Project Modifications, 2005 Analyzed Project and 2008 Approved Project are provided in a following section.
[2] *Traffic and Circulation Study for the Malibu La Paz Project*, Kaku Associates, April 2005.

Table 8 of the Kaku traffic study provides the trip generation forecast for the 2005 Analyzed Project. ***Table A*** attached to this memorandum replicates the trip forecast provided in the Kaku traffic study (i.e., *Table A* of this memorandum replicates Table 8 of the Kaku traffic study).

The Kaku traffic study utilized trip rates provided in the 6th Edition of the *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE), which was the most current version of the ITE manual at the time of preparation of the Kaku traffic study.

Trip Generation Manual

As shown on *Table A*, the proposed floor areas of the retail (67,110 square feet) and restaurant (10,000 square feet) components of the 2005 Analyzed Project were combined and evaluated for trip generation purposes based on the Specialty Retail Center land use category provided in the ITE *Trip Generation Manual*.

The practice of combining the floor areas of retail and restaurant uses for trip generation forecast purposes is a standard approach for evaluating trip generation potential for commercial centers. This is based in part on the description of the Specialty Retail Center land use category provided in prior editions of the ITE *Trip Generation Manual*, which stated: "Specialty retail centers are generally small strip shopping centers that contain a variety of retail shops and specialize in quality apparel; hard goods; and services, such as real estate offices, dance studios, florists and small restaurants."

Use of the Specialty Retail Center category (and the ITE Shopping Center land use category as will be discussed in a following paragraph) is the correct method for forecasting vehicle trips generated by multi-tenant commercial centers because these trip rates account for multiple-purpose trips by patrons who visit such developments. Applying a methodology utilizing trip rates for individual ITE land use categories for individual tenants would overstate the trip generation potential of the overall development because it does not account for the multipurpose trips (e.g., a patron who visits a small shop and then has a coffee at a café within the center). It is further noted that there is no "retail" trip rate in the ITE *Trip Generation Manual*, in part because nearly all retail uses are provided within the multi-tenant centers evaluated by ITE in the multi-tenant land use categories.

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Pass-By Adjustment

As noted in *Table A*, the Kaku traffic study utilized a 35 percent pass-by trip adjustment applied to the trip generation of the specialty retail component. A pass-by adjustment is intended to take into account vehicles that currently drive by the site today (e.g., as part of their commute), and that, in the future, would visit the retail and restaurant components of the 2005 Analyzed Project while passing-by as a matter of convenience.

For example, certain current commuters on Pacific Coast Highway would be reasonably expected to grab breakfast and/or have dinner at one or more of the food-serving uses within the La Paz Ranch Project while on their way to and/or from work. These commuters who are expected to visit the La Paz Ranch Project site in the future are already accounted for in the existing intersection traffic counts to be used in the traffic study; the use of the pass-by trip adjustment in the trip generation forecast prevents the potential overstatement of new vehicle trips that would be added to the street system.

2008 Approved Project

The project approved by the Malibu City Council (the "2008 Approved Project") consists of the following floor areas: 62,556 square feet of office, 59,502 square feet of retail, and 10,000 square feet of restaurant (slightly modified from the 53,825 square feet of office floor area, 67,110 square feet of retail floor area, and 10,000 square feet of restaurant floor area analyzed in the Kaku traffic study). ***Table B*** attached provides a trip generation forecast for the 2008 Approved Project using the methodology provided in the Kaku traffic study (including combining the approved floor area for the retail and restaurant components and applying the Specialty Retail Center trip rates to the aggregate area of 69,502 square feet, as well as the 35 percent pass-by adjustment), but with the 2008 Approved Project floor area.

2019 Project Modifications Trip Generation Forecast

Since the Applicant seeks to develop the 2008 Approved Project with the 2019 Project Modifications, there is no change in the City's previously approved project-related traffic as a result of the 2019 Project Modifications; accordingly, the addendum traffic study is provided for informational purposes.

While the Applicant seeks to develop 42,556 square feet of office floor area, 59,502 square feet of retail floor area, and 10,000 square feet of restaurant floor area, to provide for the future possibility of reducing retail square footage for additional restaurant square footage, the addendum traffic analysis evaluates the potential traffic impacts of 62,556 square feet of office floor area (inclusive of the 20,000 square feet of municipal use), 49,502 square feet of retail floor area, and 20,000 square feet of restaurant floor area. Accordingly, for purposes of the addendum traffic study, the analysis of the 2019 Project Modifications assumes 62,556 square feet of office floor area and 69,502 square feet of shopping center floor area (either the square footage the Applicant currently seeks to develop of 59,502 square feet of retail floor area and 10,000 square feet of restaurant floor area, or the future possibility of 49,502 square feet of retail floor area and 20,000 square feet of restaurant floor area).

A trip generation forecast was prepared for the 2019 Project Modifications and is provided in ***Table C***. The following sections describe the methodology for preparing the trip generation forecast for the 2019 Project Modifications.

Updated Trip Generation Manual

Since the preparation of the Kaku traffic study, ITE has issued several subsequent editions of its *Trip Generation Manual*, with the current version being the 10th Edition.[3] It is appropriate to apply the trip generation rates from the most recent version of the *Trip Generation Manual* for purposes of preparing the trip generation forecast for the 2019 Project Modifications as the 10th Edition reflects the most current research and guidance from ITE.

For purposes of forecasting the trip generation potential of the retail and restaurant components of the 2019 Project Modifications, trip rates provided in the Shopping Center land use category were utilized. The Shopping Center trip rates were used because the 10th Edition of the ITE *Trip Generation Manual* no longer provides a Specialty Retail Center land use category.[4] For the trip generation forecast for the 2019 Project Modifications, it would be appropriate to combine the floor areas of the proposed retail and restaurant components and apply the ITE Shopping Center trip rates to the aggregate floor area (69,502 square feet), similar to the methodology used in the trip generation forecast in the Kaku traffic study. Just as the Specialty Retail Center land use category assumed a variety of potential commercial tenants, the ITE Shopping Center land use category assumes a similar mix of tenants (including retail and restaurant).

[3] *Trip Generation Manual*, 10th Edition, Institute of Transportation Engineers, September 2017.
[4] The *Trip Generation Manual* states that data previously used in the deriving the Specialty Retail Center trip rates were moved to other land uses, including the Shopping Center land use category.

Specifically, the 10th Edition of the ITE *Trip Generation Manual* provides the following description of the Shopping Center land use category: "A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store…Shopping centers, including neighborhood centers, community centers, regional centers, and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities (for example, ice skating rinks or indoor miniature golf courses)."

It is further noted for the Shopping Center land use category (or for the prior Specialty Retail Center land use category), the ITE manuals do not define a minimum or maximum amount of food-serving uses (or any other uses typical to a center, as noted within the previous paragraph) within a commercial center. Thus, while the proportion of restaurant area is proposed to increase within the La Paz Ranch Project, the standard trip generation forecast practice is to apply ITE Shopping Center trip rates to the aggregate floor area of the commercial center (69,502 square feet).

Updated Pass-By Adjustment

As previously described, the Kaku traffic study applied a 35 percent pass-by trip adjustment for all analyzed peak hours, as well as over a 24-hour daily basis on weekdays and Saturdays related to the specialty retail component of the 2005 Analyzed Project.[5] The adjustment is intended to take into account vehicles that currently drive by the site today (e.g., as part of their commute), and that, in the future, would visit the retail and restaurant tenants at the La Paz Ranch Project while passing-by as a matter of convenience.

[5] It is noted that the companion document to the ITE's *Trip Generation Manual* is the Trip Generation Handbook. At the time of preparation of the Kaku traffic study, the 1st Edition of the ITE Trip Generation Handbook was available. As described in the manual, ITE obtained pass-by trip data from existing shopping centers and determined an average pass-by rate of 34 percent for the weekday PM peak hour and 26 percent for the Saturday MD peak hour. Pass-by data was not provided for the weekday AM peak hour; however, it may be assumed that pass-by trips would also occur during the AM peak hour to utilize, for example, a shopping center's restaurants and coffee shops. In addition, pass-by data was not provided for the 24-hour daily periods, even though pass-by trips would also occur throughout the day on weekdays and weekends.

In coordination with the City, the following pass-by percentages were applied in the trip generation forecast for purposes of analysis of the 2019 Project Modifications:

- Weekday AM peak hour: 0%
- Weekday PM peak hour: No more than 20%
- Saturday MD peak hour: No more than 25%

The current edition of the ITE *Trip Generation Handbook* is the 3rd Edition. The current edition provides for an average pass-by rate of 34 percent for the weekday PM peak hour, 26 percent for the Saturday midday peak hour, with no data provided for the AM peak hour or over a 24-hour daily basis for weekdays or weekends. Therefore, the pass-by trip factors utilized for the 2019 Project Modifications should be considered a conservative forecast since the data provided by ITE support use of higher pass-by trip reduction rates.

Internal Capture

The La Paz Ranch Project includes an office component, as well as retail and restaurant uses. It is reasonable to expect that office workers will choose to walk to the on-site retail and restaurant uses for shopping and dining opportunities in lieu of driving off-site for these trip purposes. Accordingly, the analysis of the 2019 Project Modifications includes a reduction in vehicle trips based on internal capture. LLG utilized the Internal Capture Estimation Tool published by the National Cooperative Highway Research Program (NCHRP) which estimates internal capture trips within a single development site. The output of the NCHRP tool is attached, and the related internal capture trip adjustments are provided on *Table C*.

As shown in *Table C*, the NCHRP Internal Capture Estimation Tool generates an internal capture adjustment of approximately 8.7 percent in the weekday AM peak hour, 7.7 percent in the weekday PM peak hour, and 2.3 percent in the Saturday MD peak hour. The weekday daily internal capture was assumed to be the average of the calculated AM and PM peak hour rates (i.e., 8.2 percent). For Saturdays, the MD peak hour internal capture factor was assumed to be equivalent to the daily internal capture adjustment (2.3 percent).

Civic Center Walk-In Capture

The trip generation shown in *Table C* does not include a reduction in vehicle trips based on the expected walk-in trips to the La Paz Ranch site from nearby existing commercial centers within the Malibu Civic Center, even though it is foreseeable for such interaction to occur; accordingly, the trip generation for the 2019 Project Modifications should be considered a conservative forecast.

The La Paz Ranch site is highly convenient to nearby existing developments within the Malibu Civic Center including the Malibu Country Mart, Malibu Lumber Yard and Malibu Village commercial centers. In addition, the Whole Foods and in the Park has opened immediately adjacent to the La Paz Ranch site, and the Malibu Satellite Campus – Santa Monica College projects will be constructed immediately adjacent to the La Paz Ranch site. It is readily observed that there is currently a high level of pedestrian activity between the existing centers. These developments have created a village-like, park-once synergy whereby a motorist will drive to one center, park, and then walk to one or more centers during a single visit. It is reasonable to foresee that the La Paz Ranch Project will benefit, and potentially enhance the walkability of the Malibu Civic Center.

Table A
2005 ANALYZED PROJECT - KAKU TRAFFIC STUDY METHODOLOGY
TRIP GENERATION [1]

28-Oct-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Office [3]	53,825 GSF	825	100	14	114	20	98	118	133	13	10	23
Specialty Retail [4], [5]	77,110 GSF	3,136	34	22	56	86	114	200	3,242	139	129	268
Subtotal		3,961	134	36	170	106	212	318	3,375	152	139	291
DRIVEWAY TRIPS		**3,961**	**134**	**36**	**170**	**106**	**212**	**318**	**3,375**	**152**	**139**	**291**
Pass-By Adjustment [6]												
Specialty Retail (35%)		(1,098)	(12)	(8)	(20)	(30)	(40)	(70)	(1,135)	(49)	(45)	(94)
OFF-SITE TRIPS		**2,863**	**122**	**28**	**150**	**76**	**172**	**248**	**2,240**	**103**	**94**	**197**

[1] Source: ITE "Trip Generation," 6th Edition, 1997.
[2] Trips are one-way traffic movements, entering or leaving
[3] ITE Land Use Code 710 (General Office) trip generation average rates
- Daily Trip Rate: Ln(T) = 0.768*Ln(X) + 3.564 ; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: Ln(T) = 0.797*Ln(X) + 1.558 ; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: Ln(T) = 0.737*Ln(X) + 1.831 ; 17% inbound/83% outbound
- Saturday Trip Rate: T = 2.136(X) + 18.473 ; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: Ln(T) = 0.814*Ln(X) - 0.115; 57% inbound/43% outbound

[4] ITE Land Use Code 814 (Specialty Retail) trip generation average rates
- Daily Trip Rate: 42.04 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.72 trips/1,000 SF of floor area; 61% inbound/39% outbound
- PM Peak Hour Trip Rate: 2.59 trips/1,000 SF of floor area; 43% inbound/57% outbound
- Saturday Trip Rate: 42.04 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 3.48 trips/1,000 SF of floor area; 52% inbound/48% outbound

[5] No rate available for Specialty Retail during AM and Saturday midday peak hours. The proportional rate of ITE Land Use Code 820 (Shopping Center) was applied
A comparison of trip rates indicates that specialty retail generates approximately 70% of shopping center trips; therefore this proportion was applied to the shopping center rate and used to estimate trip generation for specialty retail.

Table B
2008 APPROVED PROJECT - KAKU TRAFFIC STUDY METHODOLOGY
TRIP GENERATION [1]

28-Oct-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Approved Project												
Office [3]	62,556 GSF	926	113	15	128	22	110	132	152	15	11	26
Specialty Retail [4], [5]	69,502 GSF	2,827	31	19	50	77	103	180	2,922	126	116	242
Subtotal		3,753	144	34	178	99	213	312	3,074	141	127	268
DRIVEWAY TRIPS: APPROVED PROJECT		**3,753**	**144**	**34**	**178**	**99**	**213**	**312**	**3,074**	**141**	**127**	**268**
Pass-By Adjustment [6]												
Specialty Retail (35%)		(989)	(11)	(7)	(18)	(27)	(36)	(63)	(1,023)	(44)	(41)	(85)
OFF-SITE TRIPS: APPROVED PROJECT		**2,764**	**133**	**27**	**160**	**72**	**177**	**249**	**2,051**	**97**	**86**	**183**

[1] Source: ITE "Trip Generation," 6th Edition, 1997.
[2] Trips are one-way traffic movements, entering or leaving
[3] ITE Land Use Code 710 (General Office) trip generation average rates
- Daily Trip Rate: Ln(T) = 0.768*Ln(X) + 3.564 ; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: Ln(T) = 0.797*Ln(X) + 1.558 ; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: Ln(T) = 0.737*Ln(X) + 1.831 ; 17% inbound/83% outbound
- Saturday Trip Rate: T = 2.136(X) + 18.473 ; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: Ln(T) = 0.814*Ln(X) - 0.115; 57% inbound/43% outbound

[4] ITE Land Use Code 814 (Specialty Retail) trip generation average rates
- Daily Trip Rate: 42.04 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.72 trips/1,000 SF of floor area; 61% inbound/39% outbound
- PM Peak Hour Trip Rate: 2.59 trips/1,000 SF of floor area; 43% inbound/57% outbound
- Saturday Trip Rate: 42.04 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 3.48 trips/1,000 SF of floor area; 52% inbound/48% outbound

[5] No rate available for Specialty Retail during AM and Saturday midday peak hours. The proportional rate of ITE Land Use Code 820 (Shopping Center) was applied A comparison of trip rates indicates that specialty retail generates approximately 70% of shopping center trips; therefore this proportion was applied to the shopping center rate and used to estimate trip generation for specialty retail.

Table C
2019 PROJECT MODIFICATIONS - ITE 10TH EDITION TRIP RATES
TRIP GENERATION [1]

28-Oct-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Proposed Modified Project												
Office [3]	62,556 GSF	609	63	10	73	12	60	72	138	28	5	33
Shopping Center [4]	69,502 GSF	2,624	40	25	65	127	138	265	3,205	163	150	313
Subtotal		3,233	103	35	138	139	198	337	3,343	191	155	346
Internal Capture [5], [6]		(265)	(6)	(6)	(12)	(13)	(13)	(26)	(77)	(4)	(4)	(8)
SUBTOTAL DRIVEWAY TRIPS		**2,968**	**97**	**29**	**126**	**126**	**185**	**311**	**3,266**	**187**	**151**	**338**
Pass-By Adjustment [7], [8]												
Shopping Center		(262)	0	0	0	(25)	(28)	(53)	(801)	(41)	(37)	(78)
NET INCREASE "OFF-SITE" TRIPS		**2,706**	**97**	**29**	**126**	**101**	**157**	**258**	**2,465**	**146**	**114**	**260**

[1] Source: ITE "Trip Generation," 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving
[3] ITE Land Use Code 710 (General Office Building) trip generation average rates
- Daily Trip Rate: 9.74 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.16 trips/1,000 SF of floor area; 86% inbound/14% outbound
- PM Peak Hour Trip Rate: 1.15 trips/1,000 SF of floor area; 16% inbound/84% outbound
- Saturday Trip Rate: 2.21 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 0.53 trips/1,000 SF of floor area; 54% inbound/46% outbound

[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of floor area; 48% inbound/52% outbound
- Saturday Trip Rate: 46.12 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 4.50 trips/1,000 SF of floor area; 52% inbound/48% outbound

[5] Peak hour internal capture reduction based on synergy between the shopping center and office uses calculated using NCHRP 684 internal trip capture estimation tool (see attached worksheets). PM peak hour calculation used to determine Saturday MD peak hour internal capture
[6] Weekday daily internal capture assumed to be average of calculated AM peak hour and PM peak hour internal capture (i.e., 8.2%)
Saturday daily internal capture assumed to be equivalent to the calculated MD peak hour internal capture (i.e., 2.3%)
[7] Weekday PM peak hour and Saturday MD peak hour pass-by trip adjustment per City direction (20% for weekday PM peak hour and 25% for Saturday MD peak hour)
[8] Weekday daily pass-by assumed to be average of applied AM peak hour pass-by and PM peak hour pass-by (i.e., 10%)
Saturday daily pass-by assumed to be average of applied MD peak hour pass-by (i.e., 25%)

APPENDIX C

RELATED PROJECTS TRIP ASSIGNMENT



N

NOT TO SCALE

MAP SOURCE: GOOGLE MAPS
PROJECT SITE
XX RELATED PROJECT

FIGURE 6-1
LOCATION OF RELATED PROJECTS

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LA PAZ RANCH PROJECT

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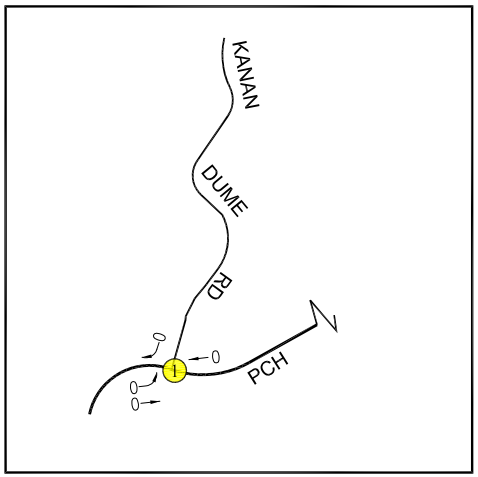
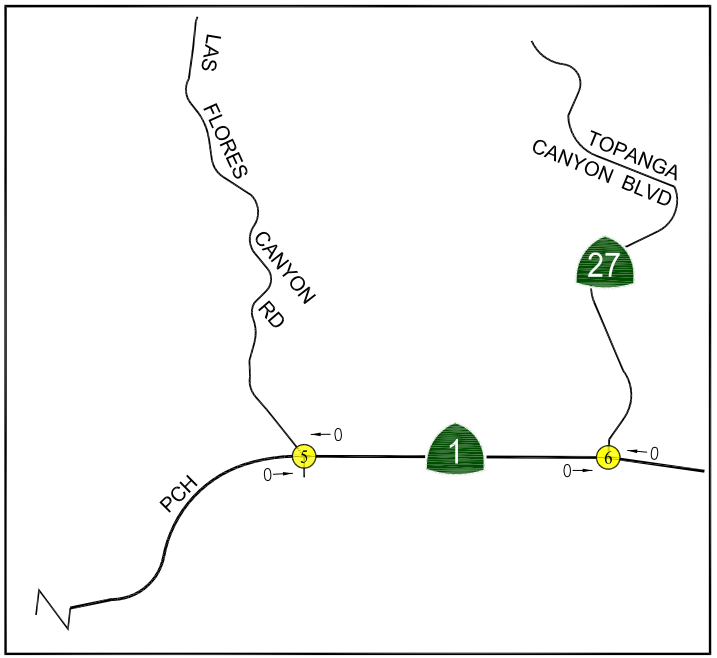


APPROXIMATELY 7 MILES WEST OF SITE



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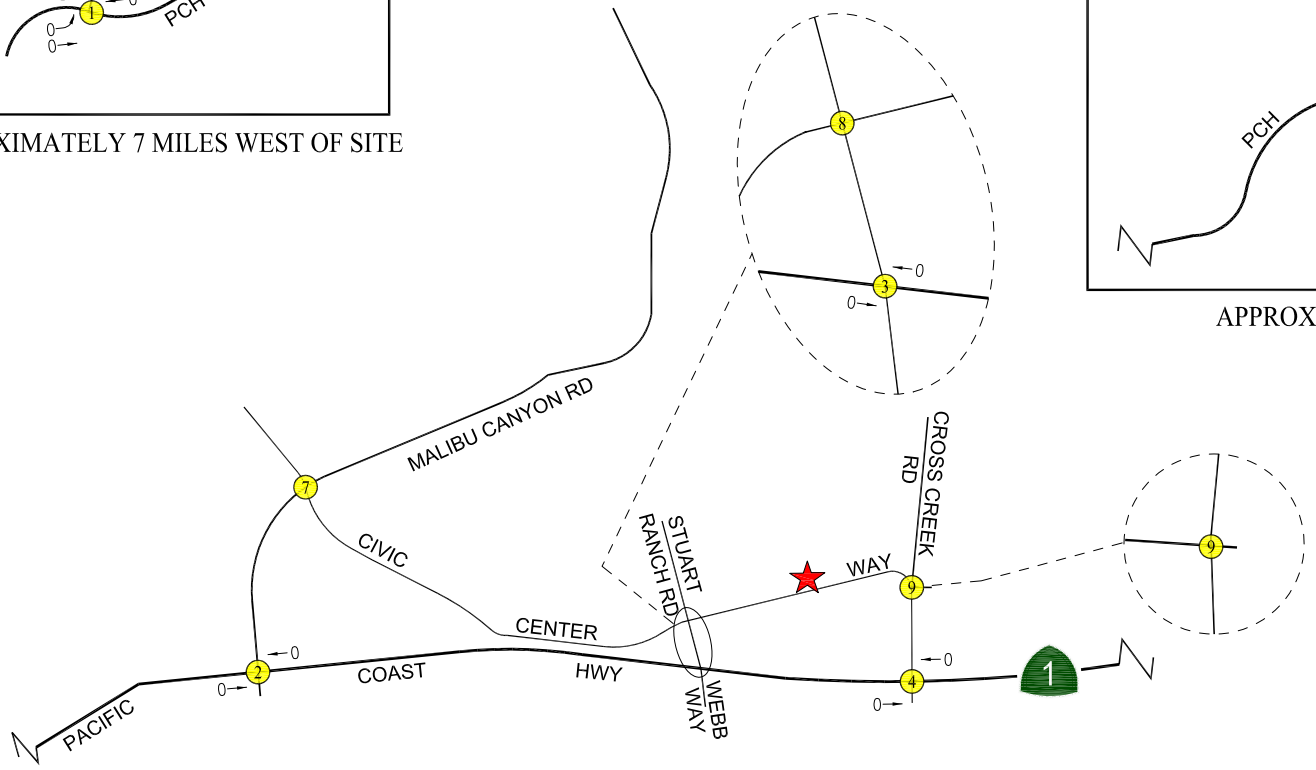

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PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-1
RELATED PROJECTS TRAFFIC VOLUMES
ZONE A

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

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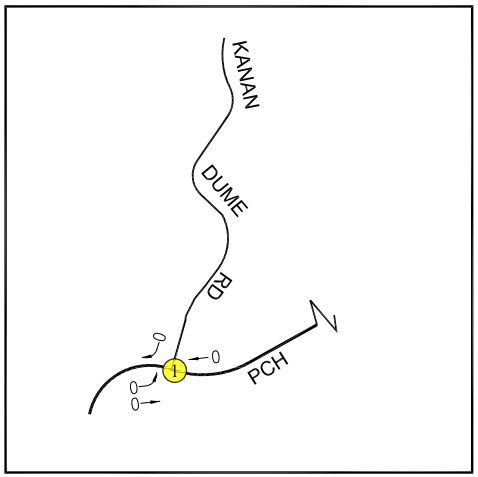
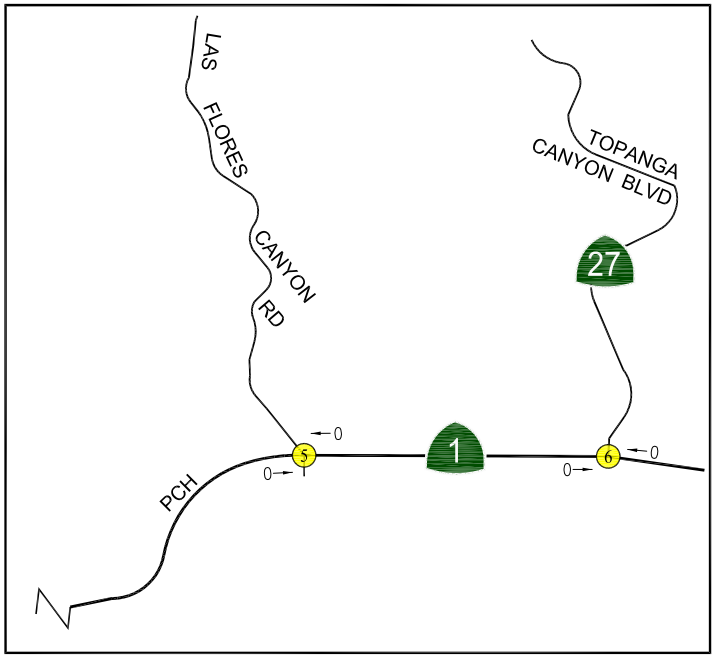
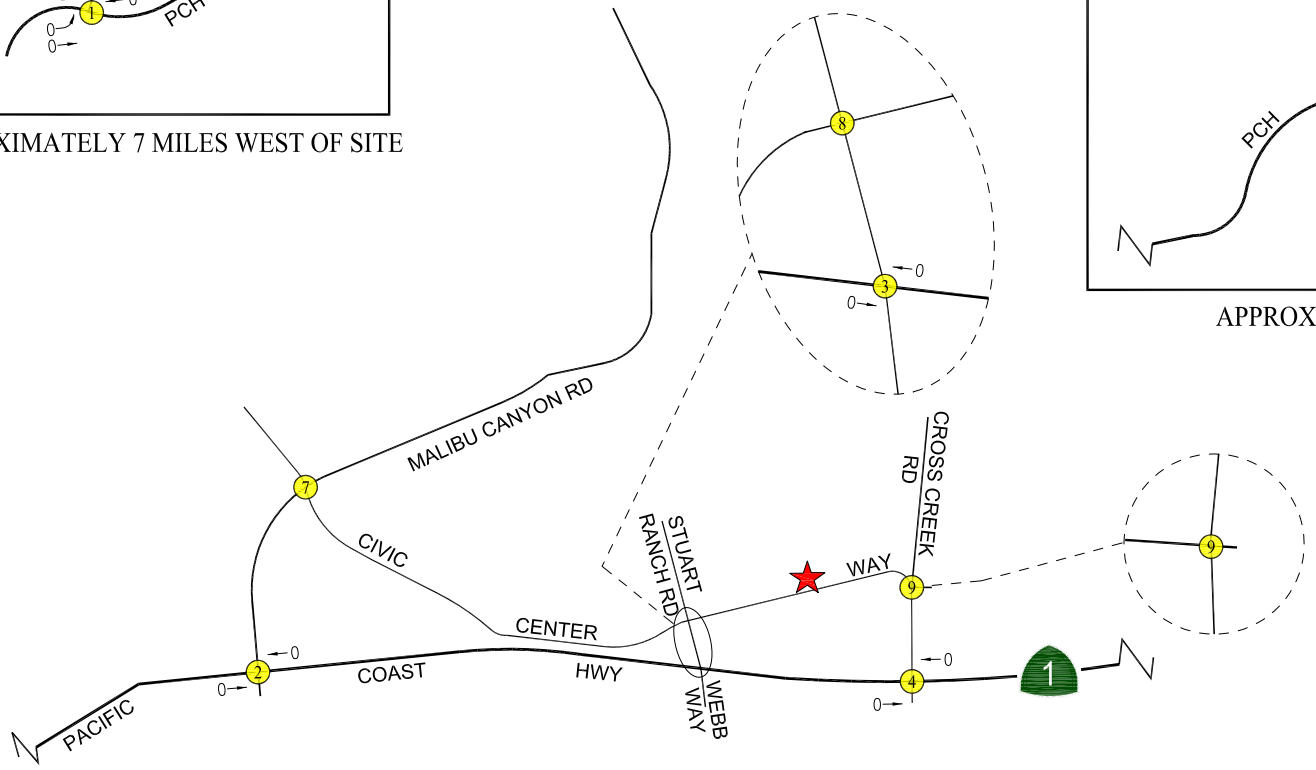


APPROXIMATELY 7 MILES WEST OF SITE



APPROXIMATELY 6 MILES EAST OF SITE



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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-2
RELATED PROJECTS TRAFFIC VOLUMES
ZONE A

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

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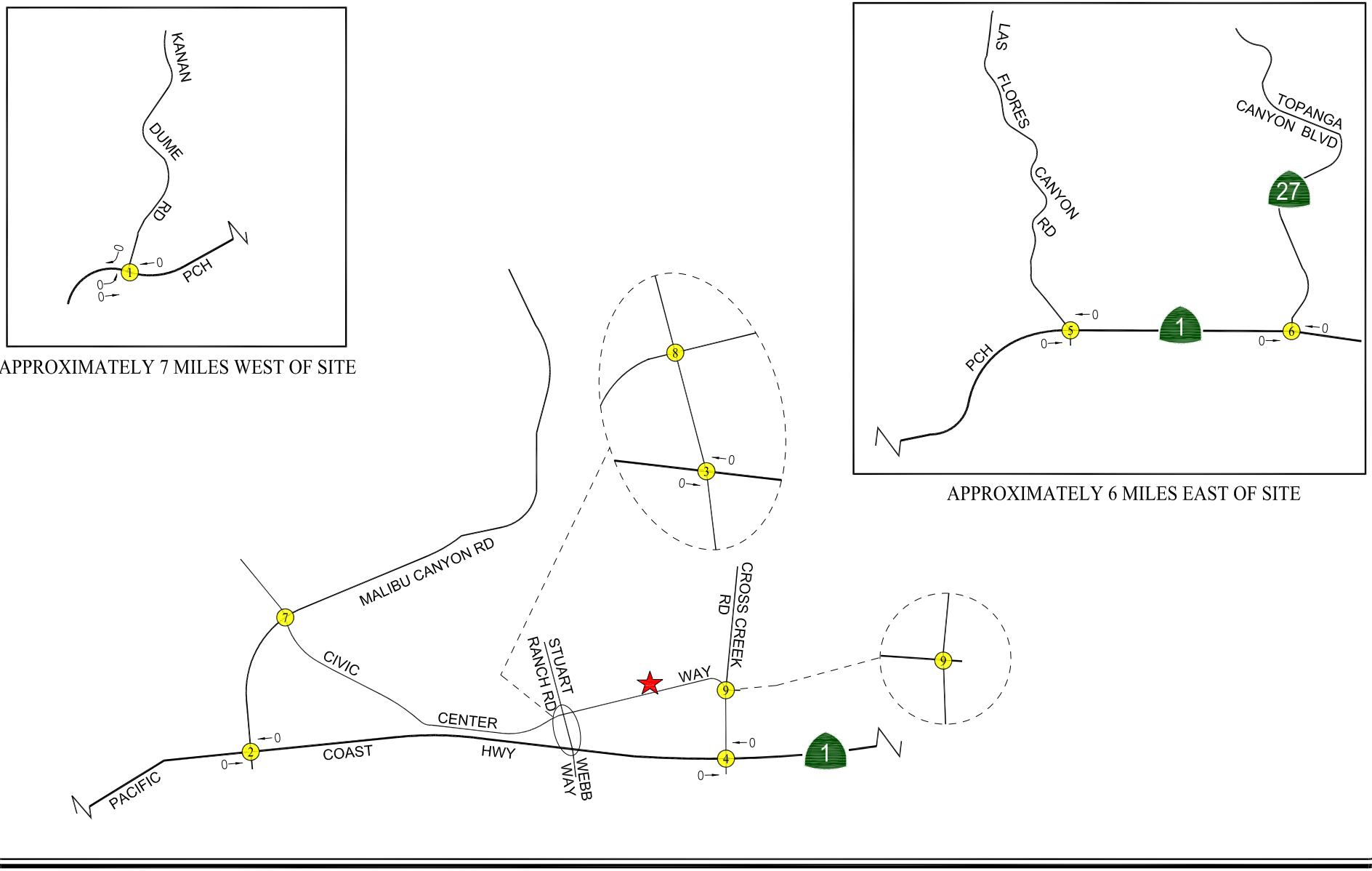

FIGURE C-3
RELATED PROJECTS TRAFFIC VOLUMES
ZONE A

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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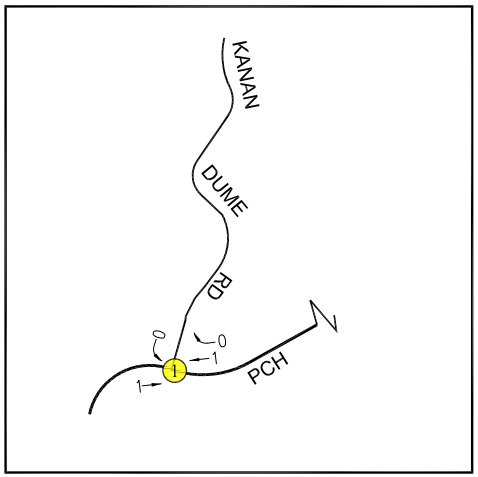

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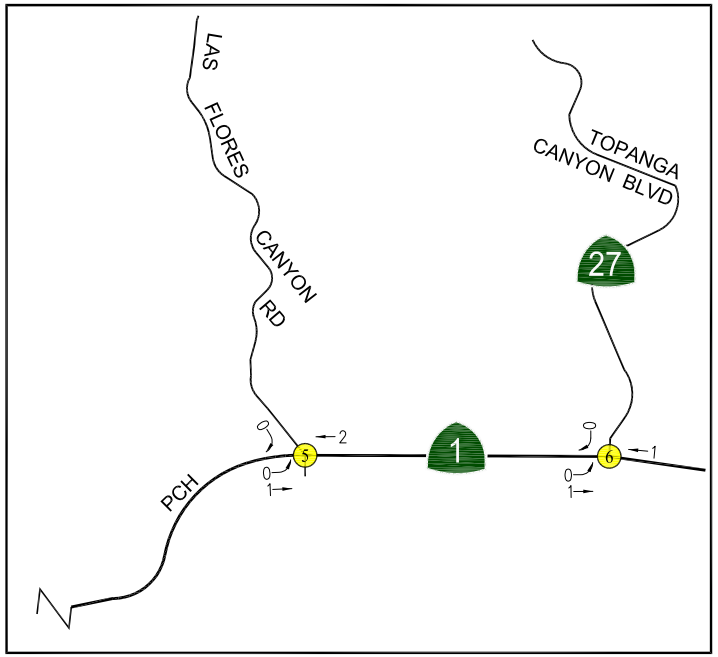

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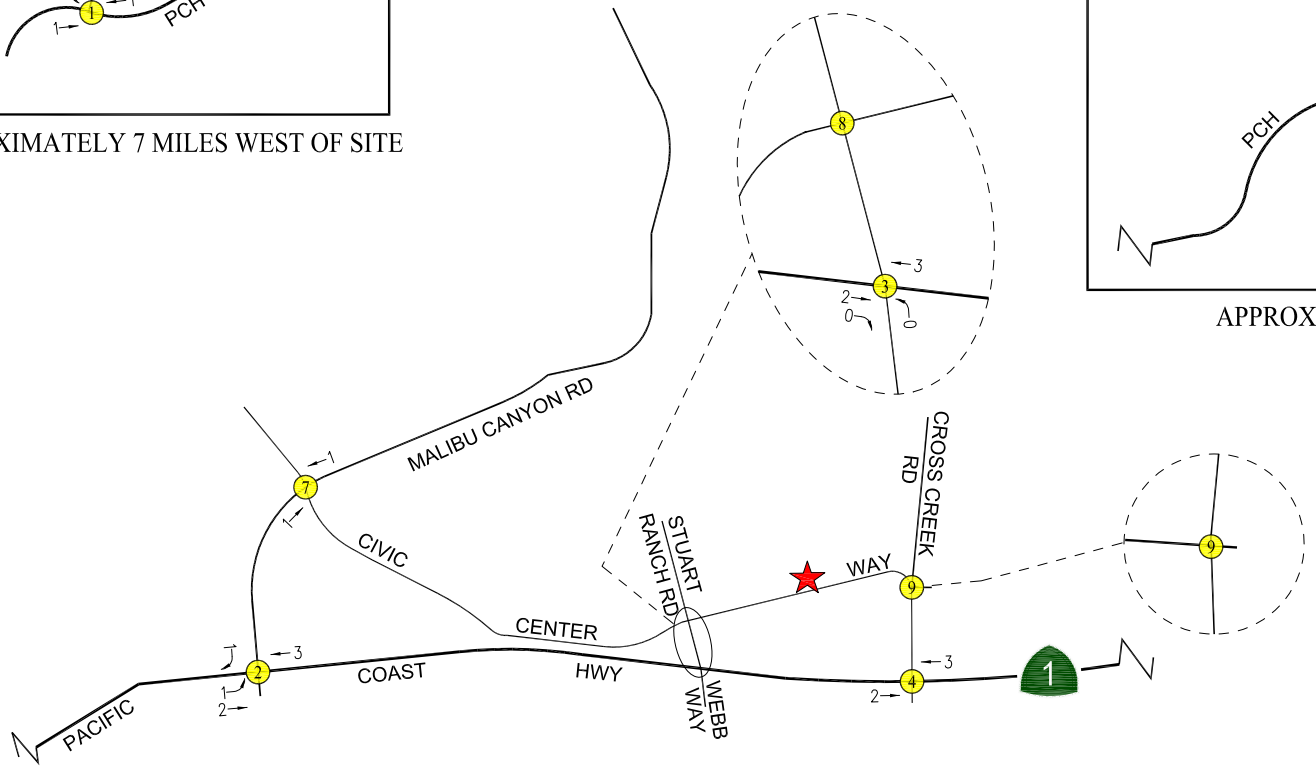

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-4
RELATED PROJECTS TRAFFIC VOLUMES
ZONE B

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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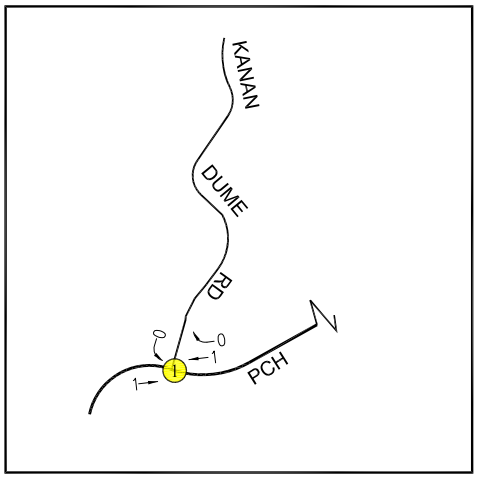

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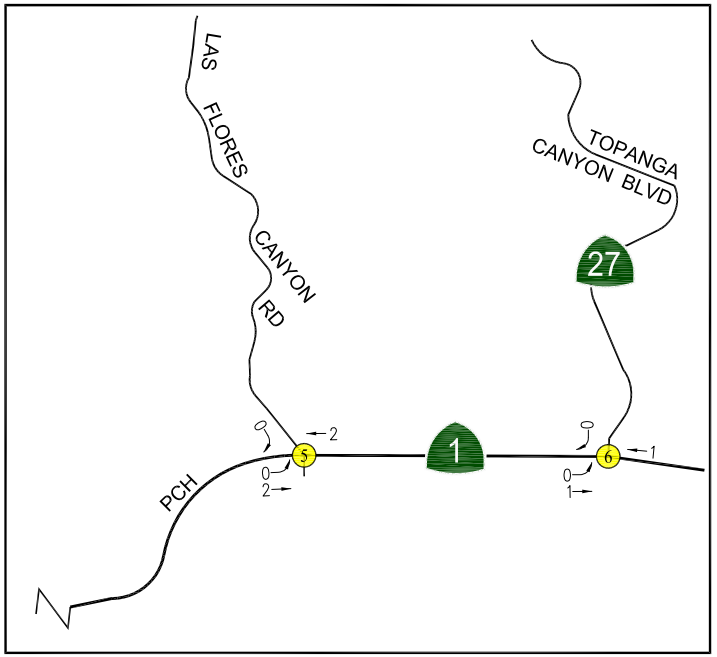

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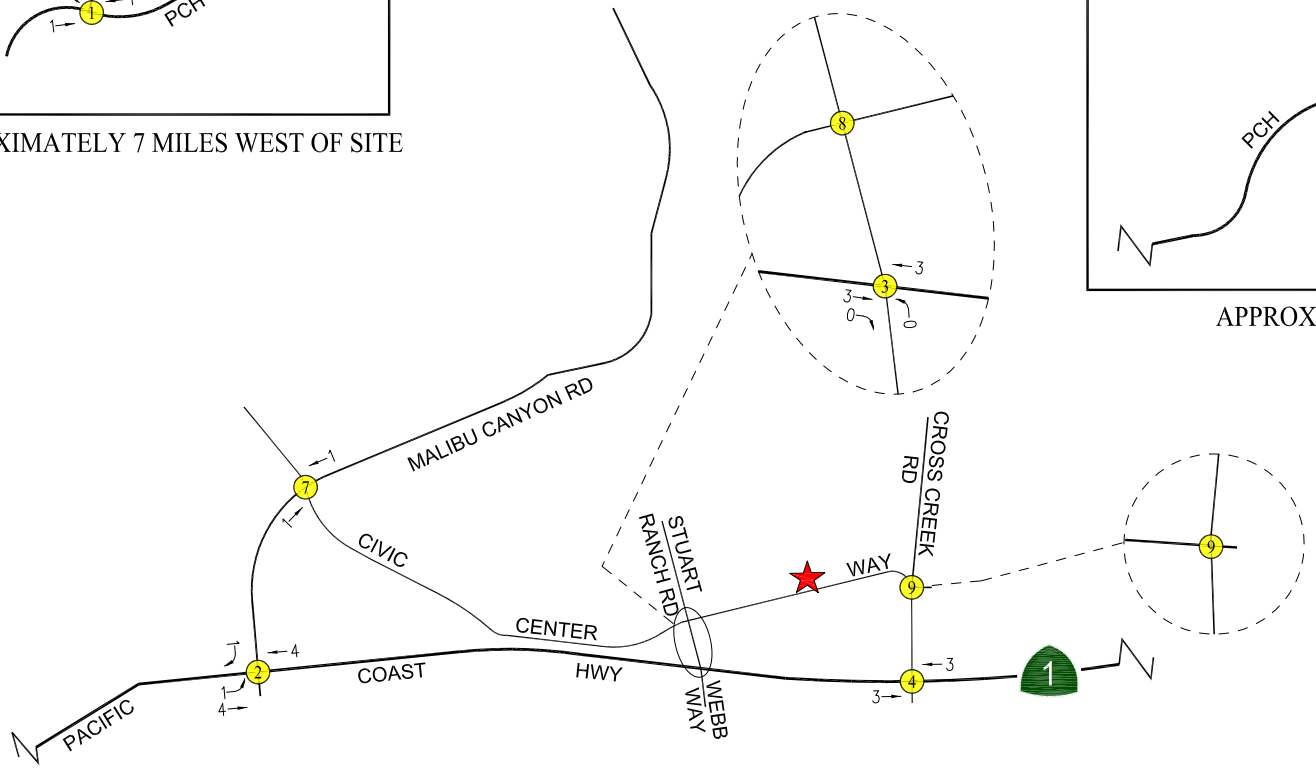

N

NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-5
RELATED PROJECTS TRAFFIC VOLUMES
ZONE B

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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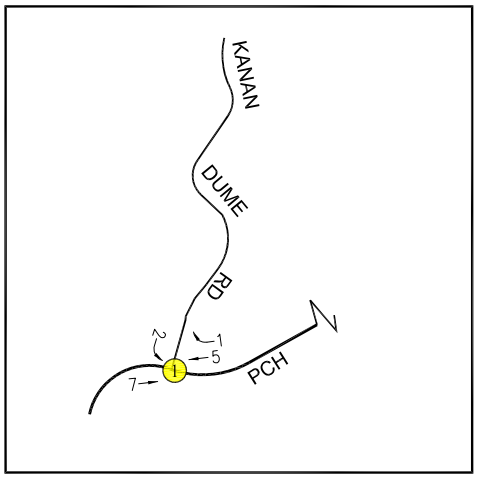

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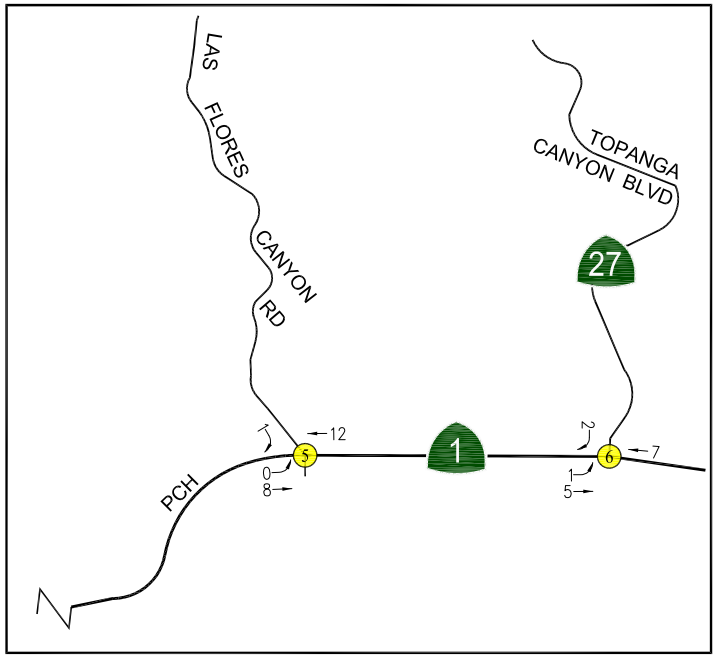

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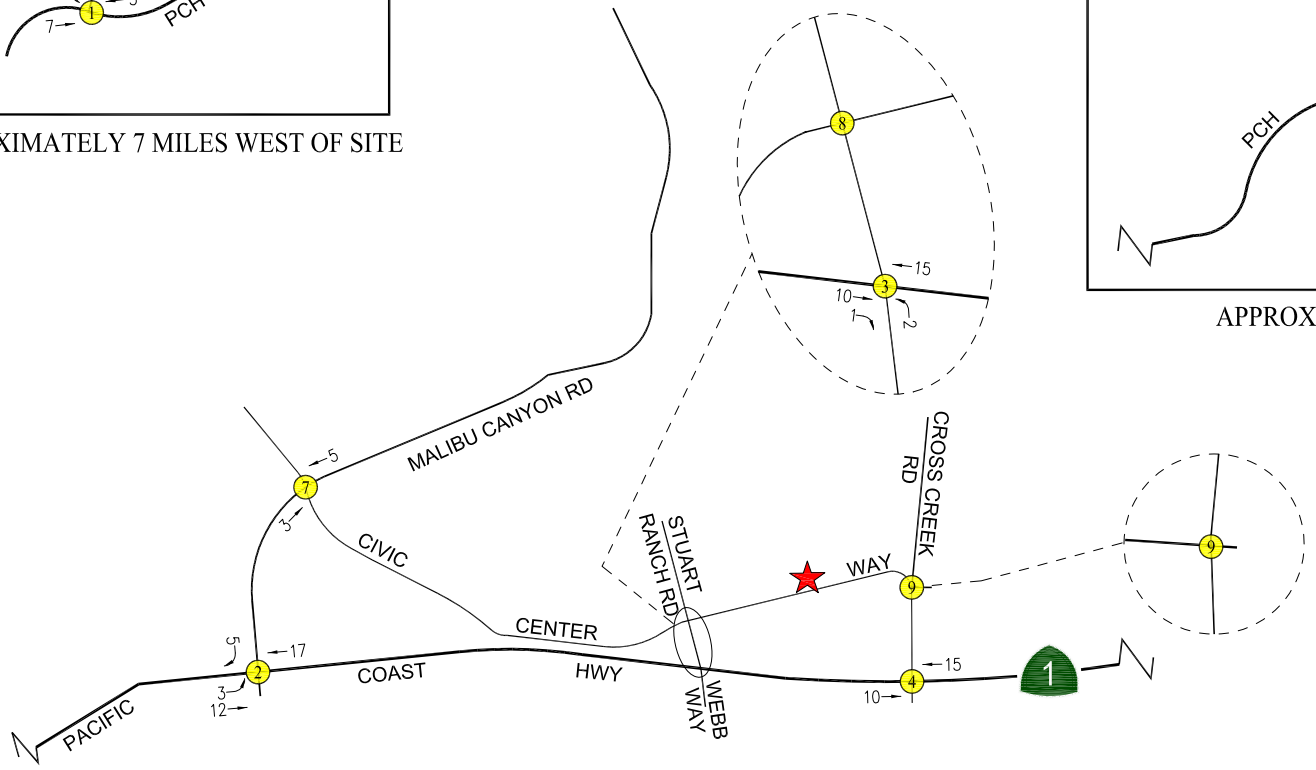

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NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-6
RELATED PROJECTS TRAFFIC VOLUMES
ZONE B

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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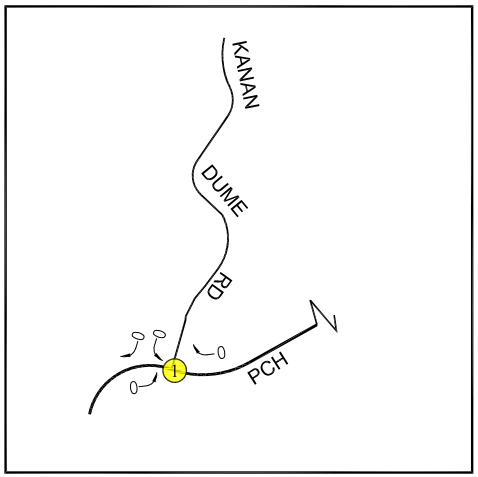

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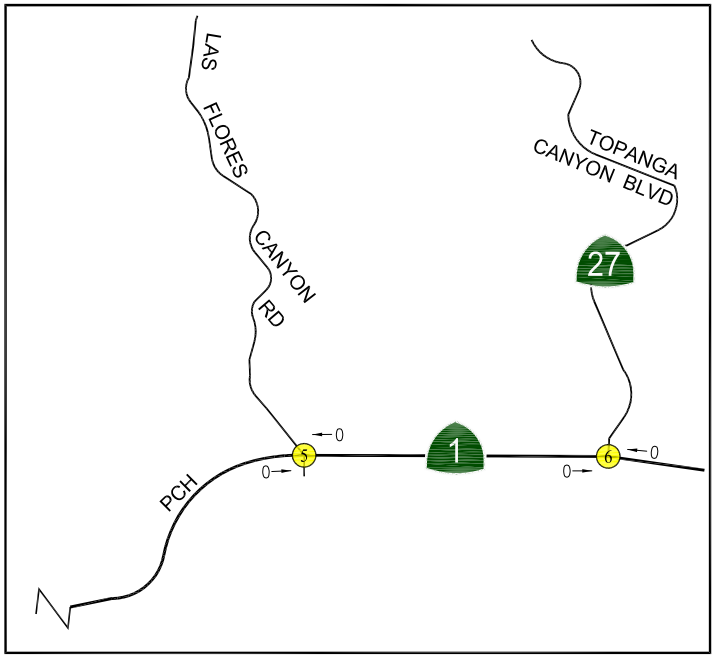

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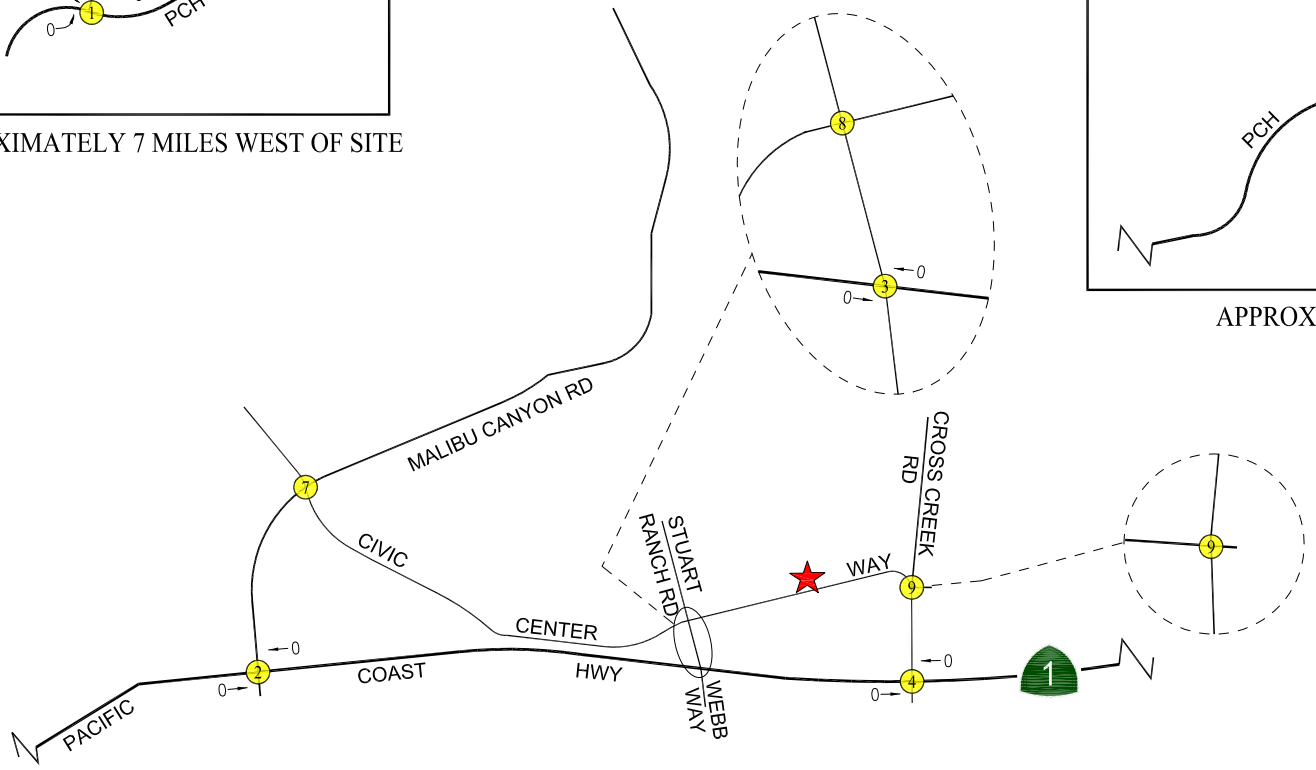

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-7
RELATED PROJECTS TRAFFIC VOLUMES
ZONE C

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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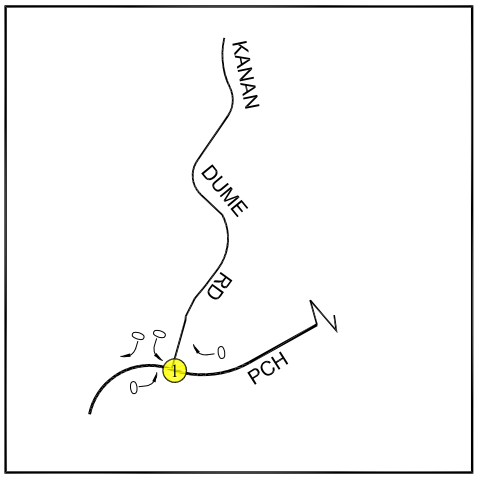

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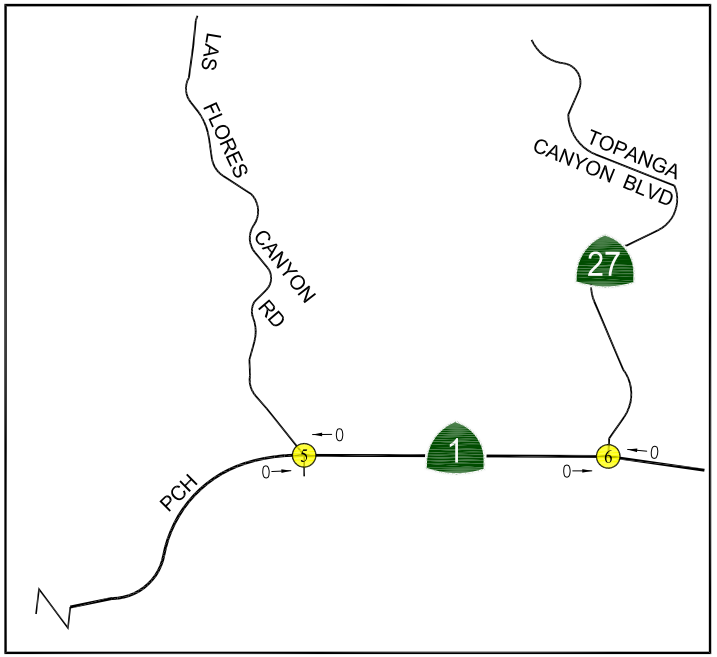

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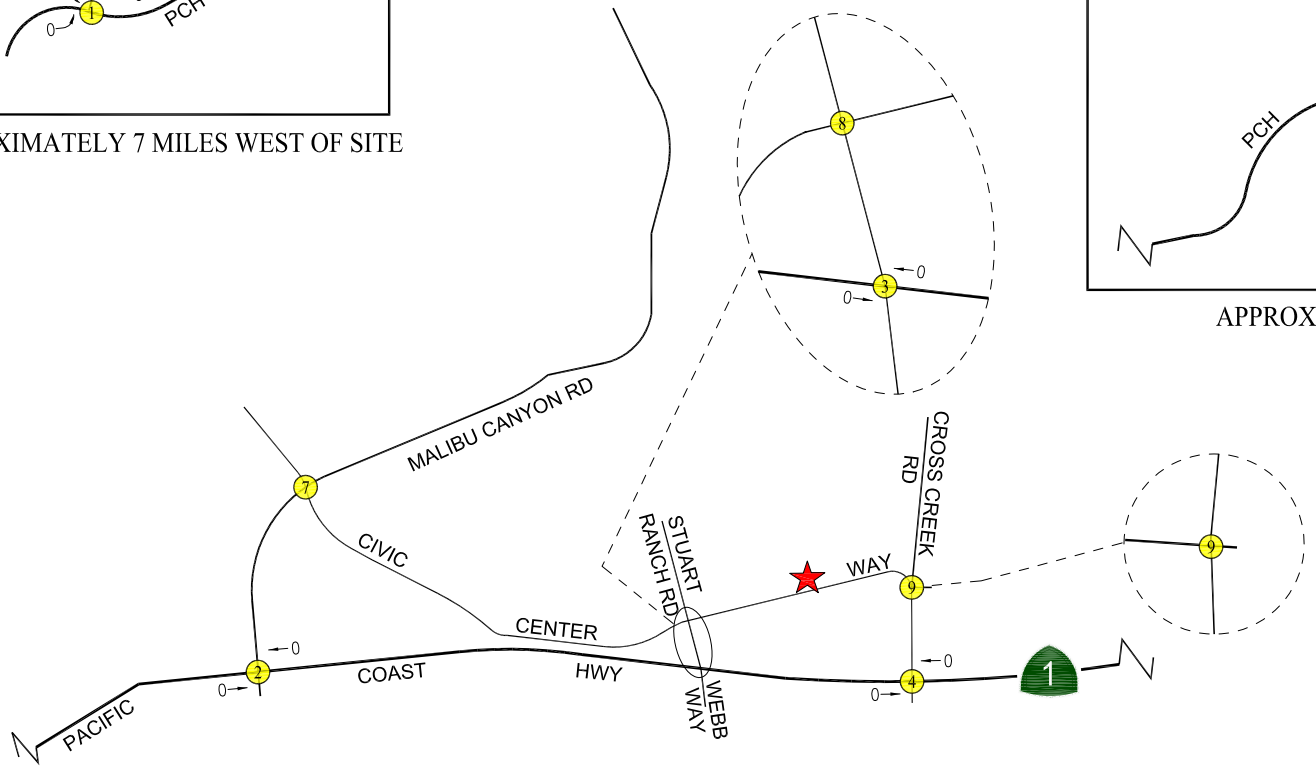

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-8
RELATED PROJECTS TRAFFIC VOLUMES
ZONE C

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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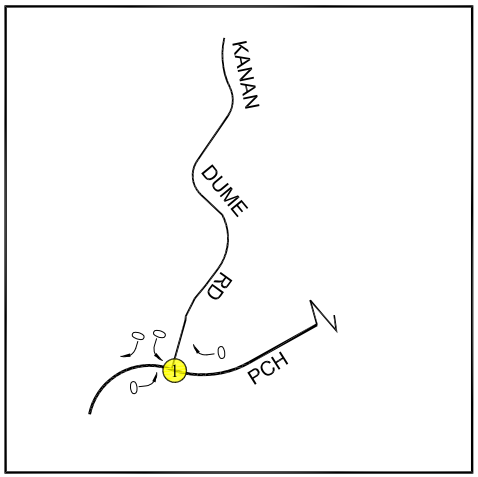

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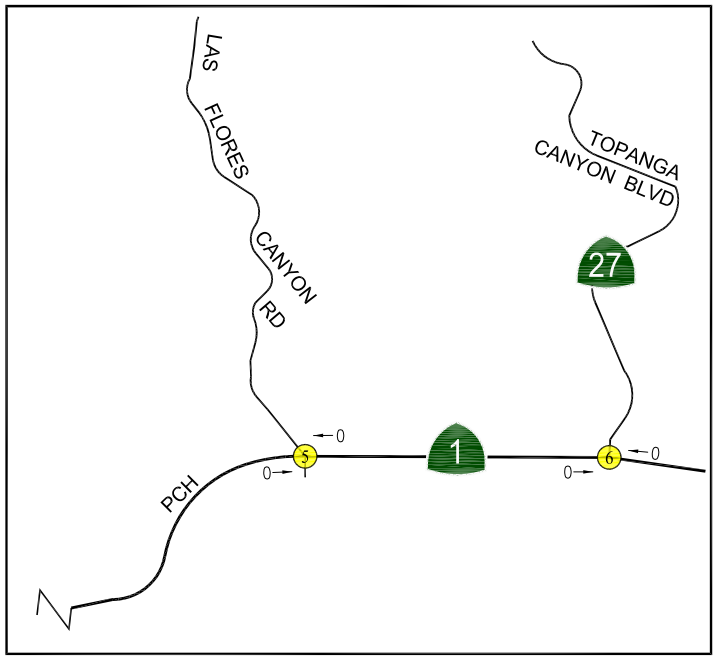

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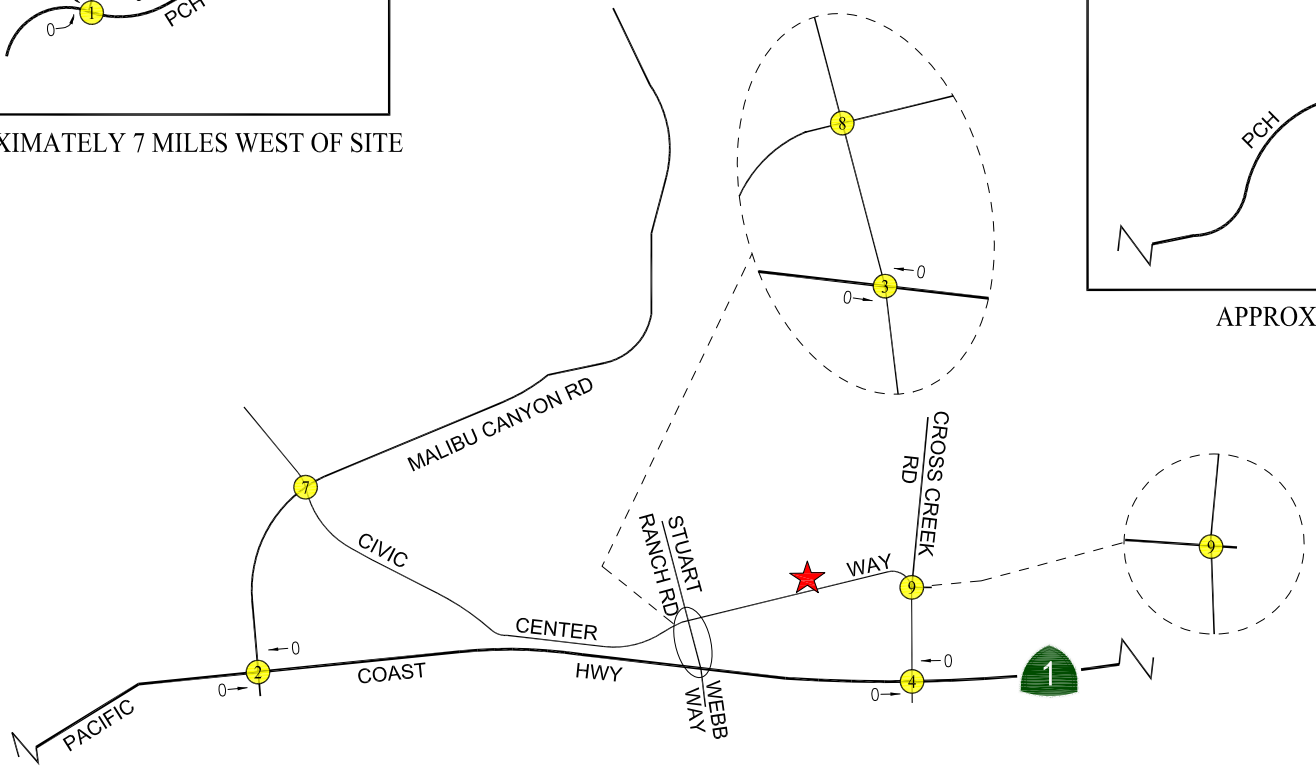

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NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-9
RELATED PROJECTS TRAFFIC VOLUMES
ZONE C

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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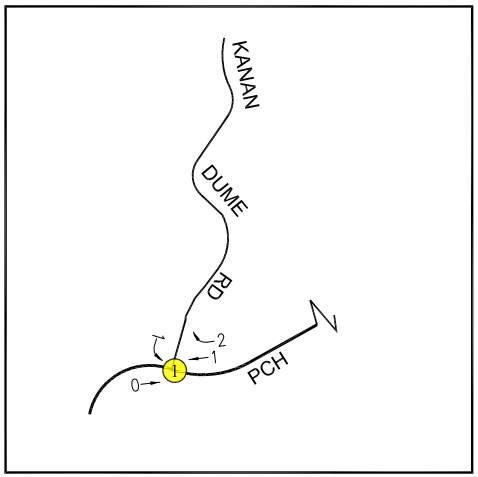

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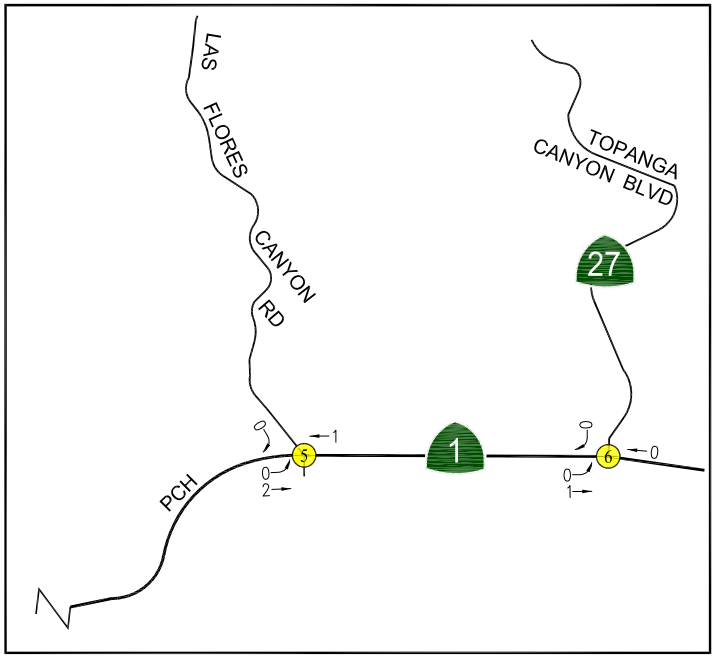

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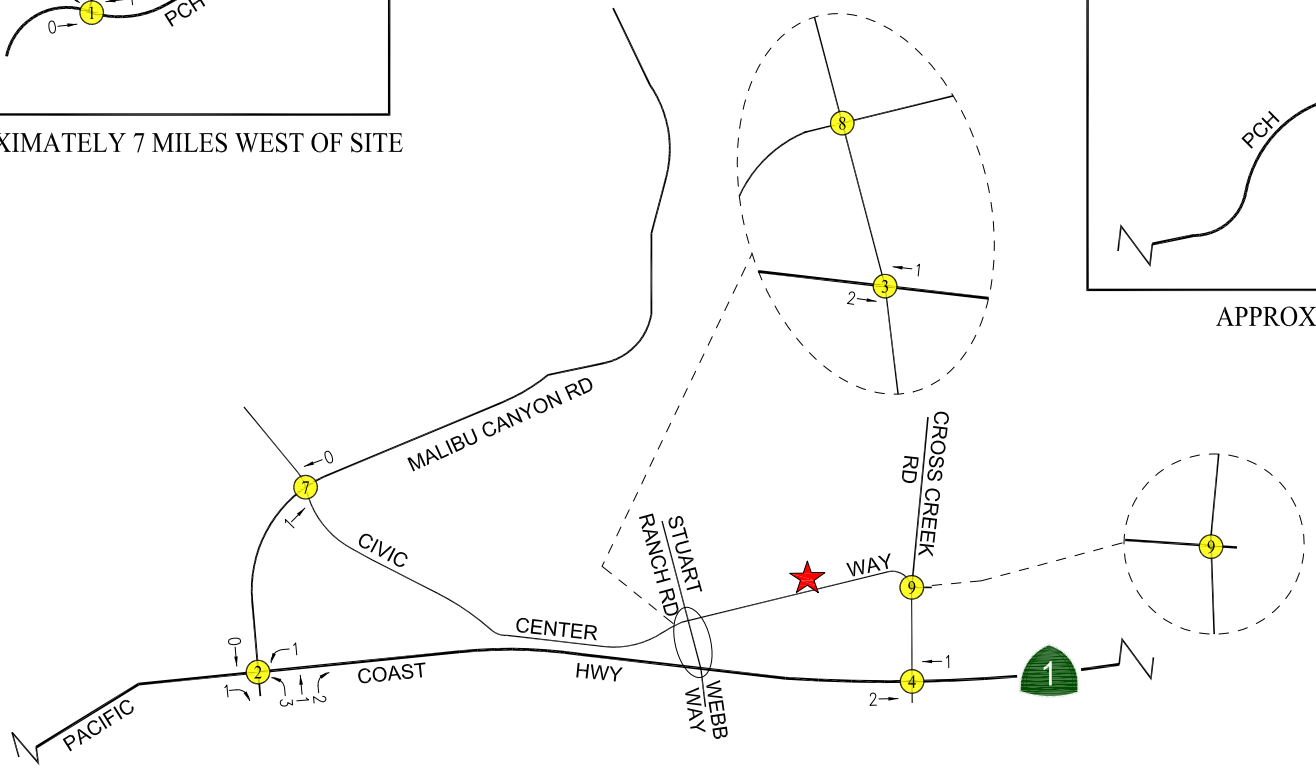

NOT TO SCALE

PROJECT SITE
STUDY INTERSECTION

FIGURE C-10
RELATED PROJECTS TRAFFIC VOLUMES
ZONE D

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

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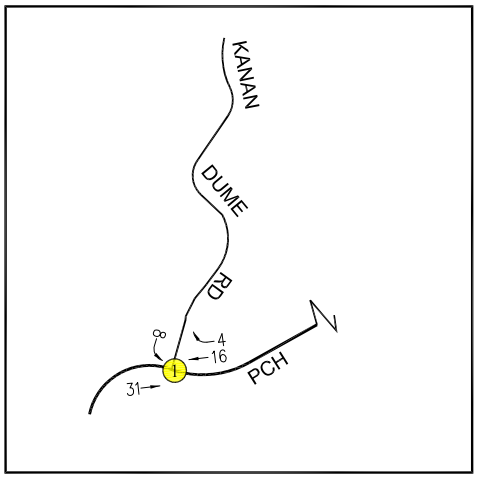

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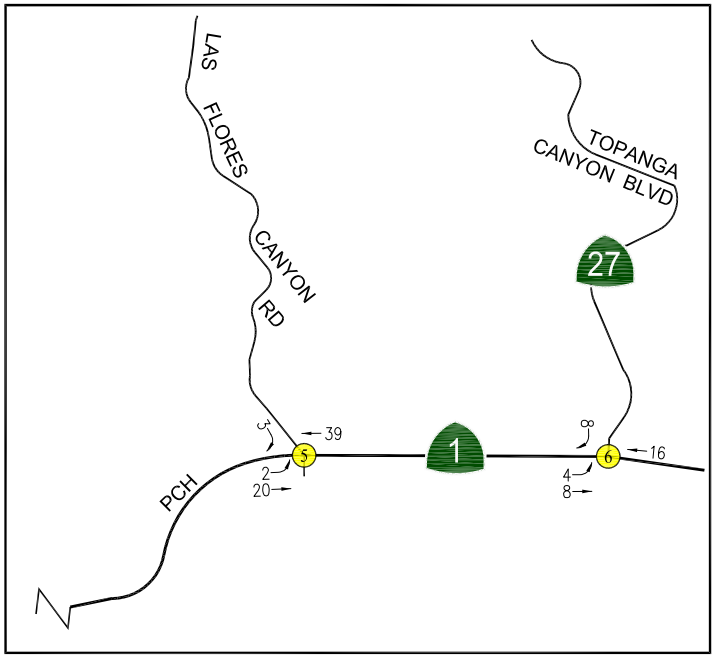

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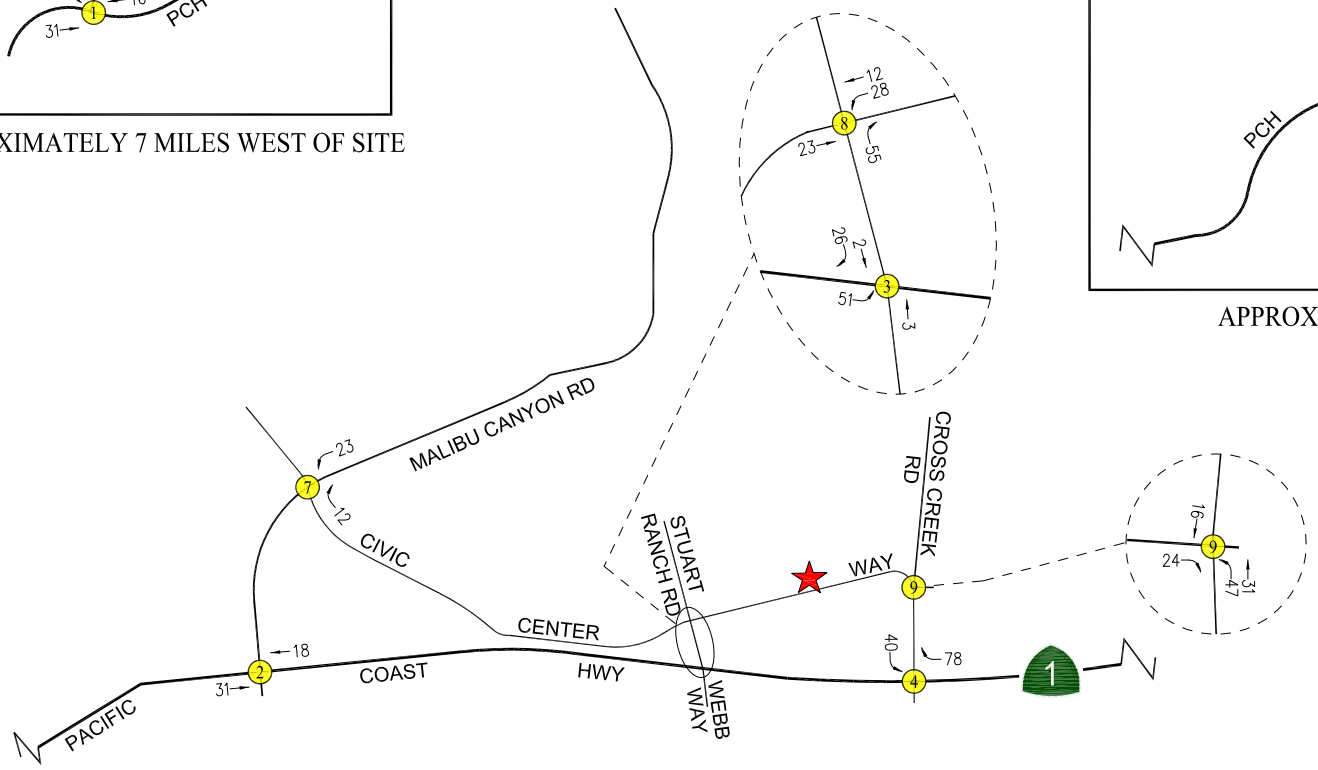

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NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-17
RELATED PROJECTS TRAFFIC VOLUMES
ZONE F

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

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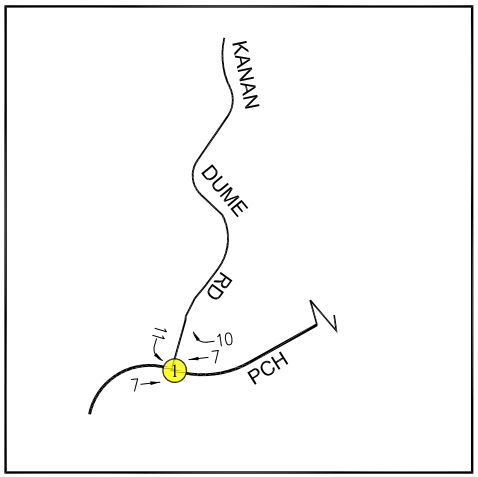

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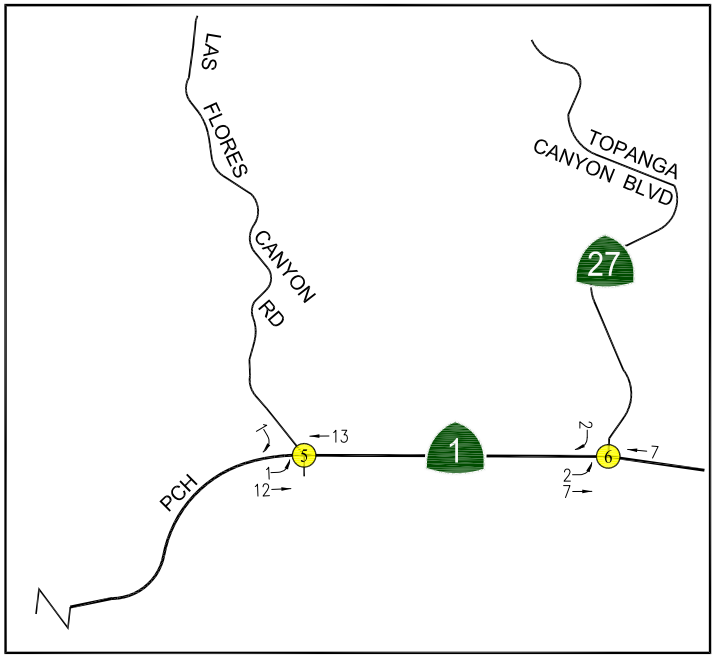

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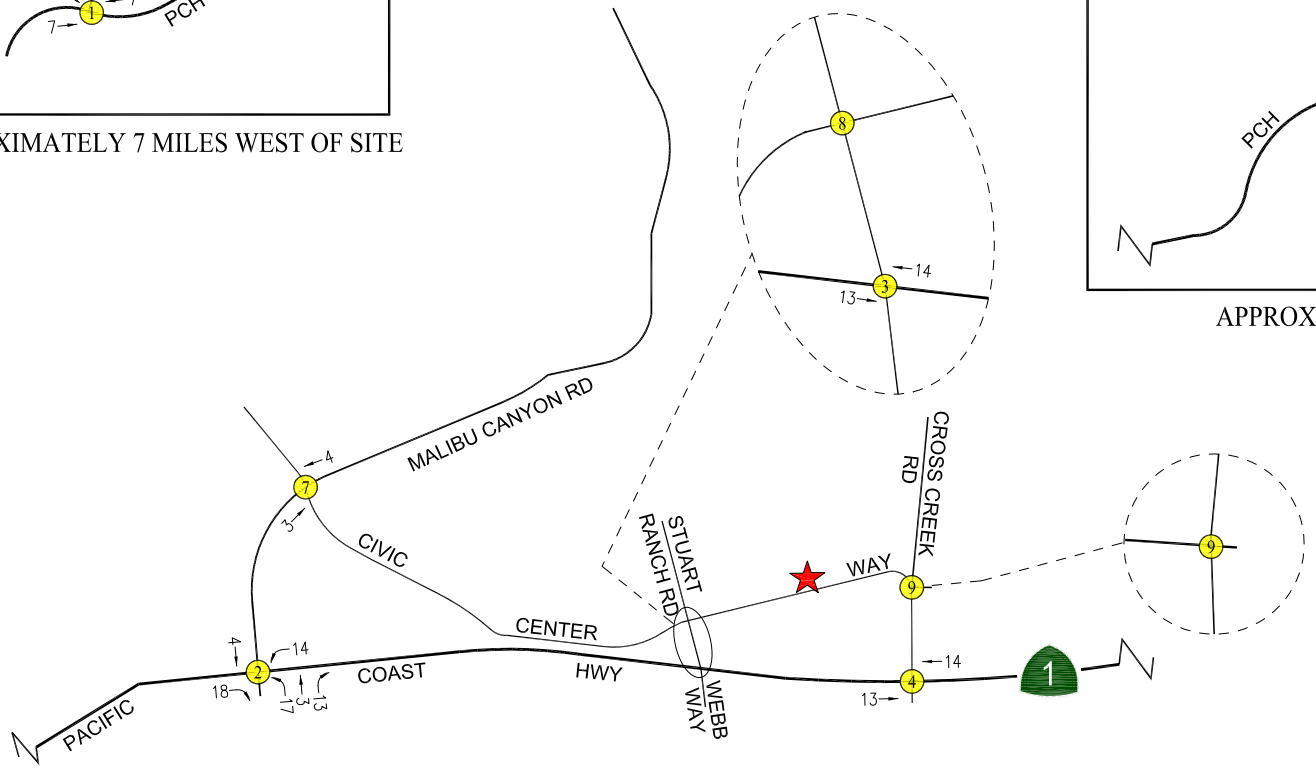

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-11
RELATED PROJECTS TRAFFIC VOLUMES
ZONE D

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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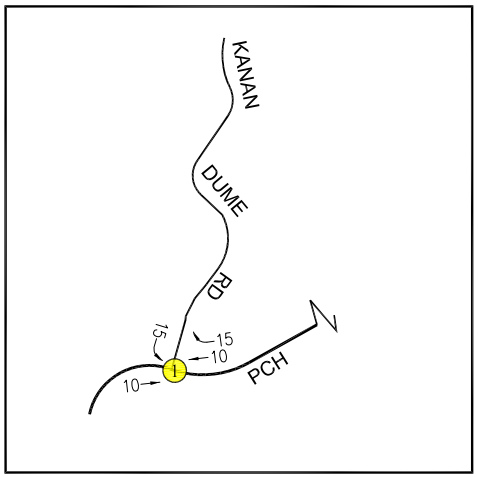

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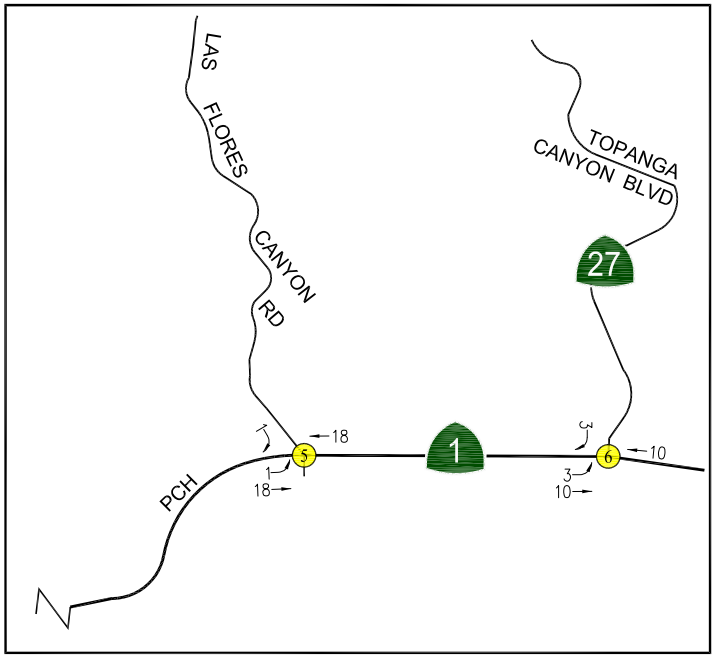

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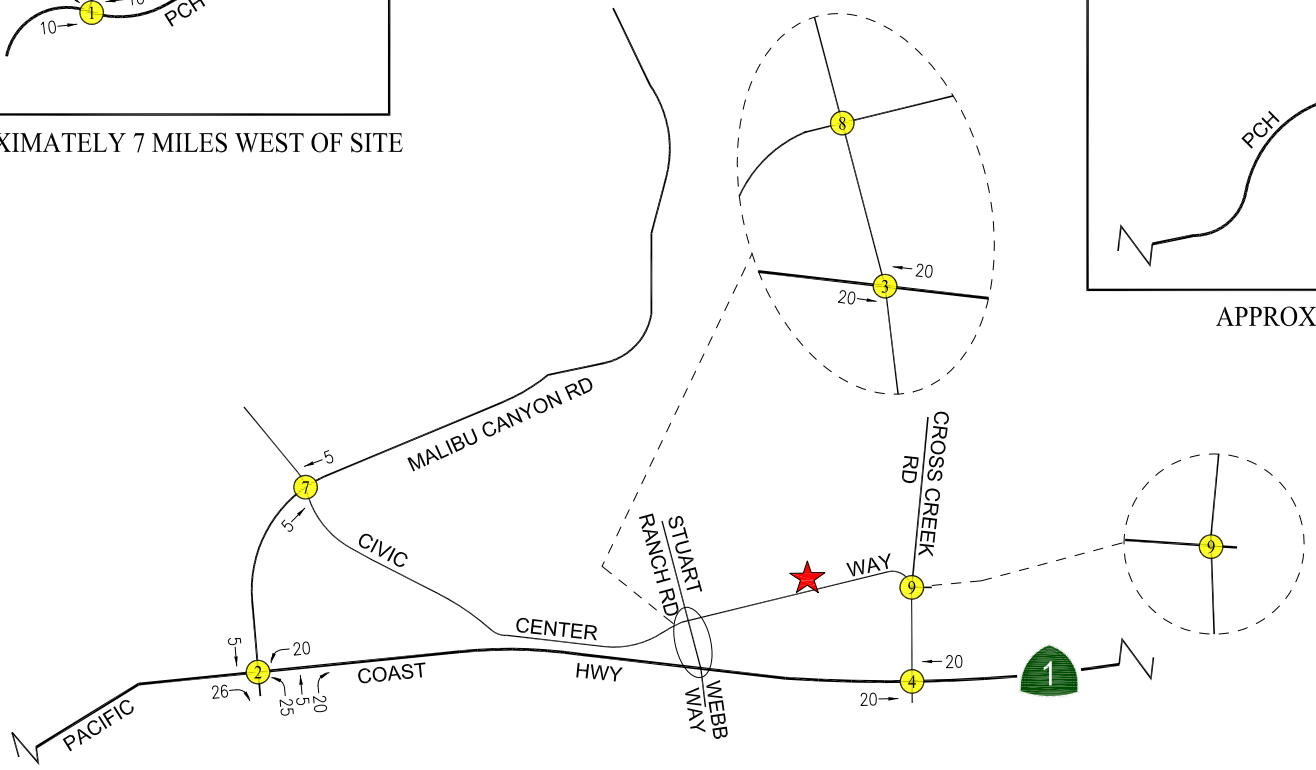

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-12
RELATED PROJECTS TRAFFIC VOLUMES
ZONE D

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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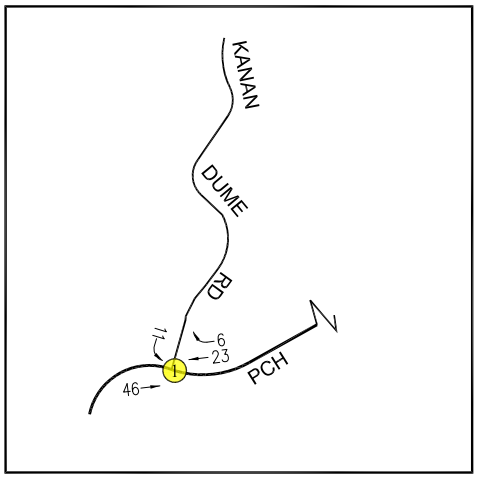

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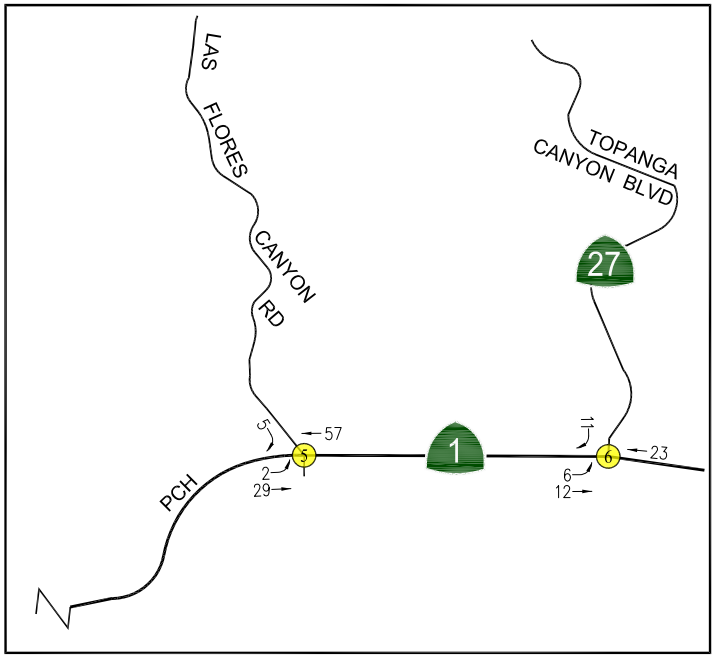

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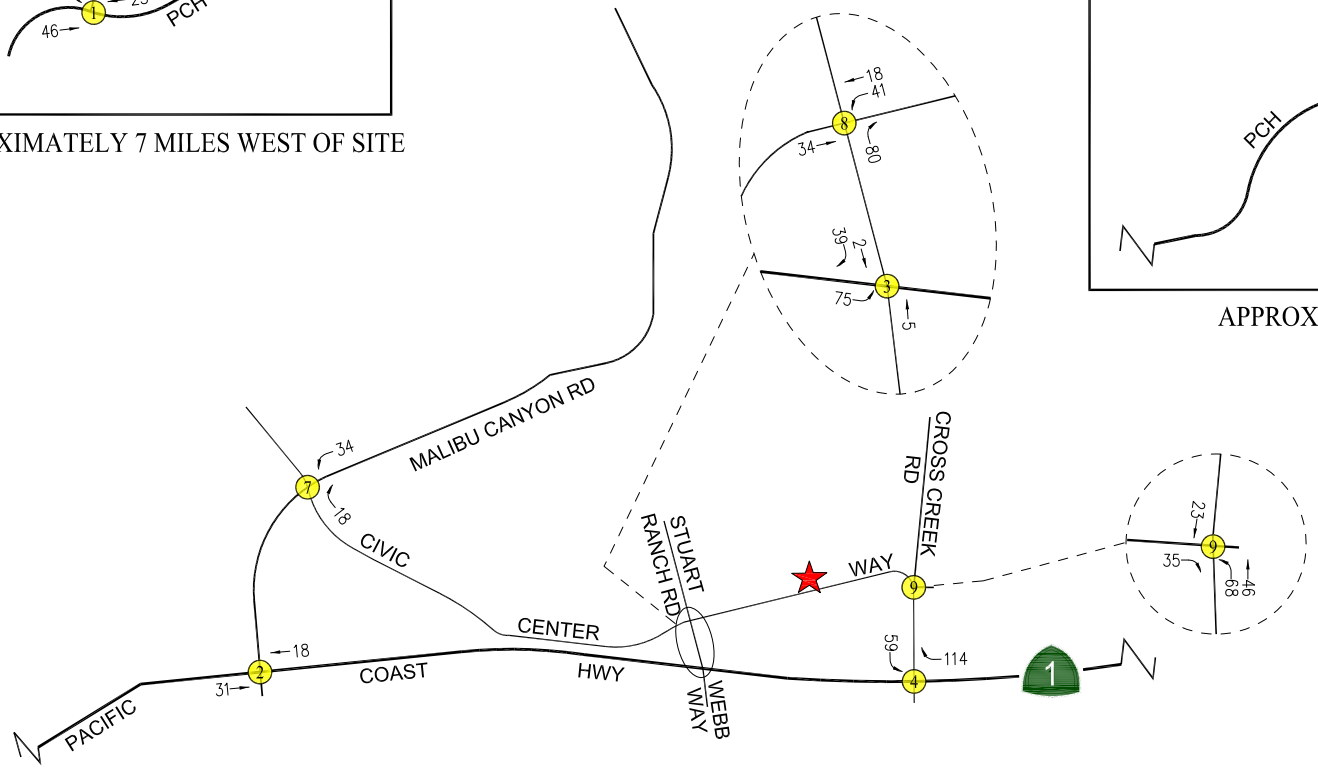

N

NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-18
RELATED PROJECTS TRAFFIC VOLUMES
ZONE F

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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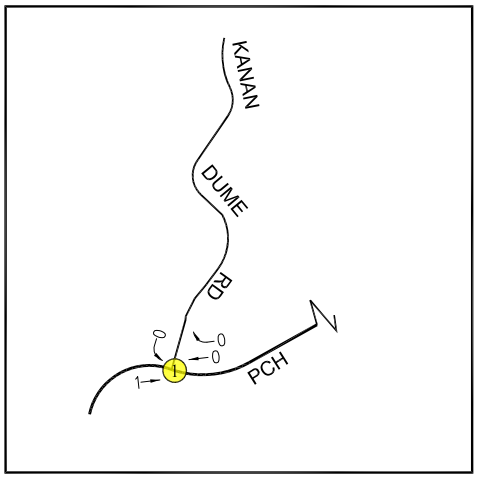

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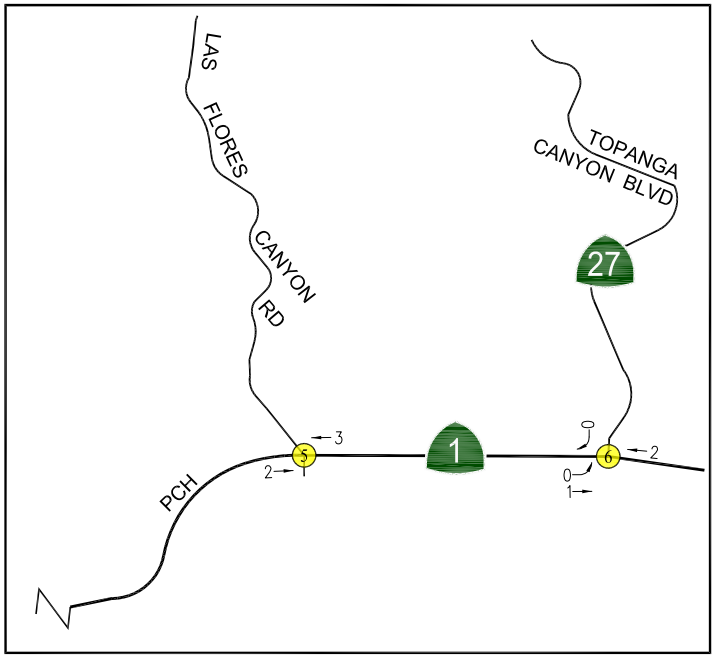

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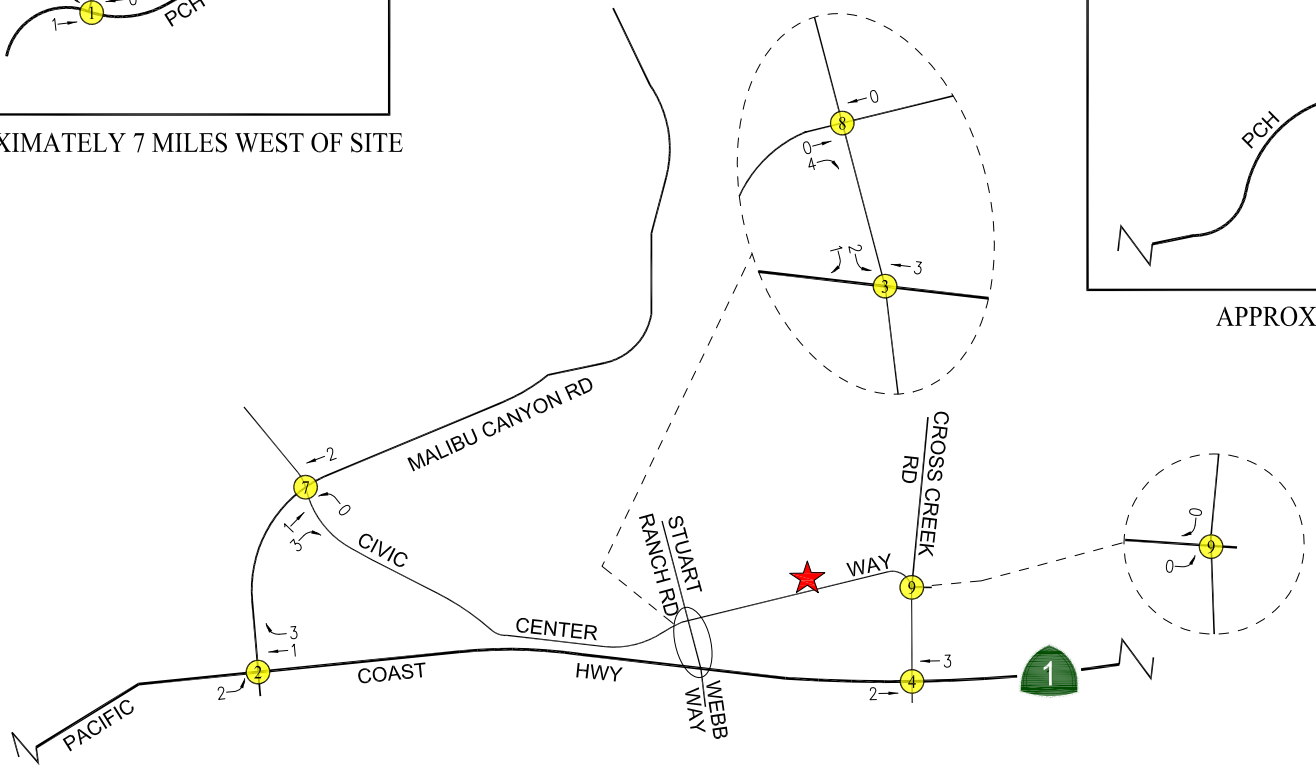

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-13
RELATED PROJECTS TRAFFIC VOLUMES
ZONE E

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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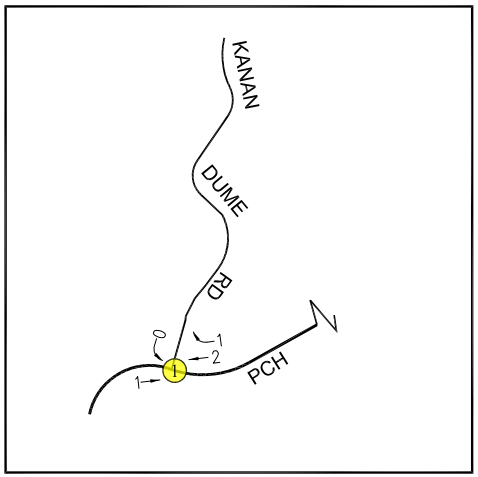

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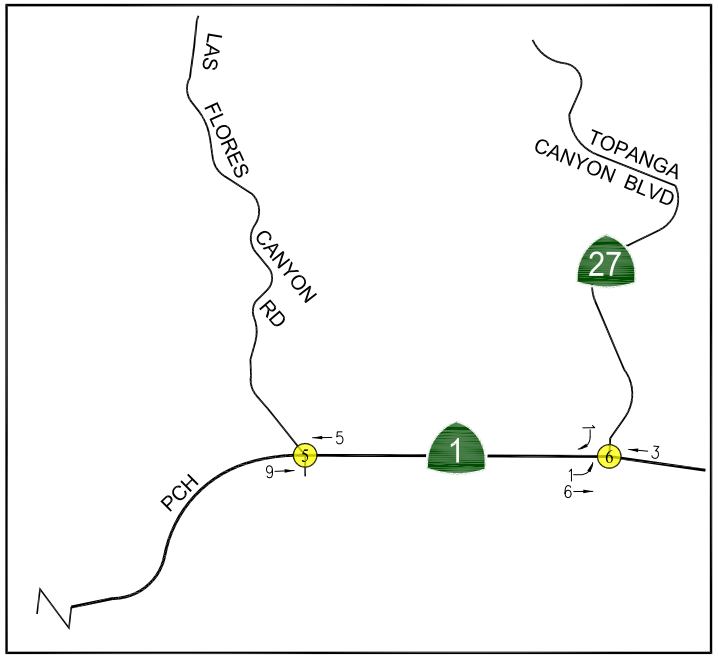

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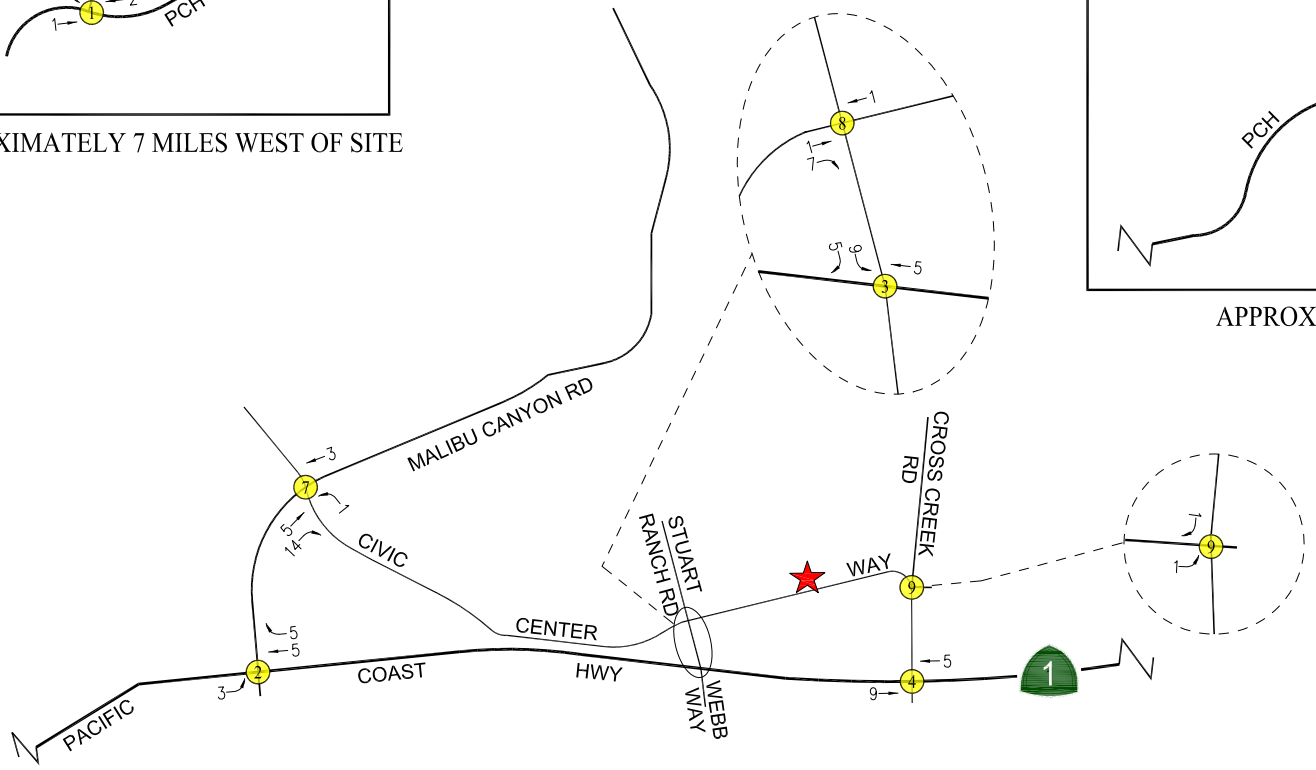

NOT TO SCALE

★ PROJECT SITE
(XX) STUDY INTERSECTION

FIGURE C-14
RELATED PROJECTS TRAFFIC VOLUMES
ZONE E

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

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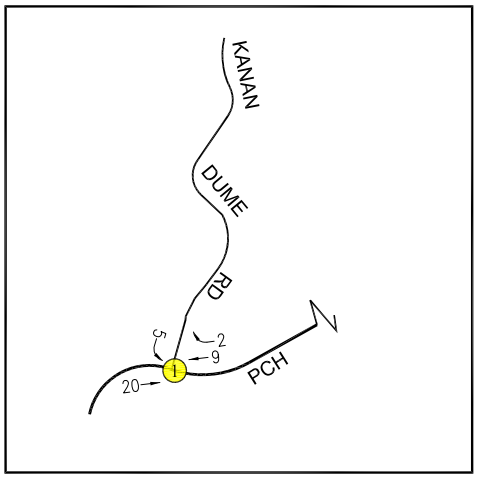

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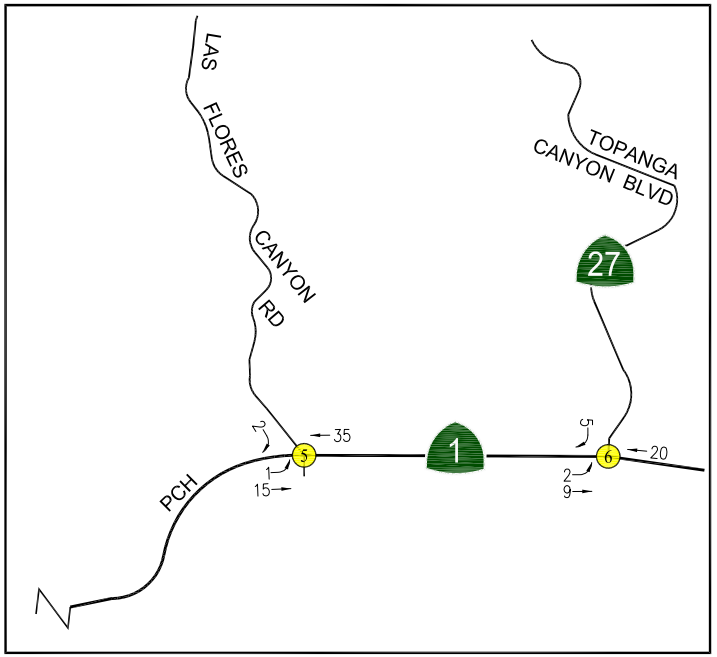

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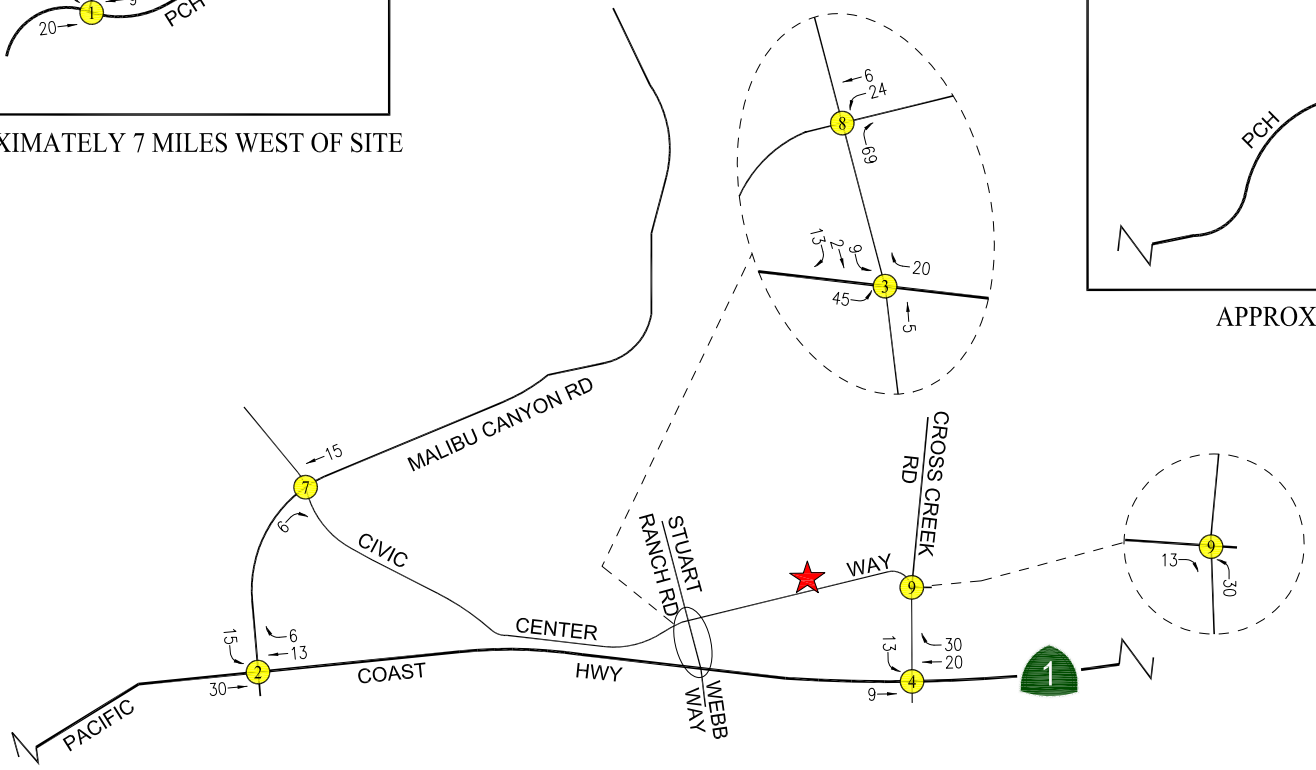

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-19
RELATED PROJECTS TRAFFIC VOLUMES
ZONE G

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

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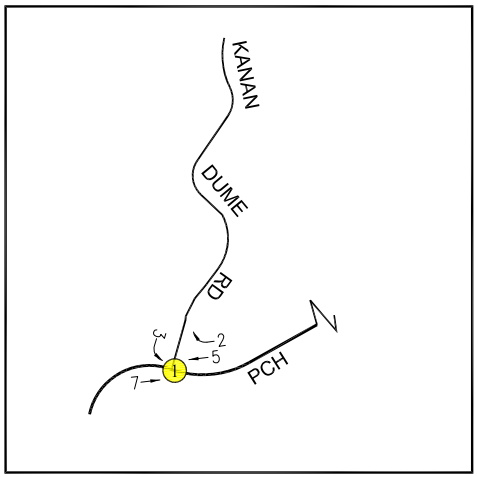

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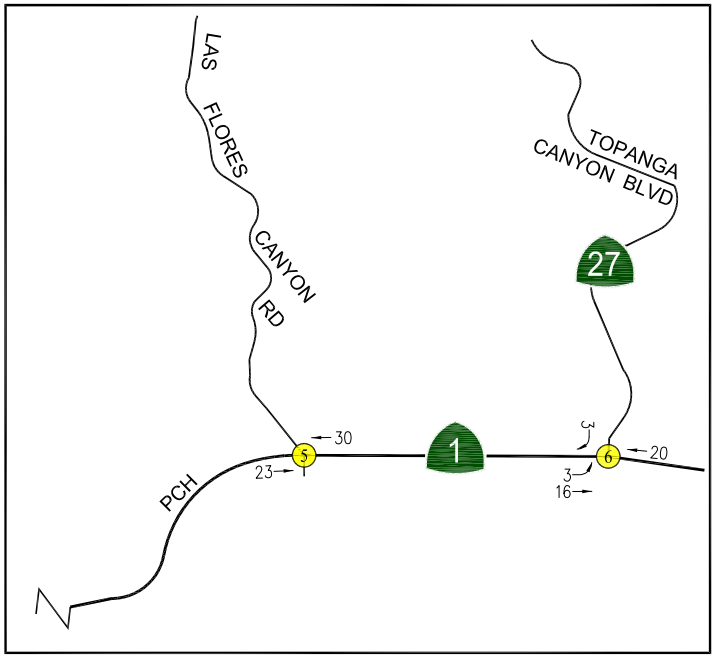

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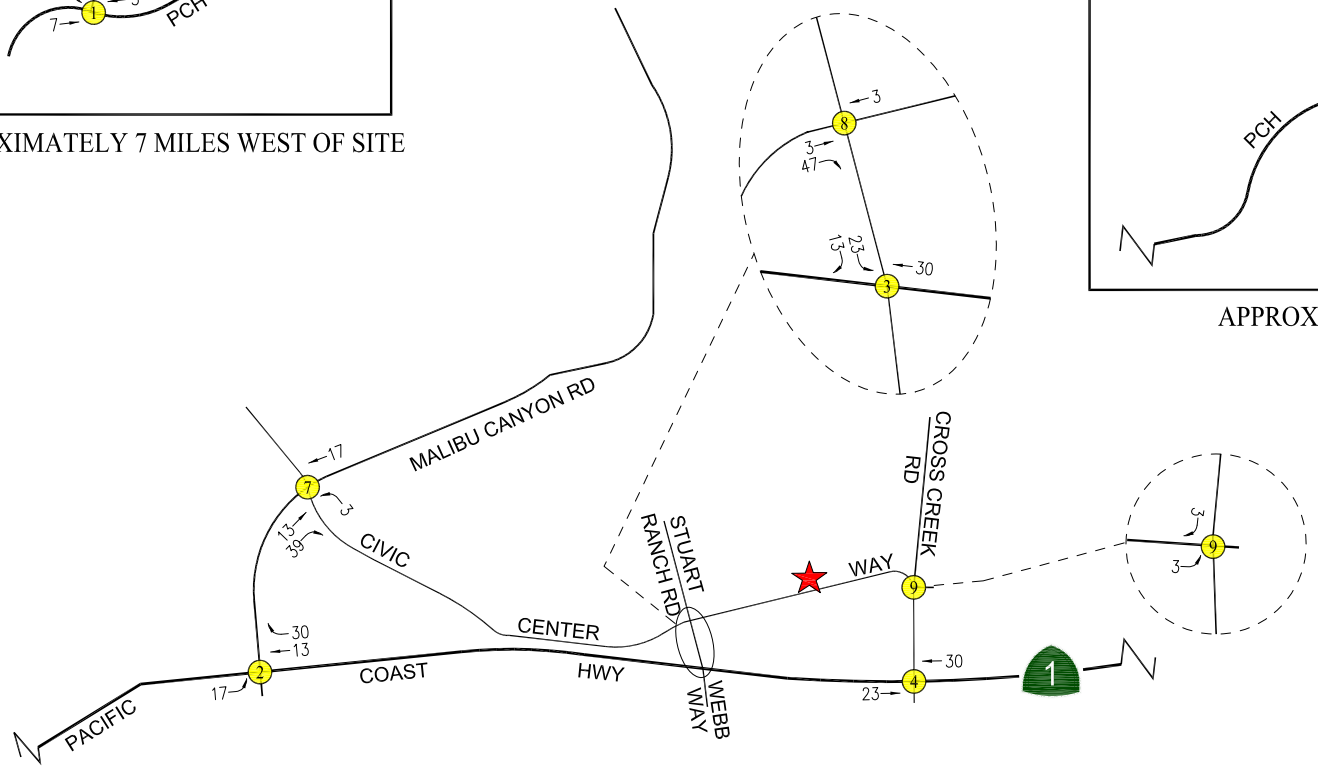

PROJECT SITE
STUDY INTERSECTION

NOT TO SCALE

FIGURE C-15
RELATED PROJECTS TRAFFIC VOLUMES
ZONE E

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

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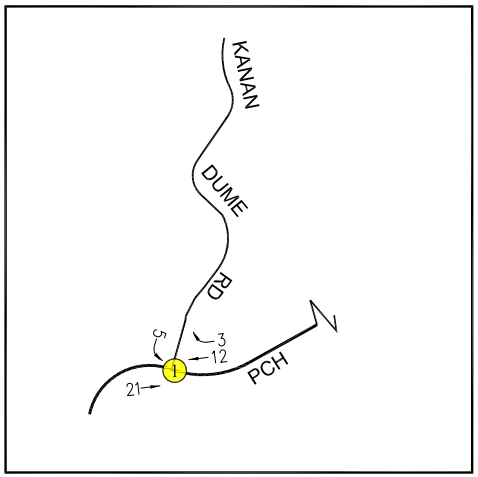

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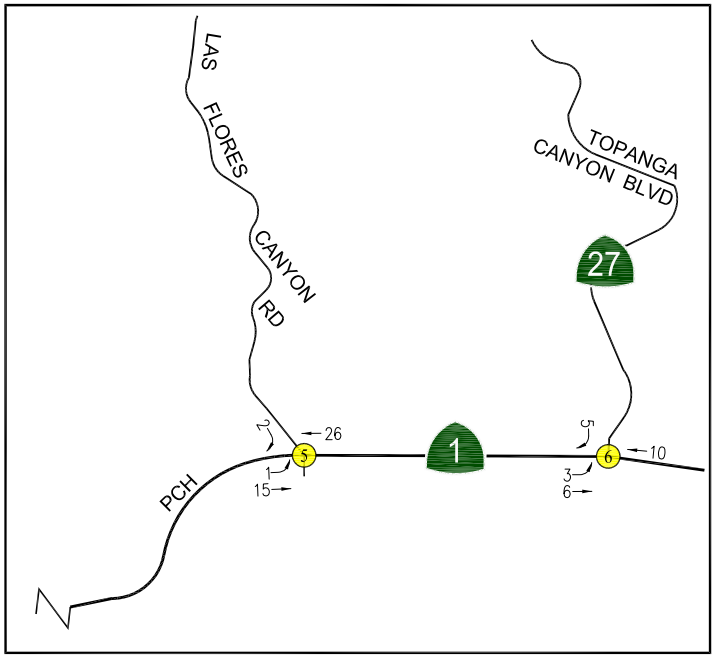

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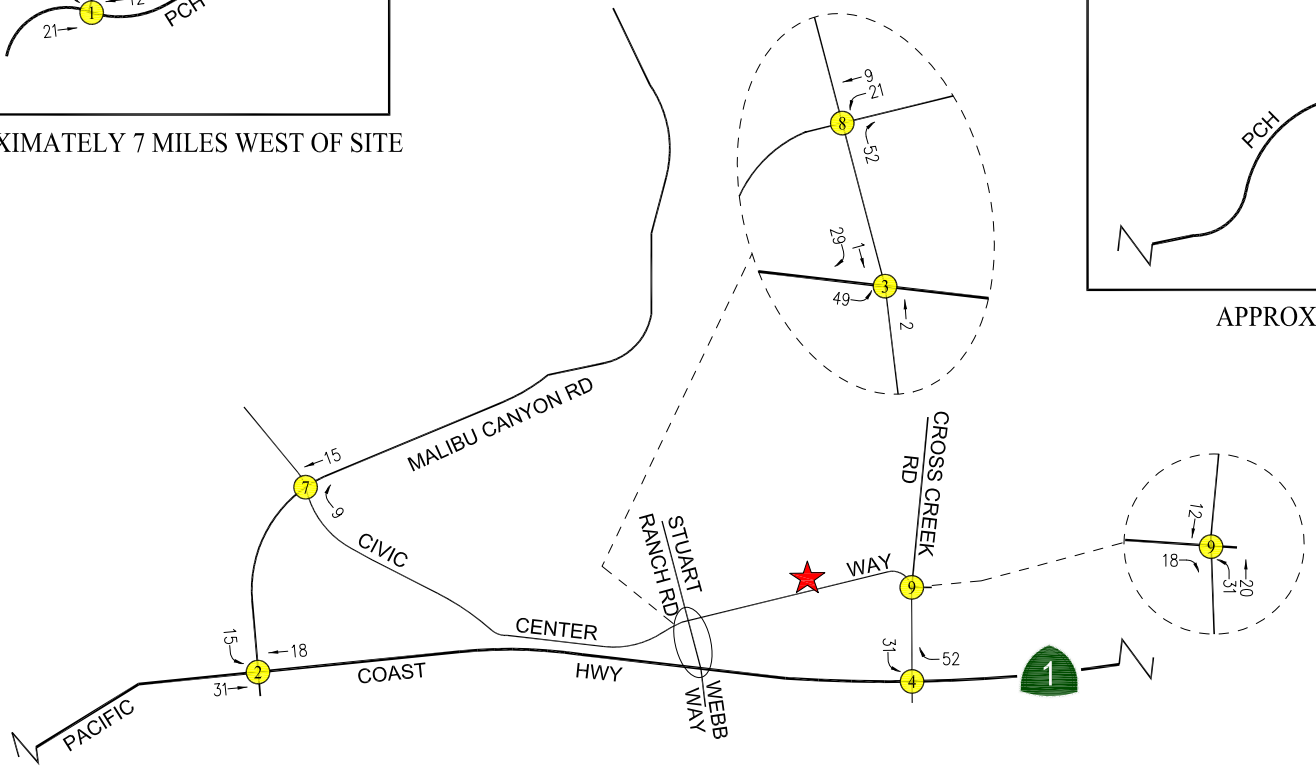

PROJECT SITE
STUDY INTERSECTION

N

NOT TO SCALE

FIGURE C-16
RELATED PROJECTS TRAFFIC VOLUMES
ZONE F

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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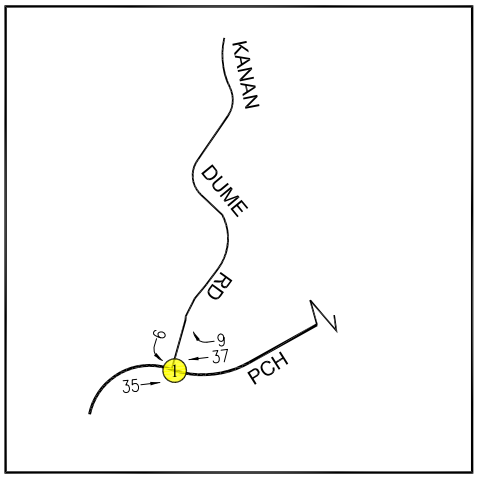

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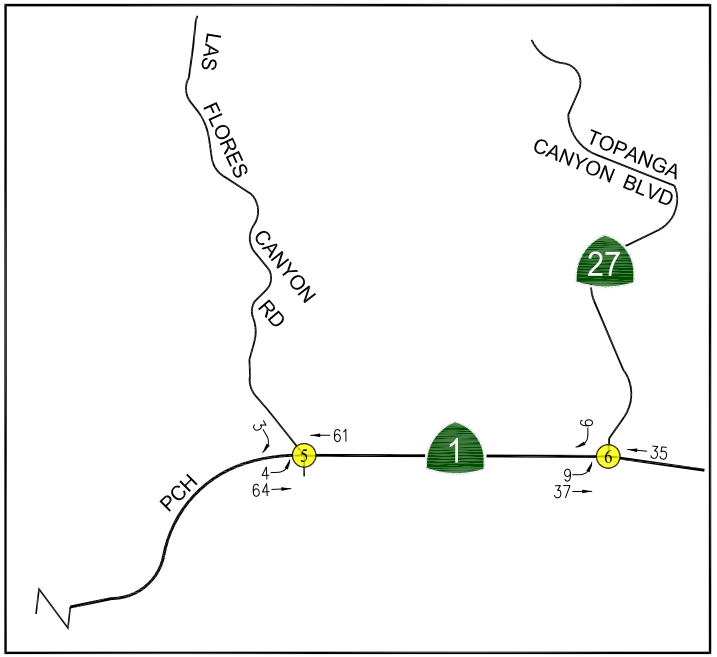

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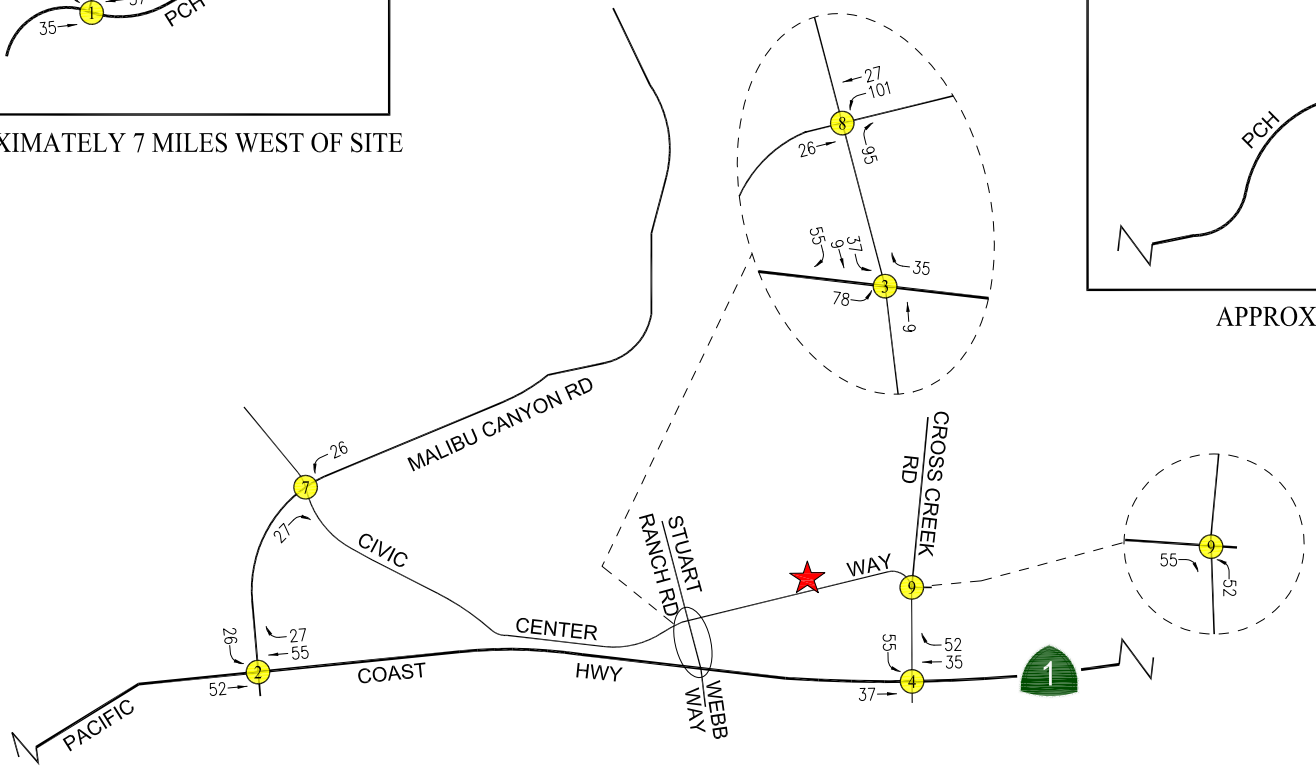

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NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-20
RELATED PROJECTS TRAFFIC VOLUMES
ZONE G

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

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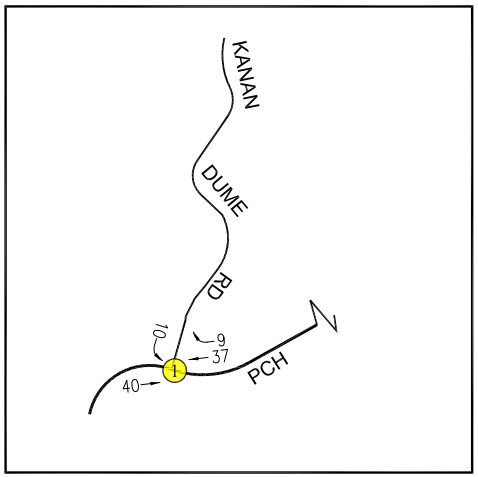

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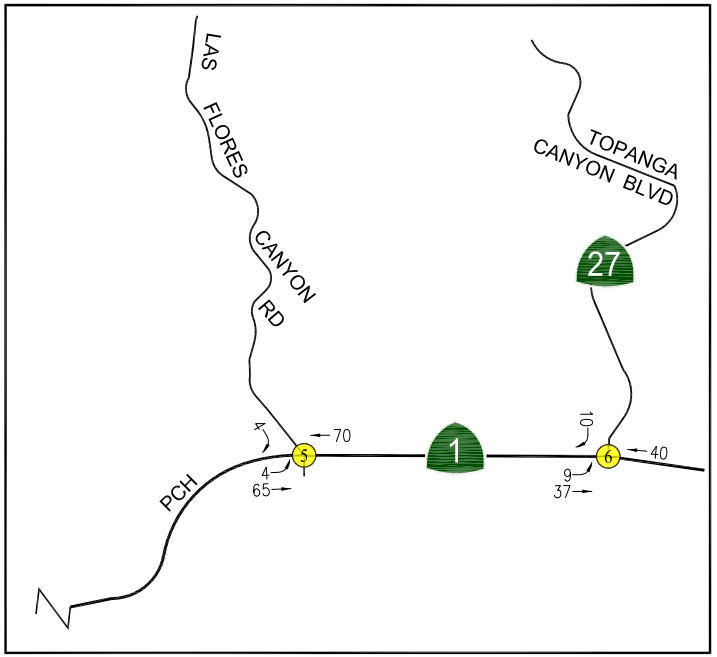

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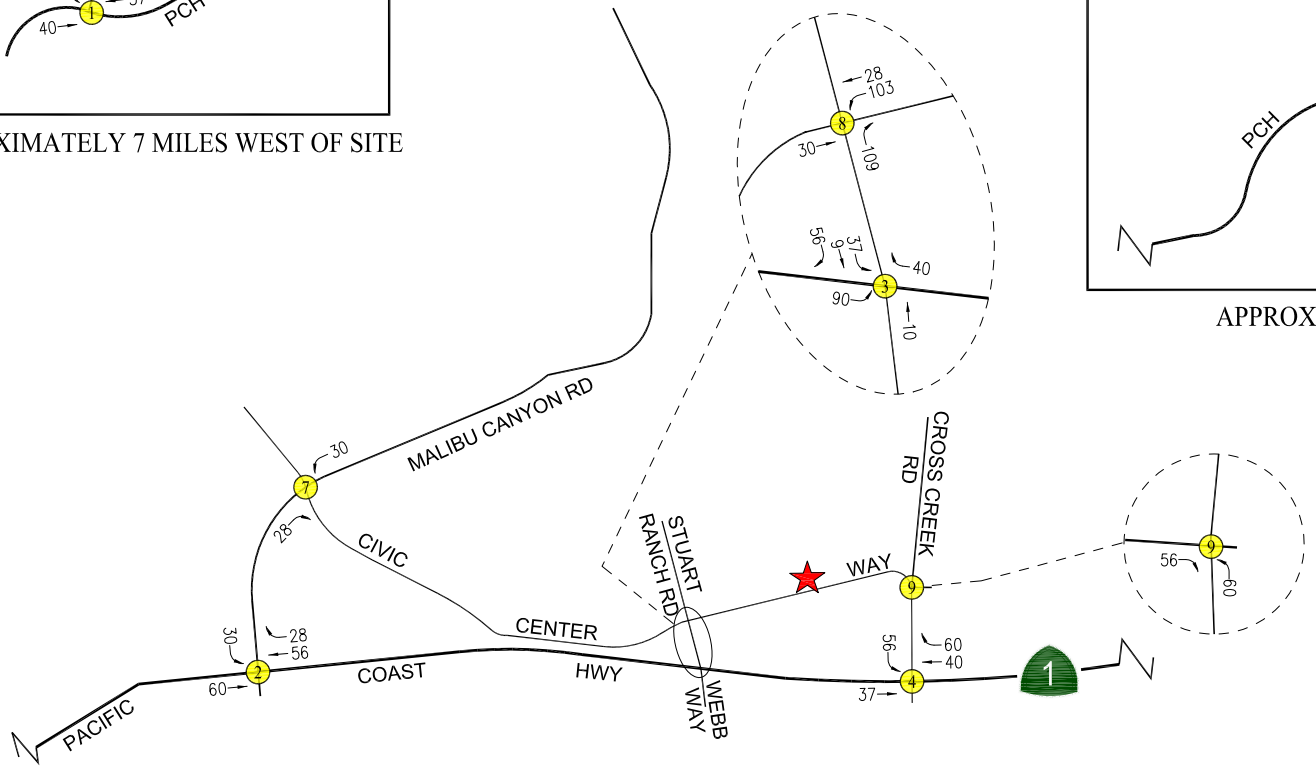

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NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-21
RELATED PROJECTS TRAFFIC VOLUMES
ZONE G

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

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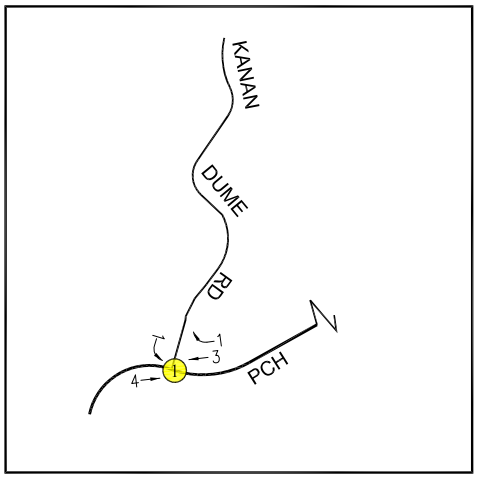

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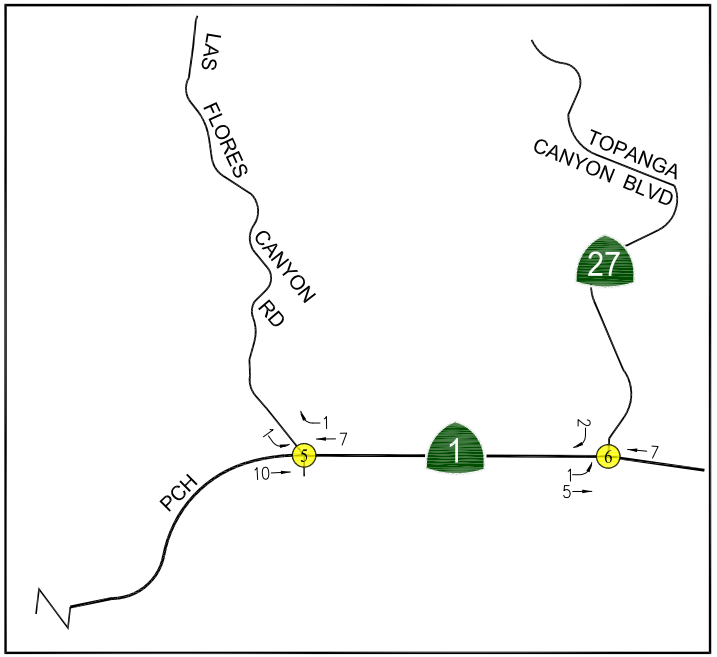

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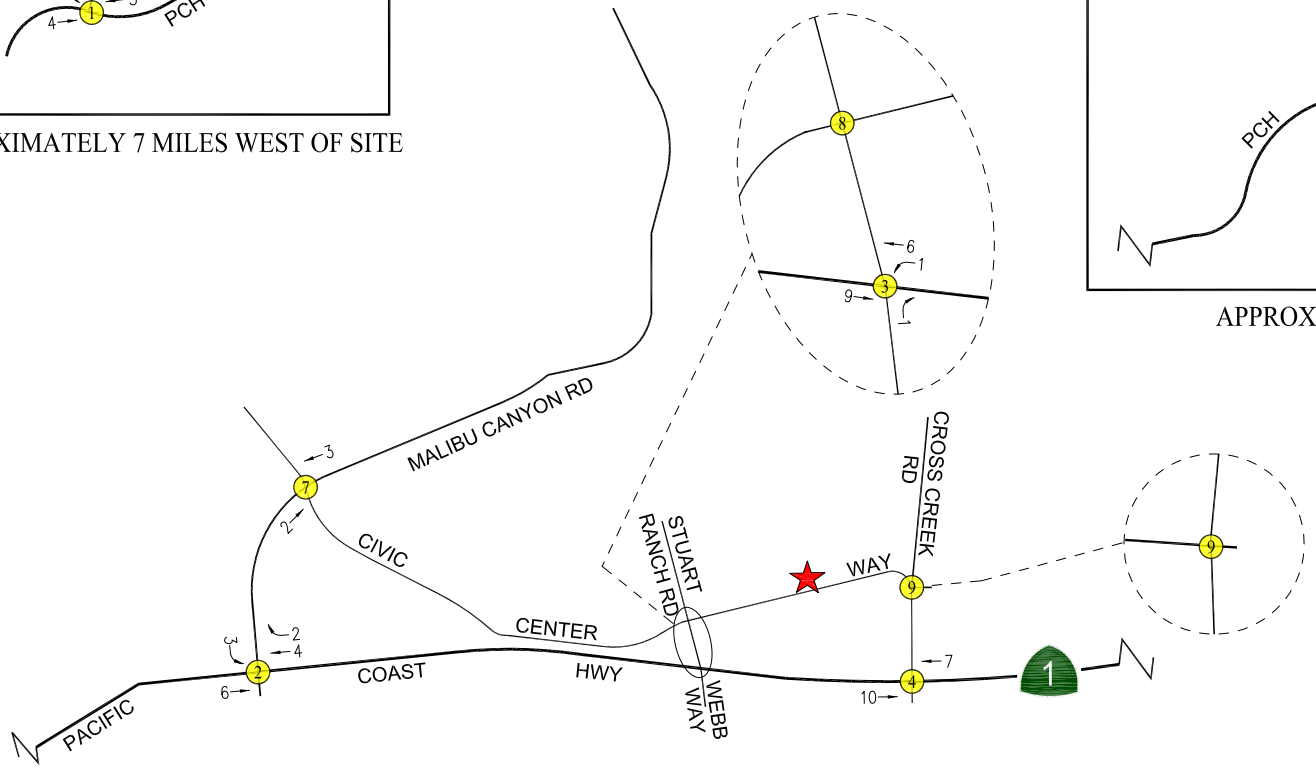

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NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-22
RELATED PROJECTS TRAFFIC VOLUMES
ZONE H

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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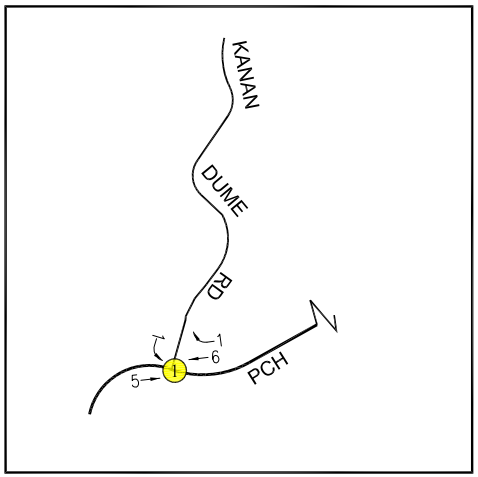

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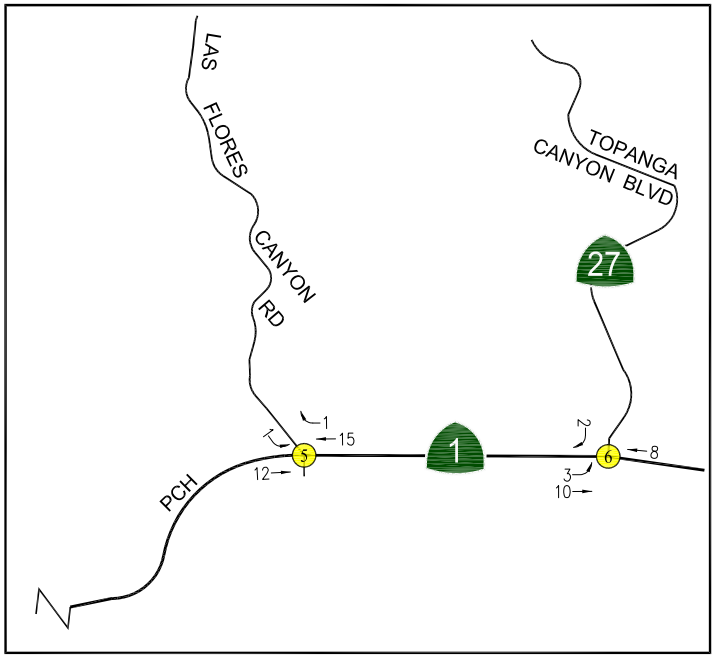

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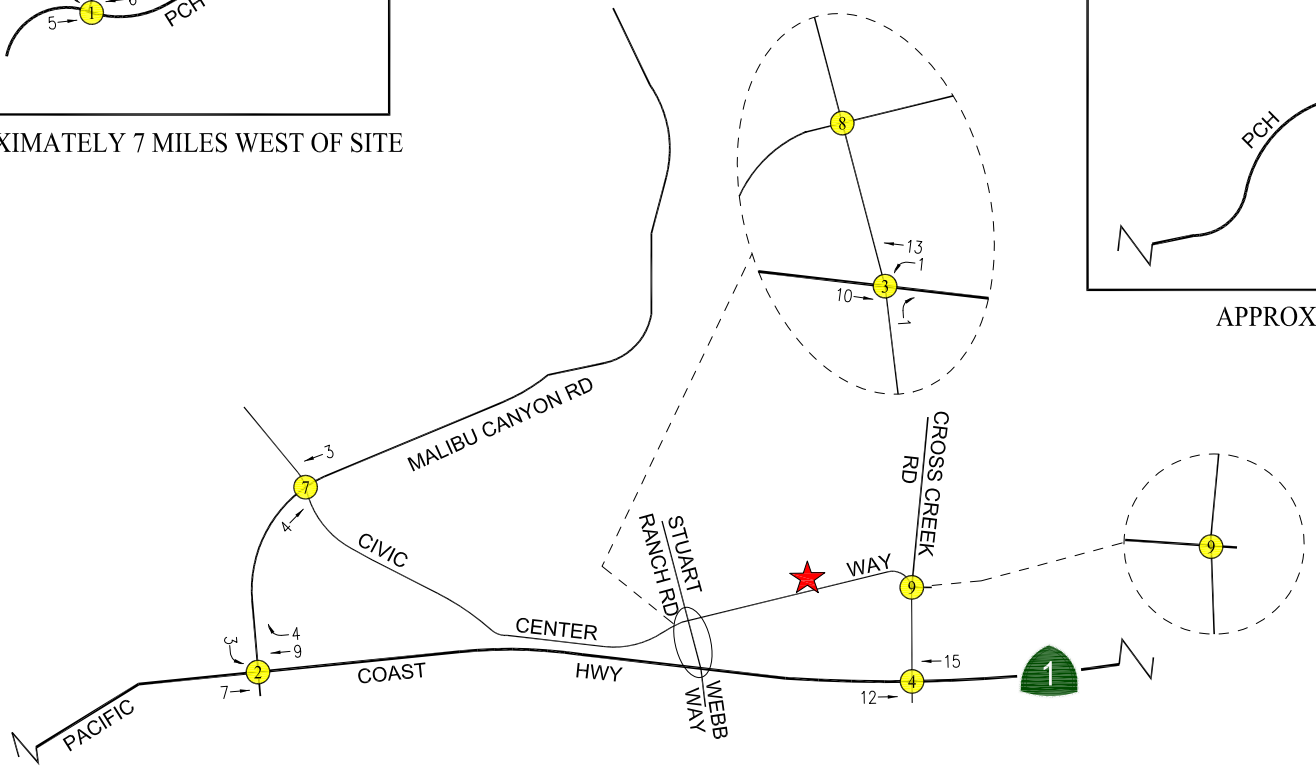

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-23
RELATED PROJECTS TRAFFIC VOLUMES
ZONE H

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

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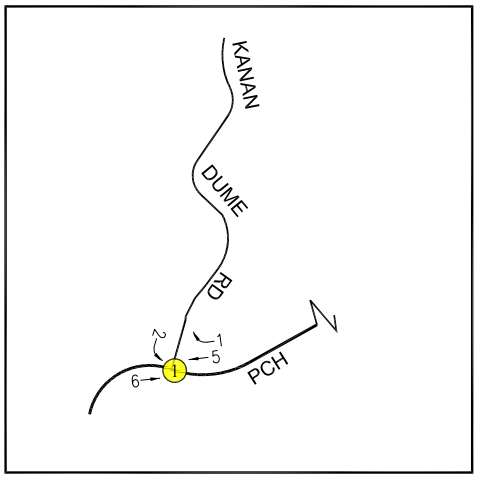

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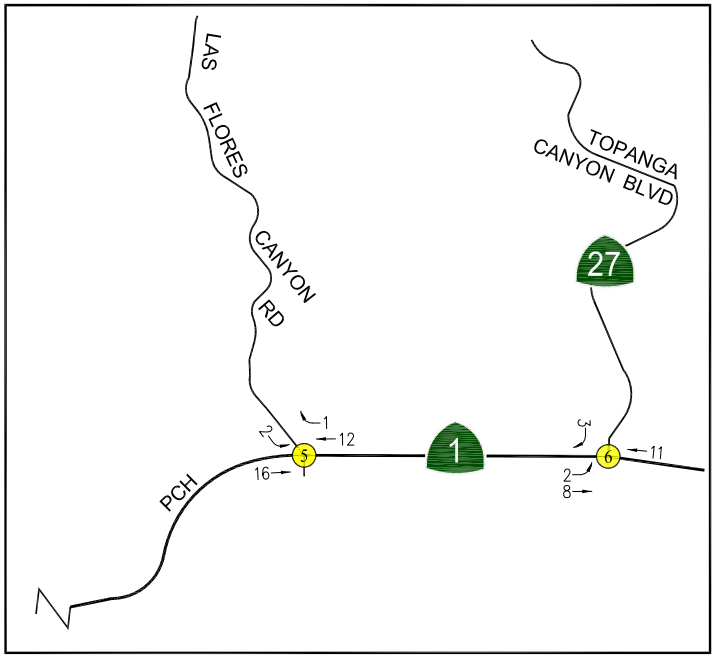

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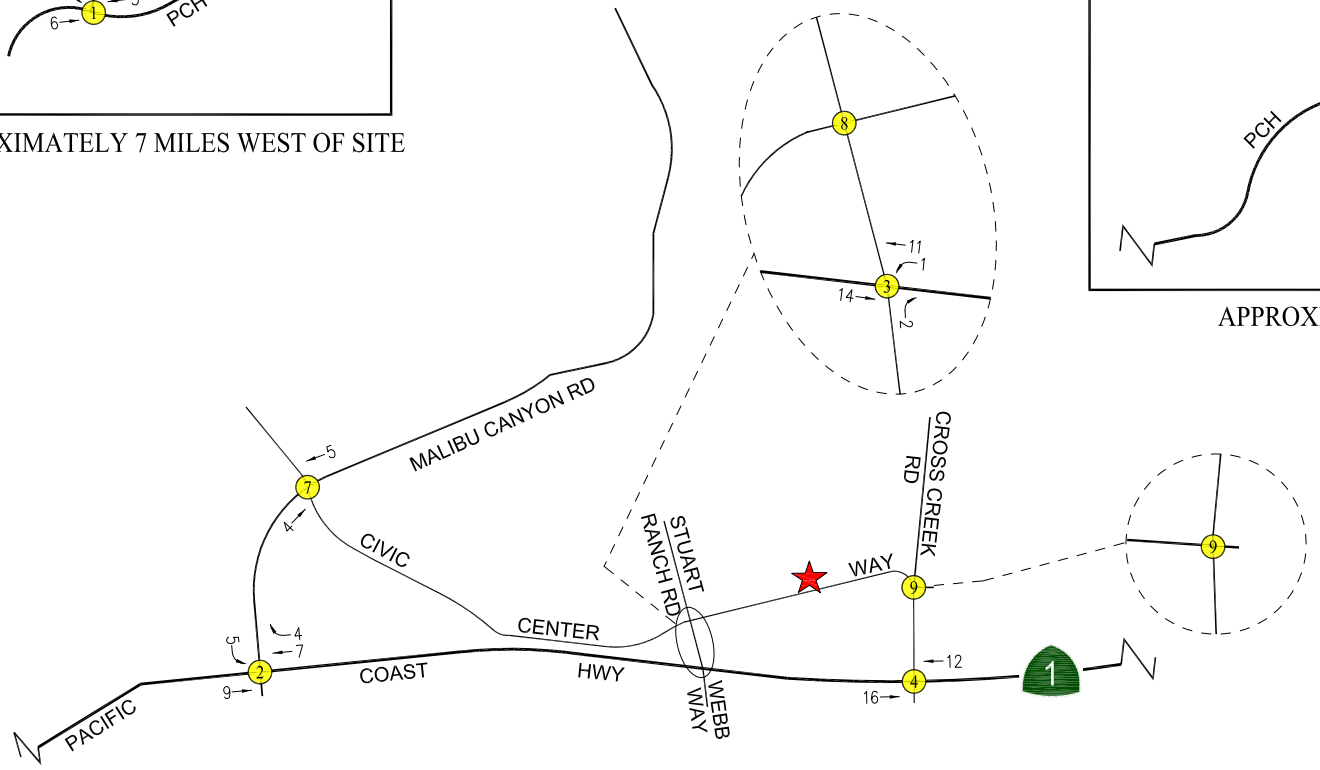

NOT TO SCALE

PROJECT SITE
STUDY INTERSECTION

FIGURE C-24
RELATED PROJECTS TRAFFIC VOLUMES
ZONE H

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

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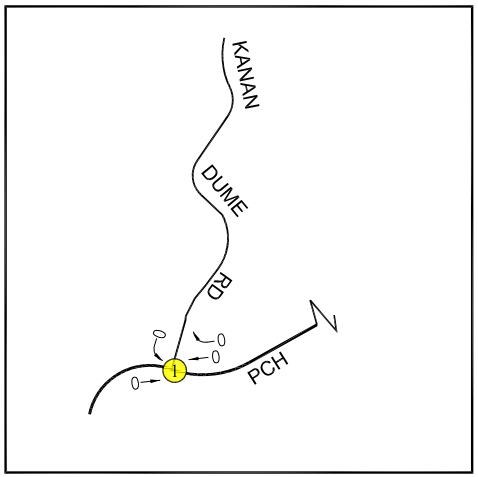

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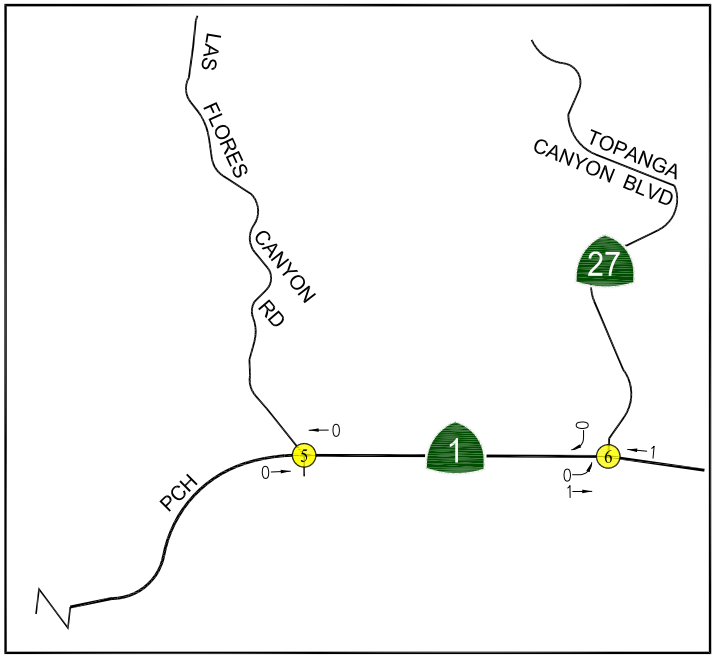

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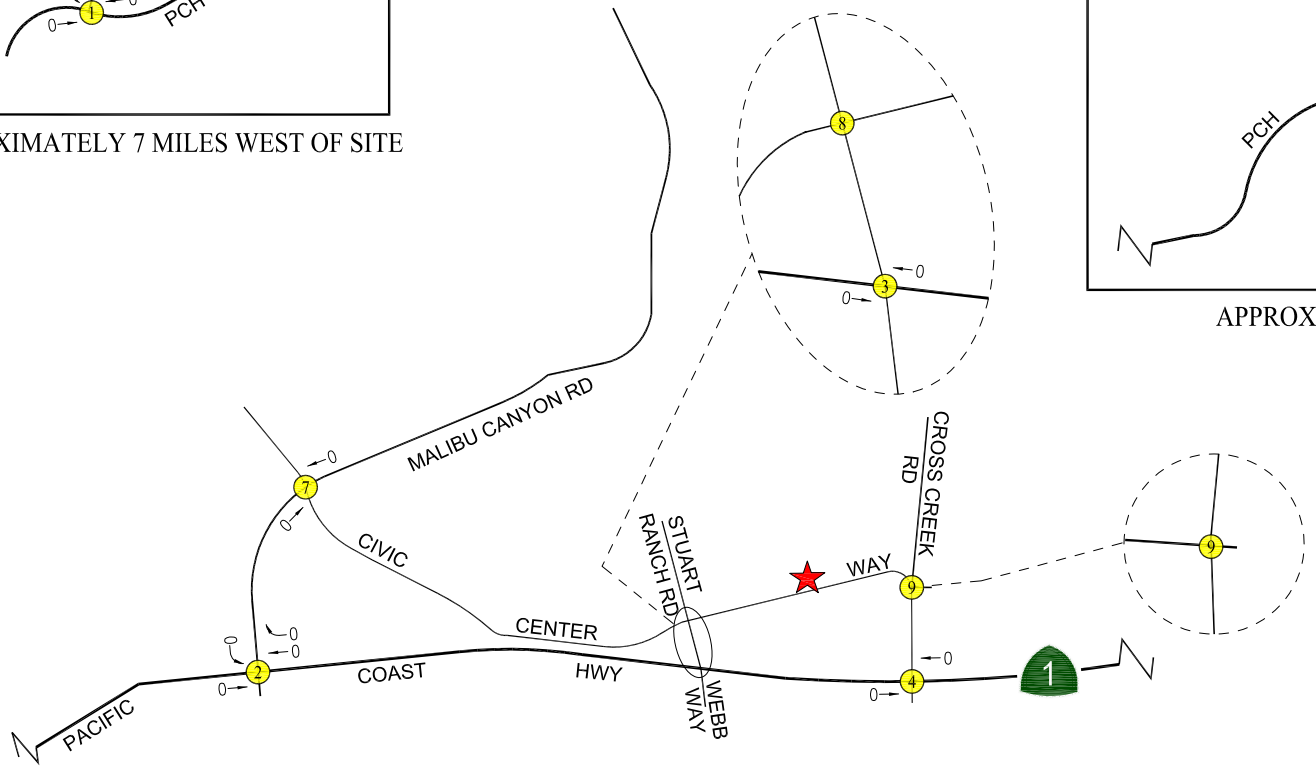

N

NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-25
RELATED PROJECTS TRAFFIC VOLUMES
ZONE I

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

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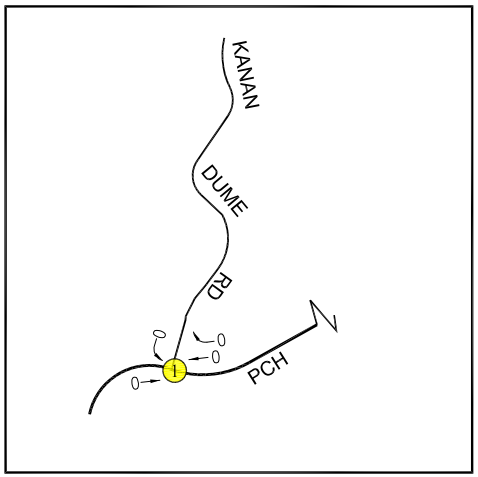

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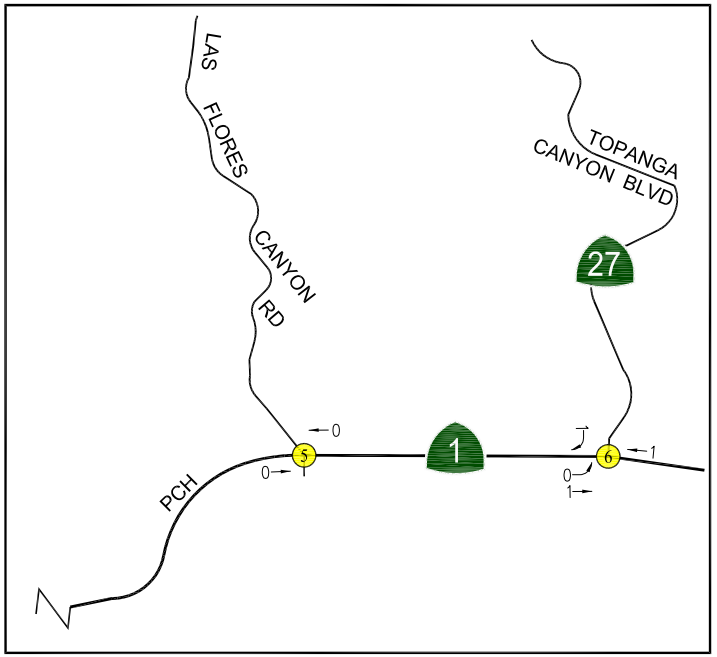

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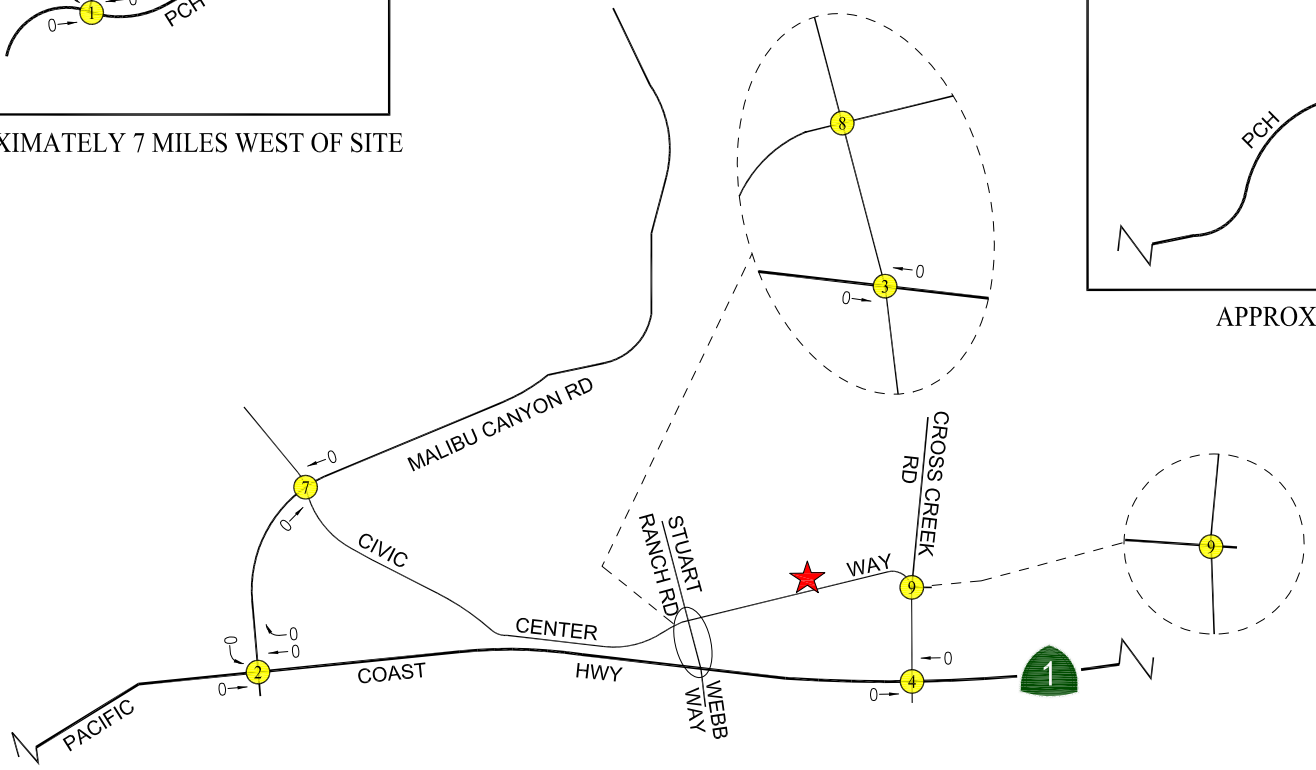

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-26
RELATED PROJECTS TRAFFIC VOLUMES
ZONE I

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

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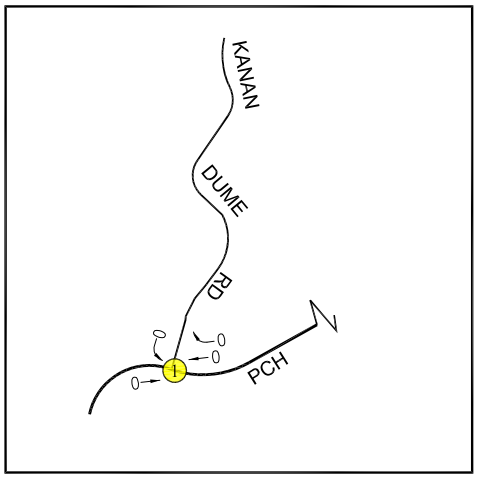

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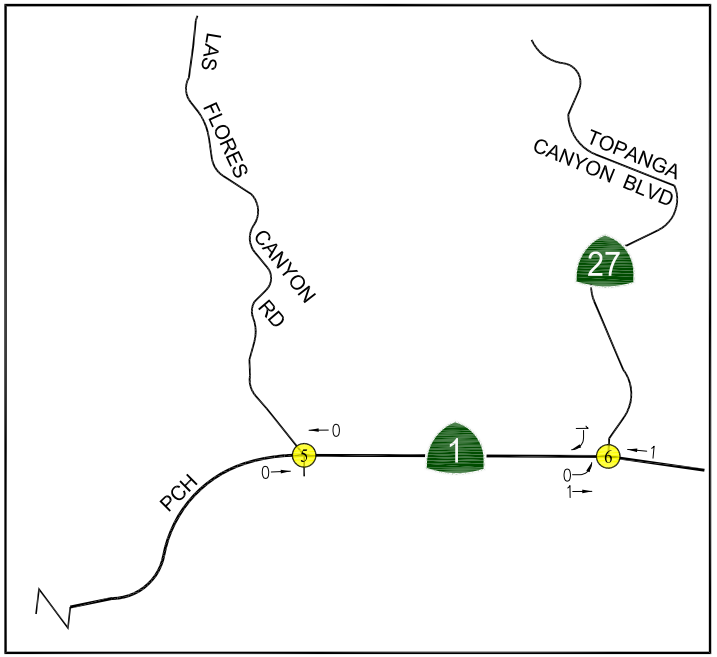

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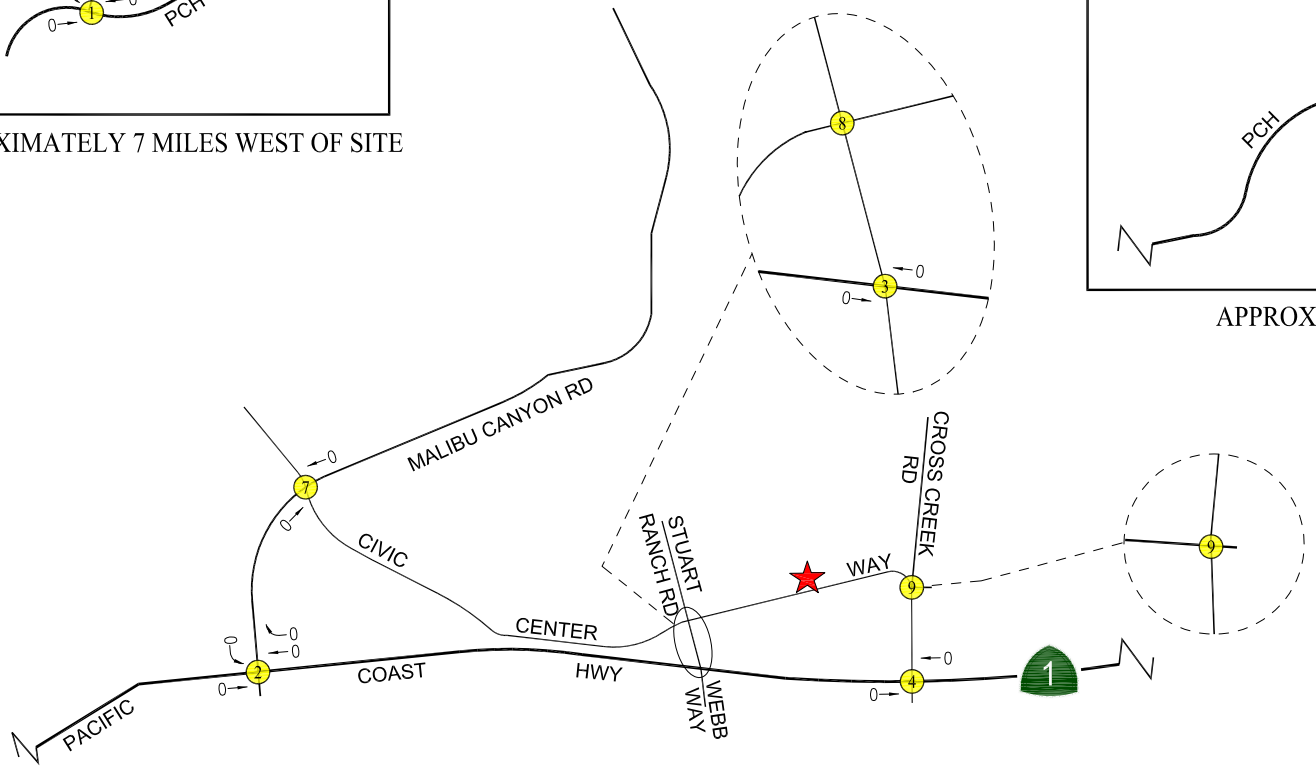

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-27
RELATED PROJECTS TRAFFIC VOLUMES
ZONE I

SATURDAY MID-DAY PEAK HOUR
LA PAZ RANCH PROJECT

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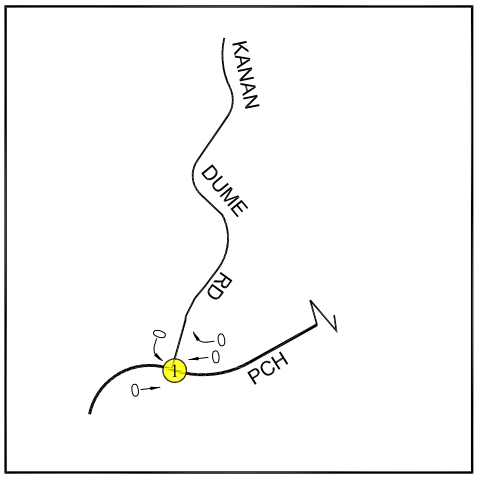

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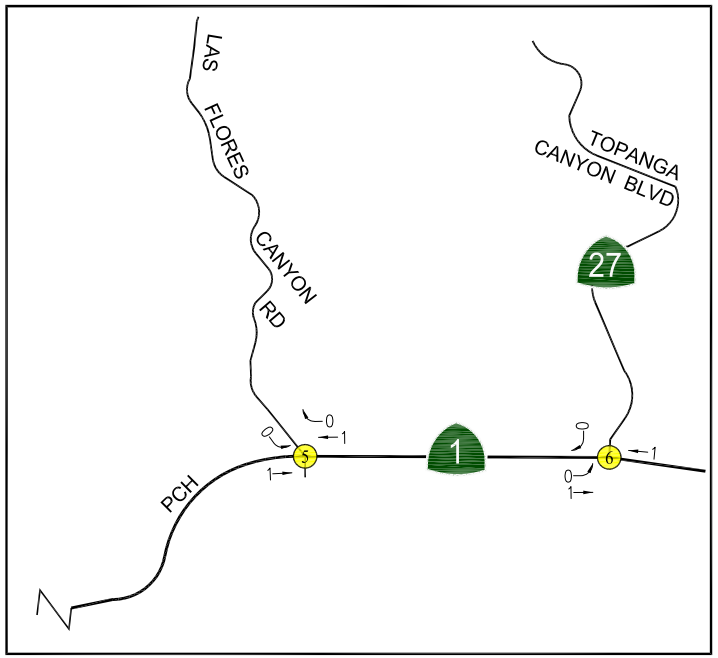

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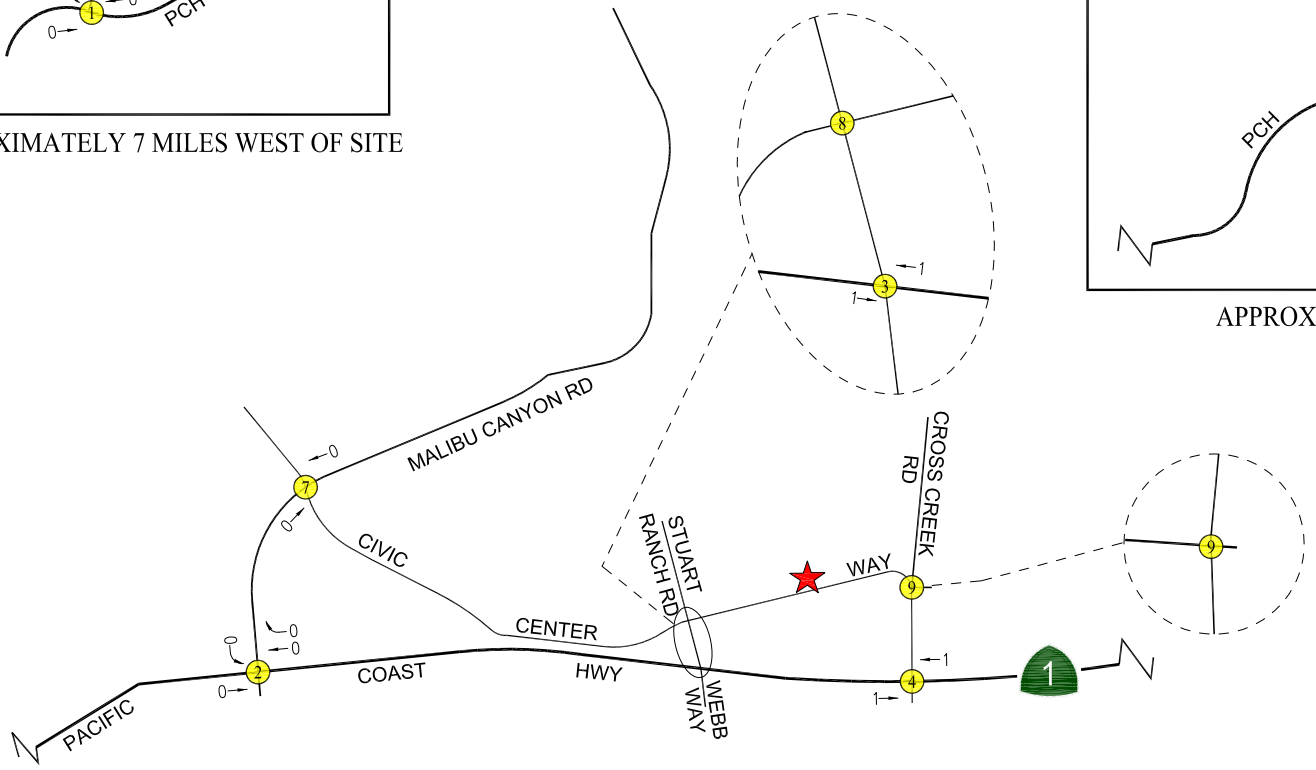

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NOT TO SCALE

PROJECT SITE

XX STUDY INTERSECTION

FIGURE C-28
RELATED PROJECTS TRAFFIC VOLUMES
ZONE J

WEEKDAY AM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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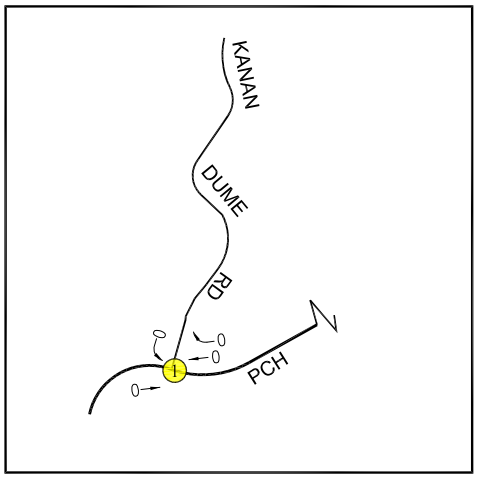

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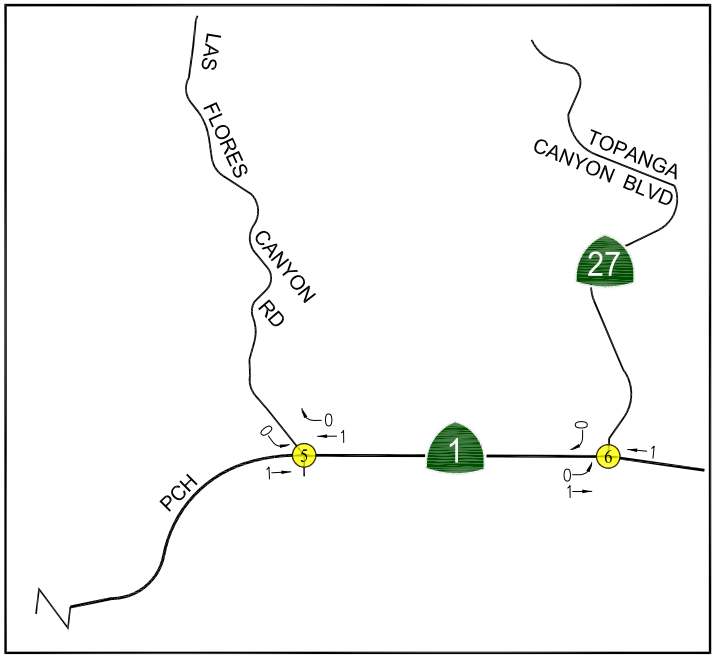

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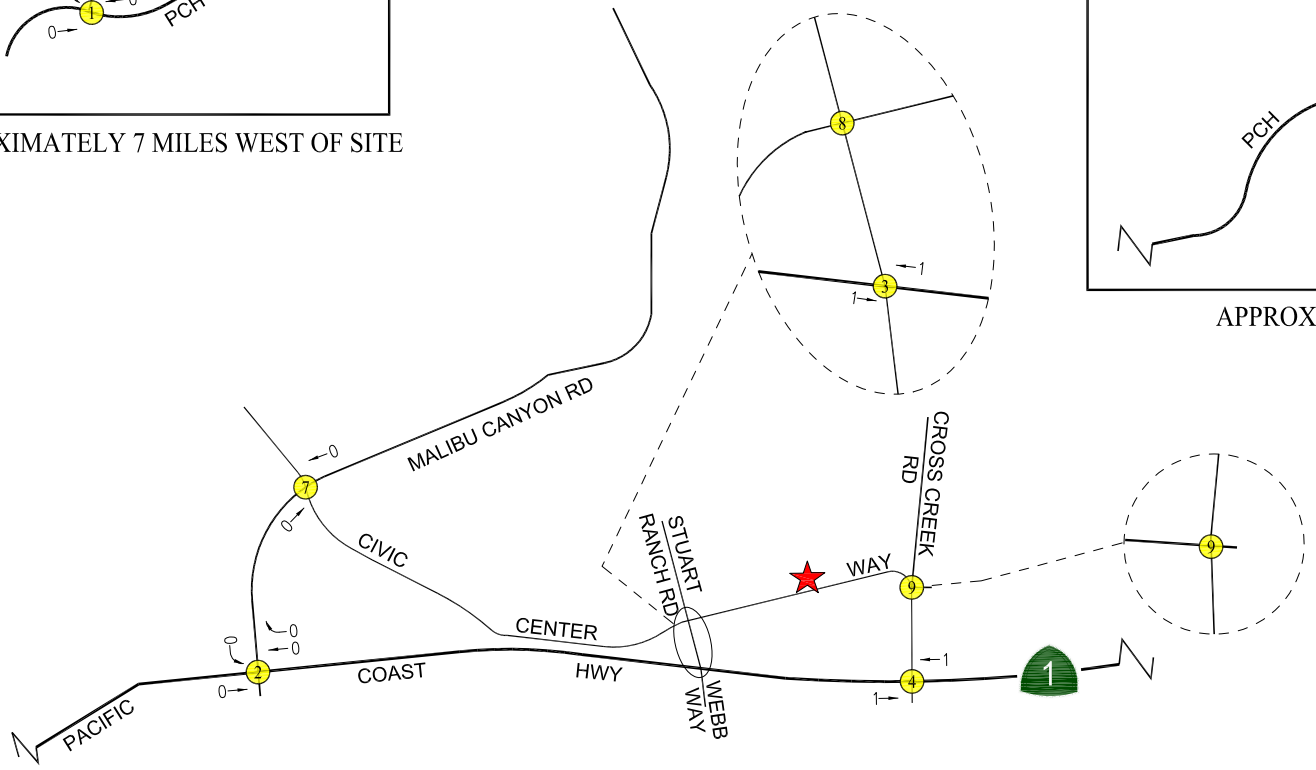

NOT TO SCALE

★ PROJECT SITE
(XX) STUDY INTERSECTION

FIGURE C-29
RELATED PROJECTS TRAFFIC VOLUMES
ZONE J

WEEKDAY PM PEAK HOUR
LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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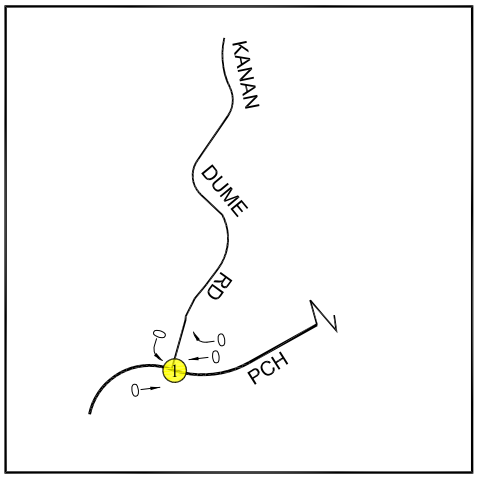

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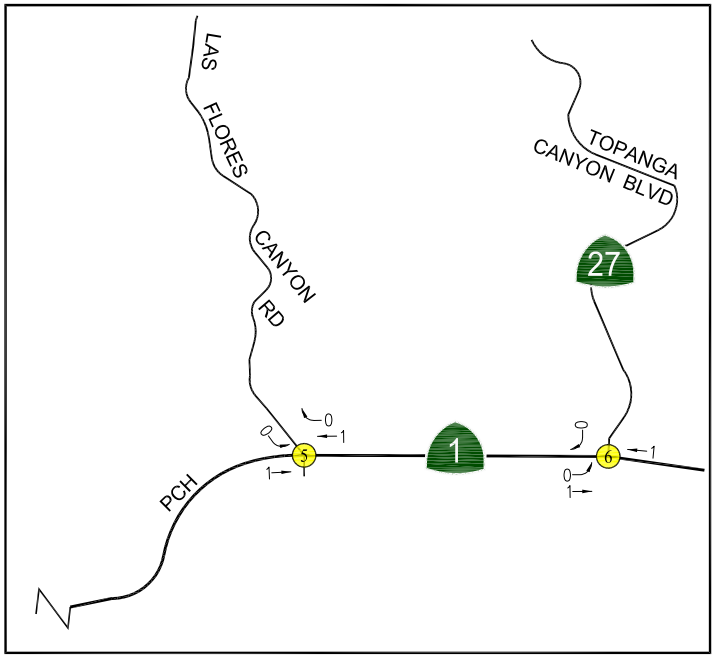
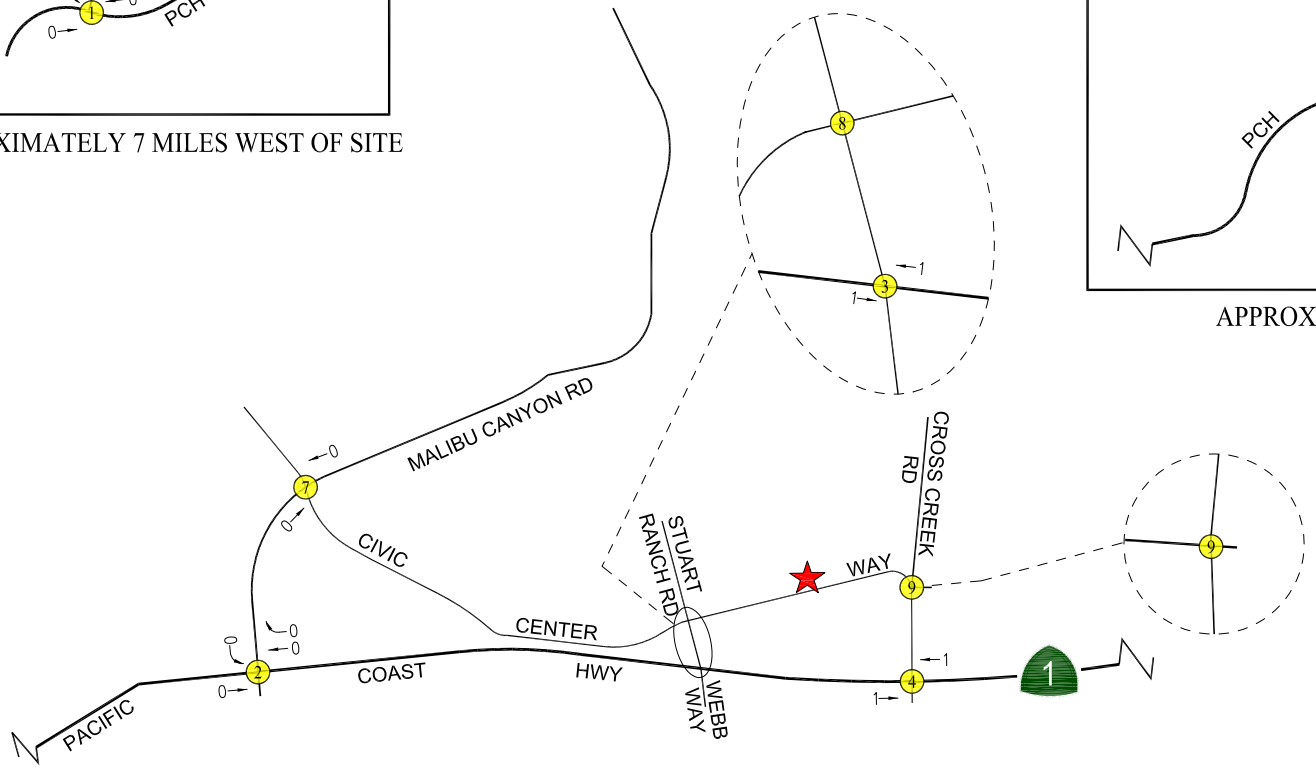


APPROXIMATELY 6 MILES EAST OF SITE



NOT TO SCALE

★ PROJECT SITE

(XX) STUDY INTERSECTION

FIGURE C-30
RELATED PROJECTS TRAFFIC VOLUMES
ZONE J

SATURDAY MID-DAY PEAK HOUR

LA PAZ RANCH PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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APPENDIX D

ICU AND LEVELS OF SERVICE EXPLANATION
ICU DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS
SCHOOL TIME CONDITIONS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Kanan Dume Road @ Pacific Coast Highway (SR-1)

N-S St: Kanan Dume Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-1

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	275	2880	0.095	5	280	2880	0.097	11	286	0.099	12	298	2880	0.103	5	303	2880	0.105	0	303	2880	0.105
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	325	1600	0.094	0	325	1600	0.094	13	338	0.098	0	338	1600	0.098	0	338	1600	0.098	0	338	1600	0.098
Eb Left	174	1600	0.109 *	0	174	1600	0.109 *	7	181	0.113 *	0	181	1600	0.113 *	0	181	1600	0.113 *	0	181	1600	0.113 *
Eb Thru	872	3200	0.273	19	891	3200	0.278	35	907	0.283	47	954	3200	0.298	19	973	3200	0.304	0	973	3200	0.304
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	723	3200	0.226 *	6	729	3200	0.228 *	29	752	0.235 *	26	778	3200	0.243 *	6	784	3200	0.245 *	0	784	3200	0.245 *
Wb Right	74	1600	0.046	1	75	1600	0.047	3	77	0.048	8	85	1600	0.053	1	86	1600	0.054	0	86	1600	0.054
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.480				0.484			0.497				0.510				0.513				0.513
LOS			A				A			A				A				A				A

12:40 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Kanan Dume Road @ Pacific Coast Highway (SR-1)

N-S St: Kanan Dume Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-1

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	141	2880	0.049	5	146	2880	0.051	6	147	0.051	29	176	2880	0.061	5	181	2880	0.063	0	181	2880	0.063
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	264	1600	0.000	0	264	1600	0.000	11	275	0.000	0	275	1600	0.000	0	275	1600	0.000	0	275	1600	0.000
Eb Left	284	1600	0.178 *	0	284	1600	0.178 *	11	295	0.185 *	0	295	1600	0.185 *	0	295	1600	0.185 *	0	295	1600	0.185 *
Eb Thru	863	3200	0.270	20	883	3200	0.276	35	898	0.280	80	978	3200	0.305	20	998	3200	0.312	0	998	3200	0.312
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1093	3200	0.342 *	31	1124	3200	0.351 *	44	1137	0.355 *	69	1206	3200	0.377 *	31	1237	3200	0.386 *	0	1237	3200	0.386 *
Wb Right	204	1600	0.128	8	212	1600	0.133	8	212	0.133	25	237	1600	0.148	8	245	1600	0.153	0	245	1600	0.153
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.618				0.629			0.641				0.672				0.684				0.684
LOS			B				B			B				B				B				B

12:40 PM

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1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase

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INTERSECTION CAPACITY UTILIZATION

Kanan Dume Road @ Pacific Coast Highway (SR-1)

N-S St: Kanan Dume Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-1

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH				2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	
Nb Left	0	0	0.000	* 0	0	0	0.000	* 0	0	0.000	*	0	0	0	0.000	* 0	0	0	0.000	* 0	0	0	0.000	*
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	
Nb Right	0	0	-	0	0	0	-	0	0	-		0	0	0	-	0	0	0	-	0	0	0	-	
Sb Left	238	2880	0.083	7	245	2880	0.085	10	248	0.086		43	291	2880	0.101	7	298	2880	0.103	0	298	2880	0.103	
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	
Sb Right [3]	650	1600	0.202	* 0	650	1600	0.202	* 26	676	0.210	*	0	676	1600	0.210	* 0	676	1600	0.210	* 0	676	1600	0.210	*
Eb Left	327	1600	0.204	* 0	327	1600	0.204	* 13	340	0.213	*	0	340	1600	0.213	* 0	340	1600	0.213	* 0	340	1600	0.213	*
Eb Thru	959	3200	0.300	29	988	3200	0.309	38	997	0.312		116	1113	3200	0.348	29	1142	3200	0.357	0	1142	3200	0.357	
Eb Right	0	0	-	0	0	0	-	0	0	-		0	0	0	-	0	0	0	-	0	0	0	-	
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000	
Wb Thru	1189	3200	0.372	* 23	1212	3200	0.379	* 48	1237	0.386	*	85	1322	3200	0.413	* 23	1345	3200	0.420	* 0	1345	3200	0.420	*
Wb Right	190	1600	0.119	6	196	1600	0.123	8	198	0.124		34	232	1600	0.145	6	238	1600	0.149	0	238	1600	0.149	
Yellow Allowance:			0.050	*			0.050	*		0.050	*				0.050	*			0.050	*			0.050	*
ICU			0.828				0.835			0.859					0.885				0.893				0.893	
LOS			D				D			D					D				D				D	

12:40 PM

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1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Malibu Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-2

Peak hr: AM
Annual Growth: 1.00%

Date: 04/26/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	19	0	0.006	0	19	0	0.006	1	20	0.006	3	23	0	0.007	0	23	0	0.007	0	23	0	0.007
Nb Thru [3]	10	3200	0.017 *	0	10	3200	0.017 *	0	10	0.017 *	1	11	3200	0.019 *	0	11	3200	0.019 *	0	11	3200	0.019 *
Nb Right	24	0	-	0	24	0	-	1	25	-	2	27	0	-	0	27	0	-	0	27	0	-
Sb Left	762	0	0.238	15	777	0	0.243	30	792	0.248	33	825	0	0.258	15	840	0	0.263	0	840	0	0.263
Sb Thru [3]	16	3200	0.243 *	0	16	3200	0.248 *	1	17	0.253 *	0	17	3200	0.263 *	0	17	3200	0.268 *	0	17	3200	0.268 *
Sb Right [4]	236	1600	0.076	0	236	1600	0.076	9	245	0.079	1	246	1600	0.078	0	246	1600	0.078	0	246	1600	0.078
Eb Left	207	2880	0.072	0	207	2880	0.072	8	215	0.075	3	218	2880	0.076	0	218	2880	0.076	0	218	2880	0.076
Eb Thru	921	3200	0.293 *	29	950	3200	0.303 *	37	958	0.305 *	69	1027	3200	0.327 *	29	1056	3200	0.336 *	0	1056	3200	0.336 *
Eb Right	18	0	-	0	18	0	-	1	19	-	1	20	0	-	0	20	0	-	0	20	0	-
Wb Left	18	1600	0.011 *	0	18	1600	0.011 *	1	19	0.012 *	1	20	1600	0.012 *	0	20	1600	0.012 *	0	20	1600	0.012 *
Wb Thru	700	3200	0.219	9	709	3200	0.222	28	728	0.228	39	767	3200	0.240	9	776	3200	0.243	0	776	3200	0.243
Wb Right [4]	282	1600	0.000	0	282	1600	0.000	11	293	0.000	11	304	1600	0.000	0	304	1600	0.000	0	304	1600	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.614				0.628			0.637				0.672				0.685				0.685
LOS			B				B			B				B				B				B

11:39 AM

** Key conflicting movement as a part of ICU*
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase. The westbound right-turn lane has an overlapping phase with southbound left-turn phase.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Malibu Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-2

Peak hr: PM
Annual Growth: 1.00%

Date: 04/26/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH				2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C	
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	
Nb Left	9	0	0.003	0	9	0	0.003	0	9	0.003		17	26	0	0.008	0	26	0	0.008	0	26	0	0.008	
Nb Thru [3]	13	3200	0.015	* 0	13	3200	0.015	* 1	14	0.015	*	3	17	3200	0.026	* 0	17	3200	0.026	* 0	17	3200	0.026	*
Nb Right	25	0	-	0	25	0	-	1	26	-		13	39	0	-	0	39	0	-	0	39	0	-	
Sb Left	375	0	0.117	0	375	0	0.117	15	390	0.122		29	419	0	0.131	0	419	0	0.131	0	419	0	0.131	
Sb Thru [3]	17	3200	0.123	* 0	17	3200	0.123	* 1	18	0.127	*	4	22	3200	0.138	* 0	22	3200	0.138	* 0	22	3200	0.138	*
Sb Right [4]	165	1600	0.000	0	165	1600	0.000	7	172	0.000		1	173	1600	0.000	0	173	1600	0.000	0	173	1600	0.000	
Eb Left	310	2880	0.108	* 0	310	2880	0.108	* 12	322	0.112	*	4	326	2880	0.113	* 0	326	2880	0.113	* 0	326	2880	0.113	*
Eb Thru	1085	3200	0.346	30	1115	3200	0.356	43	1128	0.360		94	1222	3200	0.395	30	1252	3200	0.404	0	1252	3200	0.404	
Eb Right	23	0	-	0	23	0	-	1	24	-		18	42	0	-	0	42	0	-	0	42	0	-	
Wb Left	36	1600	0.023	0	36	1600	0.023	1	37	0.023		14	51	1600	0.032	0	51	1600	0.032	0	51	1600	0.032	
Wb Thru	1160	3200	0.363	* 47	1207	3200	0.377	* 46	1206	0.377	*	91	1297	3200	0.405	* 47	1344	3200	0.420	* 0	1344	3200	0.420	*
Wb Right [4]	270	1600	0.052	0	270	1600	0.052	11	281	0.054		36	317	1600	0.067	0	317	1600	0.067	0	317	1600	0.067	
Yellow Allowance:			0.050	*			0.050	*		0.050	*				0.050	*			0.050	*			0.050	*
ICU			0.657				0.672			0.682					0.732				0.747				0.747	
LOS			B				B			B					C				C				C	

11:39 AM

** Key conflicting movement as a part of ICU*
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase. The westbound right-turn lane has an overlapping phase with southbound left-turn phase.

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INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Malibu Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-2

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/26/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	9	0	0.003	0	9	0	0.003	0	9	0.003	25	34	0	0.011	0	34	0	0.011	0	34	0	0.011
Nb Thru [3]	24	3200	0.030 *	0	24	3200	0.030 *	1	25	0.031 *	5	30	3200	0.047 *	0	30	3200	0.047 *	0	30	3200	0.047 *
Nb Right	63	0	-	0	63	0	-	3	66	-	20	86	0	-	0	86	0	-	0	86	0	-
Sb Left	490	0	0.153	0	490	0	0.153	20	510	0.159	35	545	0	0.170	0	545	0	0.170	0	545	0	0.170
Sb Thru [3]	40	3200	0.166 *	0	40	3200	0.166 *	2	42	0.172 *	5	47	3200	0.185 *	0	47	3200	0.185 *	0	47	3200	0.185 *
Sb Right [4]	381	1600	0.166	0	381	1600	0.166	15	396	0.172	5	401	1600	0.168	0	401	1600	0.168	0	401	1600	0.168
Eb Left	209	2880	0.073 *	0	209	2880	0.073 *	8	217	0.075 *	20	237	2880	0.082 *	0	237	2880	0.082 *	0	237	2880	0.082 *
Eb Thru	1228	3200	0.393	44	1272	3200	0.407	49	1277	0.409	112	1389	3200	0.452	44	1433	3200	0.465	0	1433	3200	0.465
Eb Right	29	0	-	0	29	0	-	1	30	-	26	56	0	-	0	56	0	-	0	56	0	-
Wb Left	39	1600	0.024	0	39	1600	0.024	2	41	0.025	20	61	1600	0.038	0	61	1600	0.038	0	61	1600	0.038
Wb Thru	1340	3200	0.419 *	34	1374	3200	0.429 *	54	1394	0.436 *	111	1505	3200	0.470 *	34	1539	3200	0.481 *	0	1539	3200	0.481 *
Wb Right [4]	146	1600	0.000	0	146	1600	0.000	6	152	0.000	62	214	1600	0.000	0	214	1600	0.000	0	214	1600	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.737				0.748			0.764				0.834				0.845				0.845
LOS			C				C			C				D				D				D

11:39 AM

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1 Counts conducted by NDS
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INTERSECTION CAPACITY UTILIZATION

Webb Way @ Pacific Coast Highway (SR-1)

N-S St: Webb Way
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-3

Peak hr: AM
Annual Growth: 1.00%

Date: 04/29/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	54	1600	0.034	0	54	1600	0.034	2	56	0.035	0	56	1600	0.035	0	56	1600	0.035	0	56	1600	0.035
Nb Thru [3]	46	1600	0.038 *	5	51	1600	0.041 *	2	48	0.039 *	7	55	1600	0.044 *	5	60	1600	0.047 *	0	60	1600	0.047 *
Nb Right	14	0	-	0	14	0	-	1	15	-	1	16	0	-	0	16	0	-	0	16	0	-
Sb Left	75	0	0.023	0	75	0	0.023	3	78	0.024	11	89	0	0.028	0	89	0	0.028	0	89	0	0.028
Sb Thru [3]	60	3200	0.042 *	1	61	3200	0.043 *	2	62	0.044 *	3	65	3200	0.048 *	1	66	3200	0.049 *	0	66	3200	0.049 *
Sb Right [4]	40	1600	0.000	9	49	1600	0.000	2	42	0.000	43	85	1600	0.000	9	94	1600	0.000	0	94	1600	0.000
Eb Left	150	1600	0.094	44	194	1600	0.121 *	6	156	0.098	94	250	1600	0.156 *	44	294	1600	0.184 *	0	294	2880	0.102
Eb Thru	1370	4800	0.285 *	0	1370	4800	0.285	55	1425	0.297 *	14	1439	4800	0.300	0	1439	4800	0.300	0	1439	4800	0.300 *
Eb Right	77	1600	0.048	0	77	1600	0.048	3	80	0.050	0	80	1600	0.050	0	80	1600	0.050	0	80	1600	0.050
Wb Left	137	1600	0.086 *	0	137	1600	0.086	5	142	0.089 *	1	143	1600	0.090	0	143	1600	0.090	0	143	1600	0.090 *
Wb Thru	804	3200	0.251	0	804	3200	0.251 *	32	836	0.261	14	850	3200	0.266 *	0	850	3200	0.266 *	0	850	3200	0.266
Wb Right [5]	262	1600	0.140	0	262	1600	0.140	10	272	0.146	20	292	1600	0.155	0	292	1600	0.155	0	292	1600	0.155
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.501				0.506			0.519				0.564				0.595				0.535
LOS			A				A			A				A				A				A

04:04 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 Right turns on red from exclusive lanes, 50% of overlapping left turn
5 *The westbound right-turn lane has an overlapping phase with soundbound left-turn phase.*

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Webb Way @ Pacific Coast Highway (SR-1)

N-S St: Webb Way
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-3

Peak hr: PM
Annual Growth: 1.00%

Date: 04/29/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH				2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	108	1600	0.068 *	0	108	1600	0.068 *	4	112	0.070 *		0	112	1600	0.070 *	0	112	1600	0.070 *	0	112	1600	0.070 *
Nb Thru [3]	70	1600	0.054	5	75	1600	0.058	3	73	0.057		12	85	1600	0.065	5	90	1600	0.068	0	90	1600	0.068
Nb Right	17	0	-	0	17	0	-	1	18	-		1	19	0	-	0	19	0	-	0	19	0	-
Sb Left	118	0	0.037	0	118	0	0.037	5	123	0.038		46	169	0	0.053	0	169	0	0.053	0	169	0	0.053
Sb Thru [3]	56	3200	0.054 *	8	64	3200	0.057 *	2	58	0.057 *		11	69	3200	0.074 *	8	77	3200	0.077 *	0	77	3200	0.077 *
Sb Right [4]	71	1600	0.020	47	118	1600	0.040	3	74	0.021		86	160	1600	0.034	47	207	1600	0.054	0	207	1600	0.054
Eb Left	78	1600	0.049 *	30	108	1600	0.068 *	3	81	0.051 *		129	210	1600	0.131 *	30	240	1600	0.150 *	0	240	2880	0.083 *
Eb Thru	1303	4800	0.271	0	1303	4800	0.271	52	1355	0.282		27	1382	4800	0.288	0	1382	4800	0.288	0	1382	4800	0.288
Eb Right	55	1600	0.034	0	55	1600	0.034	2	57	0.036		0	57	1600	0.036	0	57	1600	0.036	0	57	1600	0.036
Wb Left	169	1600	0.106	0	169	1600	0.106	7	176	0.110		1	177	1600	0.110	0	177	1600	0.110	0	177	1600	0.110
Wb Thru	1305	3200	0.408 *	0	1305	3200	0.408 *	52	1357	0.424 *		36	1393	3200	0.435 *	0	1393	3200	0.435 *	0	1393	3200	0.435 *
Wb Right [5]	344	1600	0.178	0	344	1600	0.178	14	358	0.185		35	393	1600	0.193	0	393	1600	0.193	0	393	1600	0.193
Yellow Allowance:			0.050 *				0.050 *			0.050 *					0.050 *				0.050 *				0.050 *
ICU			0.628				0.650			0.652					0.761				0.783				0.716
LOS			B				B			B					C				C				C

04:04 PM

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INTERSECTION CAPACITY UTILIZATION

Webb Way @ Pacific Coast Highway (SR-1)

N-S St: Webb Way
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-3

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/29/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	114	1600	0.071 *	0	114	1600	0.071 *	5	119	0.074 *	2	121	1600	0.075	0	121	1600	0.075	0	121	1600	0.075
Nb Thru [3]	62	1600	0.065	7	69	1600	0.069	2	64	0.068	15	79	1600	0.078 *	7	86	1600	0.083 *	0	86	1600	0.083 *
Nb Right	42	0	-	0	42	0	-	2	44	-	2	46	0	-	0	46	0	-	0	46	0	-
Sb Left	93	0	0.029	0	93	0	0.029	4	97	0.030	60	157	0	0.049	0	157	0	0.049	0	157	0	0.049
Sb Thru [3]	77	3200	0.053 *	6	83	3200	0.055 *	3	80	0.055 *	11	91	3200	0.077 *	6	97	3200	0.079 *	0	97	3200	0.079 *
Sb Right [4]	63	1600	-0.007	34	97	1600	0.001	3	66	-0.007	108	174	1600	0.009	34	208	1600	0.017	0	208	1600	0.017
Eb Left	147	1600	0.092 *	44	191	1600	0.119 *	6	153	0.096 *	165	318	1600	0.199 *	44	362	1600	0.226 *	0	362	2880	0.126 *
Eb Thru	1352	4800	0.282	0	1352	4800	0.282	54	1406	0.293	45	1451	4800	0.302	0	1451	4800	0.302	0	1451	4800	0.302
Eb Right	90	1600	0.056	0	90	1600	0.056	4	94	0.059	1	95	1600	0.059	0	95	1600	0.059	0	95	1600	0.059
Wb Left	171	1600	0.107	0	171	1600	0.107	7	178	0.111	1	179	1600	0.112	0	179	1600	0.112	0	179	1600	0.112
Wb Thru	1355	3200	0.423 *	0	1355	3200	0.423 *	54	1409	0.440 *	77	1486	3200	0.464 *	0	1486	3200	0.464 *	0	1486	3200	0.464 *
Wb Right [5]	167	1600	0.075	0	167	1600	0.075	7	174	0.078	40	214	1600	0.085	0	214	1600	0.085	0	214	1600	0.085
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.690				0.719			0.715				0.869				0.903				0.802
LOS			B				C			C				D				E				D

04:04 PM

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INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Pacific Coast Highway (SR-1)

N-S St: Cross Creek Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-18-0246-1
File: ICU-4

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	3	0	0.002 *	0	3	0	0.002 *	0	3	0.002 *	0	3	0	0.002 *	0	3	0	0.002 *	0	3	0	0.002 *
Nb Thru [3]	0	1600	0.002 *	0	0	1600	0.002 *	0	0	0.002 *	0	0	1600	0.002 *	0	0	1600	0.002 *	0	0	1600	0.002 *
Nb Right	1	1600	0.001	0	1	1600	0.001	0	1	0.001	0	1	1600	0.001	0	1	1600	0.001	0	1	1600	0.001
Sb Left	94	0	0.029 *	15	109	0	0.034 *	4	98	0.031 *	44	142	0	0.044 *	15	157	0	0.049 *	0	157	0	0.049 *
Sb Thru [3]	0	3200	0.029 *	0	0	3200	0.034 *	0	0	0.031 *	0	0	3200	0.044 *	0	0	3200	0.049 *	0	0	3200	0.049 *
Sb Right [4]	67	1600	0.010	0	67	1600	0.010	3	70	0.010	0	70	1600	0.010	0	70	1600	0.010	0	70	1600	0.010
Eb Left	103	1600	0.064 *	0	103	1600	0.064 *	4	107	0.067 *	0	107	1600	0.067 *	0	107	1600	0.067 *	0	107	1600	0.067
Eb Thru	1382	3200	0.434	0	1382	3200	0.434	55	1437	0.451	26	1463	3200	0.459	0	1463	3200	0.459	0	1463	3200	0.459 *
Eb Right	6	0	-	0	6	0	-	0	6	-	0	6	0	-	0	6	0	-	0	6	0	-
Wb Left	2	1600	0.001	0	2	1600	0.001	0	2	0.001	0	2	1600	0.001	0	2	1600	0.001	0	2	1600	0.001 *
Wb Thru	1121	3200	0.390 *	0	1121	3200	0.406 *	45	1166	0.406 *	35	1201	3200	0.442 *	0	1201	3200	0.458 *	0	1201	3200	0.375
Wb Right	128	0	-	49	177	0	-	5	133	-	82	215	0	-	49	264	0	-	0	264	1600	0.165
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.536				0.556			0.555				0.606				0.626				0.561
LOS			A				A			A				B				B				A

12:48 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
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INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Pacific Coast Highway (SR-1)

N-S St: Cross Creek Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-18-0246-1
File: ICU-4

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	11	0	0.007	0	11	0	0.007	0	11	0.007	0	11	0	0.007	0	11	0	0.007	0	11	0	0.007
Nb Thru [3]	3	1600	0.009 *	0	3	1600	0.009 *	0	3	0.009 *	0	3	1600	0.009 *	0	3	1600	0.009 *	0	3	1600	0.009 *
Nb Right	13	1600	0.008	0	13	1600	0.008	1	14	0.008	0	14	1600	0.008	0	14	1600	0.008	0	14	1600	0.008
Sb Left	157	0	0.049	79	236	0	0.074	6	163	0.051	95	258	0	0.081	79	337	0	0.105	0	337	0	0.105
Sb Thru [3]	3	3200	0.050 *	0	3	3200	0.075 *	0	3	0.052 *	0	3	3200	0.082 *	0	3	3200	0.106 *	0	3	3200	0.106 *
Sb Right [4]	90	1600	0.034	0	90	1600	0.034	4	94	0.036	0	94	1600	0.036	0	94	1600	0.036	0	94	1600	0.036
Eb Left	70	1600	0.044 *	0	70	1600	0.044 *	3	73	0.046 *	0	73	1600	0.046 *	0	73	1600	0.046 *	0	73	1600	0.046 *
Eb Thru	1586	3200	0.499	0	1586	3200	0.499	63	1649	0.519	75	1724	3200	0.542	0	1724	3200	0.542	0	1724	3200	0.542
Eb Right	11	0	-	0	11	0	-	0	11	-	0	11	0	-	0	11	0	-	0	11	0	-
Wb Left	13	1600	0.008	0	13	1600	0.008	1	14	0.008	0	14	1600	0.008	0	14	1600	0.008	0	14	1600	0.008
Wb Thru	1666	3200	0.562 *	0	1666	3200	0.578 *	67	1733	0.585 *	73	1806	3200	0.648 *	0	1806	3200	0.664 *	0	1806	3200	0.564 *
Wb Right	133	0	-	51	184	0	-	5	138	-	130	268	0	-	51	319	0	-	0	319	1600	0.200
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.715				0.755			0.741				0.834				0.875				0.775
LOS			C				C			C				D				D				C

12:48 PM

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4 Right turns on red from exclusive lanes, 50% of overlapping left turn

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INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Pacific Coast Highway (SR-1)

N-S St: Cross Creek Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-18-0246-1
File: ICU-4

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	16	0	0.010	0	16	0	0.010	1	17	0.010	0	17	0	0.010	0	17	0	0.010	0	17	0	0.010
Nb Thru [3]	9	1600	0.016 *	0	9	1600	0.016 *	0	9	0.016 *	0	9	1600	0.016 *	0	9	1600	0.016 *	0	9	1600	0.016 *
Nb Right	21	1600	0.013	0	21	1600	0.013	1	22	0.014	0	22	1600	0.014	0	22	1600	0.014	0	22	1600	0.014
Sb Left	219	0	0.068	57	276	0	0.086	9	228	0.071	115	343	0	0.107	57	400	0	0.125	0	400	0	0.125
Sb Thru [3]	2	3200	0.069 *	0	2	3200	0.087 *	0	2	0.072 *	0	2	3200	0.108 *	0	2	3200	0.126 *	0	2	3200	0.126 *
Sb Right [4]	134	1600	0.039	0	134	1600	0.039	5	139	0.040	0	139	1600	0.040	0	139	1600	0.040	0	139	1600	0.040
Eb Left	144	1600	0.090 *	0	144	1600	0.090 *	6	150	0.094 *	0	150	1600	0.094 *	0	150	1600	0.094 *	0	150	1600	0.094 *
Eb Thru	1450	3200	0.459	0	1450	3200	0.459	58	1508	0.477	107	1615	3200	0.511	0	1615	3200	0.511	0	1615	3200	0.511
Eb Right	18	0	-	0	18	0	-	1	19	-	0	19	0	-	0	19	0	-	0	19	0	-
Wb Left	20	1600	0.013	0	20	1600	0.013	1	21	0.013	0	21	1600	0.013	0	21	1600	0.013	0	21	1600	0.013
Wb Thru	1517	3200	0.524 *	0	1517	3200	0.547 *	61	1578	0.545 *	118	1696	3200	0.637 *	0	1696	3200	0.659 *	0	1696	3200	0.530 *
Wb Right	161	0	-	73	234	0	-	6	167	-	174	341	0	-	73	414	0	-	0	414	1600	0.259
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.749				0.790			0.777				0.904				0.945				0.815
LOS			C				C			C				E				E				D

12:48 PM

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INTERSECTION CAPACITY UTILIZATION

Las Flores Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Las Flores Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-5

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	2	0	0.001 *	0	2	0	0.001 *	0	2	0.001 *	0	2	0	0.001 *	0	2	0	0.001 *	0	2	0	0.001 *
Nb Thru	1	1600	0.004	0	1	1600	0.004	0	1	0.005	0	1	1600	0.005	0	1	1600	0.005	0	1	1600	0.005
Nb Right	4	0	-	0	4	0	-	0	4	-	0	4	0	-	0	4	0	-	0	4	0	-
Sb Left	53	0	0.033	0	53	0	0.033	2	55	0.034	1	56	0	0.035	0	56	0	0.035	0	56	0	0.035
Sb Thru	0	1600	0.063 *	0	0	1600	0.064 *	0	0	0.066 *	0	0	1600	0.069 *	0	0	1600	0.070 *	0	0	1600	0.070 *
Sb Right [3]	48	0	-	2	50	0	-	2	50	-	4	54	0	-	2	56	0	-	0	56	0	-
Eb Left	27	1600	0.017	1	28	1600	0.018	1	28	0.018	2	30	1600	0.019	1	31	1600	0.019	0	31	1600	0.019
Eb Thru	1677	3200	0.526 *	10	1687	3200	0.529 *	67	1744	0.547 *	46	1790	3200	0.562 *	10	1800	3200	0.565 *	0	1800	3200	0.565 *
Eb Right	7	0	-	0	7	0	-	0	7	-	0	7	0	-	0	7	0	-	0	7	0	-
Wb Left	4	1600	0.003 *	0	4	1600	0.003 *	0	4	0.003 *	0	4	1600	0.003 *	0	4	1600	0.003 *	0	4	1600	0.003 *
Wb Thru	1176	3200	0.368	34	1210	3200	0.378	47	1223	0.382	75	1298	3200	0.406	34	1332	3200	0.416	0	1332	3200	0.416
Wb Right	31	1600	0.019	0	31	1600	0.019	1	32	0.020	1	33	1600	0.021	0	33	1600	0.021	0	33	1600	0.021
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.643				0.648			0.667				0.684				0.689				0.689
LOS			B				B			B				B				B				B

12:49 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Las Flores Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Las Flores Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-5

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	9	0	0.006 *	0	9	0	0.006 *	0	9	0.006 *	0	9	0	0.006 *	0	9	0	0.006 *	0	9	0	0.006 *
Nb Thru	4	1600	0.019	0	4	1600	0.019	0	4	0.020	0	4	1600	0.020	0	4	1600	0.020	0	4	1600	0.020
Nb Right	17	0	-	0	17	0	-	1	18	-	0	18	0	-	0	18	0	-	0	18	0	-
Sb Left	40	0	0.025	0	40	0	0.025	2	42	0.026	1	43	0	0.027	0	43	0	0.027	0	43	0	0.027
Sb Thru	0	1600	0.047 *	0	0	1600	0.048 *	0	0	0.049 *	0	0	1600	0.054 *	0	0	1600	0.055 *	0	0	1600	0.055 *
Sb Right [3]	35	0	-	2	37	0	-	1	36	-	7	43	0	-	2	45	0	-	0	45	0	-
Eb Left	35	1600	0.022	3	38	1600	0.024	1	36	0.023	7	43	1600	0.027	3	46	1600	0.029	0	46	1600	0.029
Eb Thru	1687	3200	0.534 *	55	1742	3200	0.551 *	67	1754	0.555 *	120	1874	3200	0.593 *	55	1929	3200	0.610 *	0	1929	3200	0.610 *
Eb Right	22	0	-	0	22	0	-	1	23	-	0	23	0	-	0	23	0	-	0	23	0	-
Wb Left	19	1600	0.012 *	0	19	1600	0.012 *	1	20	0.012 *	0	20	1600	0.012 *	0	20	1600	0.012 *	0	20	1600	0.012 *
Wb Thru	1632	3200	0.510	35	1667	3200	0.521	65	1697	0.530	136	1833	3200	0.573	35	1868	3200	0.584	0	1868	3200	0.584
Wb Right	42	1600	0.026	0	42	1600	0.026	2	44	0.027	1	45	1600	0.028	0	45	1600	0.028	0	45	1600	0.028
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.648				0.667			0.672				0.715				0.733				0.733
LOS			B				B			B				C				C				C

12:49 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Las Flores Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Las Flores Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-5

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	24	0	0.015	0	24	0	0.015	1	25	0.016	0	25	0	0.016 *	0	25	0	0.016 *	0	25	0	0.016 *
Nb Thru	1	1600	0.039 *	0	1	1600	0.039 *	0	1	0.041 *	0	1	1600	0.041	0	1	1600	0.041	0	1	1600	0.041
Nb Right	38	0	-	0	38	0	-	2	40	-	0	40	0	-	0	40	0	-	0	40	0	-
Sb Left	18	0	0.011 *	0	18	0	0.011 *	1	19	0.012 *	2	21	0	0.013	0	21	0	0.013	0	21	0	0.013
Sb Thru	0	1600	0.029	0	0	1600	0.031	0	0	0.031	0	0	1600	0.039 *	0	0	1600	0.041 *	0	0	1600	0.041 *
Sb Right [3]	29	0	-	3	32	0	-	1	30	-	11	41	0	-	3	44	0	-	0	44	0	-
Eb Left	29	1600	0.018 *	2	31	1600	0.019 *	1	30	0.019 *	7	37	1600	0.023 *	2	39	1600	0.024 *	0	39	1600	0.024 *
Eb Thru	1555	3200	0.501	40	1595	3200	0.513	62	1617	0.521	160	1777	3200	0.571	40	1817	3200	0.583	0	1817	3200	0.583
Eb Right	48	0	-	0	48	0	-	2	50	-	0	50	0	-	0	50	0	-	0	50	0	-
Wb Left	69	1600	0.043	0	69	1600	0.043	3	72	0.045	0	72	1600	0.045	0	72	1600	0.045	0	72	1600	0.045
Wb Thru	1834	3200	0.573 *	51	1885	3200	0.589 *	73	1907	0.596 *	200	2107	3200	0.659 *	51	2158	3200	0.674 *	0	2158	3200	0.674 *
Wb Right	45	1600	0.028	0	45	1600	0.028	2	47	0.029	1	48	1600	0.030	0	48	1600	0.030	0	48	1600	0.030
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.692				0.709			0.718				0.786				0.805				0.805
LOS			B				C			C				C				D				D

12:49 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Topanga Canyon Road (SR-27) @ Pacific Coast Highway (SR-1)

N-S St: Topanga Canyon Road (SR-27)
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-6

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	1154	2880	0.401	0	1154	2880	0.401	46	1200	0.417	0	1200	2880	0.417	0	1200	2880	0.417	0	1200	2880	0.417
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	52	1600	0.021	5	57	1600	0.024	2	54	0.022	12	66	1600	0.026	5	71	1600	0.028	0	71	1600	0.028
Eb Left	18	1600	0.011	1	19	1600	0.012	1	19	0.012	6	25	1600	0.015	1	26	1600	0.016	0	26	1600	0.016
Eb Thru	1545	3200	0.483 *	6	1551	3200	0.485 *	62	1607	0.502 *	25	1632	3200	0.510 *	6	1638	3200	0.512 *	0	1638	3200	0.512 *
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	1174	4800	0.288	19	1193	4800	0.292	47	1221	0.300	42	1263	4800	0.308	19	1282	4800	0.312	0	1282	4800	0.312
Wb Right	209	0	-	0	209	0	-	8	217	-	0	217	0	-	0	217	0	-	0	217	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.934				0.935			0.969				0.977				0.979				0.979
LOS			E				E			E				E				E				E

12:50 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Topanga Canyon Road (SR-27) @ Pacific Coast Highway (SR-1)

N-S St: Topanga Canyon Road (SR-27)
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-6

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	234	2880	0.081	0	234	2880	0.081	9	243	0.085	0	243	2880	0.085	0	243	2880	0.085	0	243	2880	0.085
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	70	1600	0.000	5	75	1600	0.000	3	73	0.000	23	96	1600	0.000	5	101	1600	0.000	0	101	1600	0.000
Eb Left	159	1600	0.099 *	8	167	1600	0.104 *	6	165	0.103 *	19	184	1600	0.115 *	8	192	1600	0.120 *	0	192	1600	0.120 *
Eb Thru	1740	3200	0.544	31	1771	3200	0.553	70	1810	0.566	71	1881	3200	0.588	31	1912	3200	0.597	0	1912	3200	0.597
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1693	4800	0.556 *	20	1713	4800	0.560 *	68	1761	0.578 *	72	1833	4800	0.593 *	20	1853	4800	0.597 *	0	1853	4800	0.597 *
Wb Right	976	0	-	0	976	0	-	39	1015	-	0	1015	0	-	0	1015	0	-	0	1015	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.787				0.796			0.816				0.843				0.852				0.852
LOS			C				C			D				D				D				D

12:50 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Topanga Canyon Road (SR-27) @ Pacific Coast Highway (SR-1)

N-S St: Topanga Canyon Road (SR-27)
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-6

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	465	2880	0.161	0	465	2880	0.161	19	484	0.168	0	484	2880	0.168	0	484	2880	0.168	0	484	2880	0.168
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	196	1600	0.039	7	203	1600	0.039	8	204	0.040	33	237	1600	0.046	7	244	1600	0.047	0	244	1600	0.047
Eb Left	134	1600	0.084 *	6	140	1600	0.088 *	5	139	0.087 *	24	163	1600	0.102 *	6	169	1600	0.106 *	0	169	1600	0.106 *
Eb Thru	1599	3200	0.500	23	1622	3200	0.507	64	1663	0.520	90	1753	3200	0.548	23	1776	3200	0.555	0	1776	3200	0.555
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1882	4800	0.460 *	29	1911	4800	0.466 *	75	1957	0.479 *	113	2070	4800	0.502 *	29	2099	4800	0.508 *	0	2099	4800	0.508 *
Wb Right	327	0	-	0	327	0	-	13	340	-	0	340	0	-	0	340	0	-	0	340	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.755				0.765			0.784				0.822				0.832				0.832
LOS			C				C			C				D				D				D

12:50 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Civic Center Way
Peak hr: AM
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-7

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	53	1600	0.033 *	0	53	1600	0.033 *	2	55	0.034 *	0	55	1600	0.034 *	0	55	1600	0.034 *	0	55	1600	0.034 *
Nb Thru	288	3200	0.090	0	288	3200	0.090	12	300	0.094	5	305	3200	0.095	0	305	3200	0.095	0	305	3200	0.095
Nb Right [3]	161	16000000	0.000	0	161	16000000	0.000	6	167	0.000	9	176	16000000	0.000	0	176	16000000	0.000	0	176	16000000	0.000
Sb Left [4]	37	1600	0.023	0	37	1600	0.023	1	38	0.024	0	38	1600	0.024	0	38	1600	0.024	0	38	1600	0.024
Sb Thru	976	3200	0.305 *	15	991	3200	0.310 *	39	1015	0.317 *	36	1051	3200	0.328 *	15	1066	3200	0.333 *	0	1066	3200	0.333 *
Sb Right [3]	365	16000000	0.000	0	365	16000000	0.000	15	380	0.000	0	380	16000000	0.000	0	380	16000000	0.000	0	380	16000000	0.000
Eb Left	30	0	0.009	0	30	0	0.009	1	31	0.010	0	31	0	0.010	0	31	0	0.010	0	31	0	0.010
Eb Thru	58	3200	0.028 *	0	58	3200	0.028 *	2	60	0.029 *	0	60	3200	0.029 *	0	60	3200	0.029 *	0	60	3200	0.029 *
Eb Right [3]	14	16000000	0.000	0	14	16000000	0.000	1	15	0.000	0	15	16000000	0.000	0	15	16000000	0.000	0	15	16000000	0.000
Wb Left	56	1600	0.035	0	56	1600	0.035	2	58	0.036	0	58	1600	0.036	0	58	1600	0.036	0	58	1600	0.036
Wb Thru	125	1600	0.078 *	0	125	1600	0.078 *	5	130	0.081 *	0	130	1600	0.081 *	0	130	1600	0.081 *	0	130	1600	0.081 *
Wb Right [3	213	16000000	0.000	4	217	16000000	0.000	9	222	0.000	9	231	16000000	0.000	4	235	16000000	0.000	0	235	16000000	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.494				0.498			0.512				0.523				0.527				0.527
LOS			A				A			A				A				A				A

04:03 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Freeflow right-turn lane.
4 Southbound left-turns prohibited Monday-Friday, 6-9 AM.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Civic Center Way
Peak hr: PM
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-7

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	27	1600	0.017	0	27	1600	0.017	1	28	0.018	0	28	1600	0.018	0	28	1600	0.018	0	28	1600	0.018
Nb Thru	519	3200	0.162 *	0	519	3200	0.162 *	21	540	0.169 *	13	553	3200	0.173 *	0	553	3200	0.173 *	0	553	3200	0.173 *
Nb Right [3]	25	16000000	0.000	0	25	16000000	0.000	1	26	0.000	41	67	16000000	0.000	0	67	16000000	0.000	0	67	16000000	0.000
SB Left	162	1600	0.101 *	15	177	1600	0.111 *	6	168	0.105 *	49	217	1600	0.136 *	15	232	1600	0.145 *	0	232	1600	0.145 *
Sb Thru	521	3200	0.163	0	521	3200	0.163	21	542	0.169	11	553	3200	0.173	0	553	3200	0.173	0	553	3200	0.173
Sb Right [3]	74	16000000	0.000	0	74	16000000	0.000	3	77	0.000	0	77	16000000	0.000	0	77	16000000	0.000	0	77	16000000	0.000
Eb Left	267	0	0.083	0	267	0	0.083	11	278	0.087	0	278	0	0.087	0	278	0	0.087	0	278	0	0.087
Eb Thru	118	3200	0.120 *	0	118	3200	0.120 *	5	123	0.125 *	0	123	3200	0.125 *	0	123	3200	0.125 *	0	123	3200	0.125 *
Eb Right [3]	93	16000000	0.000	0	93	16000000	0.000	4	97	0.000	0	97	16000000	0.000	0	97	16000000	0.000	0	97	16000000	0.000
Wb Left	20	1600	0.013	0	20	1600	0.013	1	21	0.013	1	22	1600	0.014	0	22	1600	0.014	0	22	1600	0.014
Wb Thru	84	1600	0.053 *	0	84	1600	0.053 *	3	87	0.055 *	0	87	1600	0.055 *	0	87	1600	0.055 *	0	87	1600	0.055 *
Wb Right [3	576	16000000	0.000	24	600	16000000	0.000	23	599	0.000	12	611	16000000	0.000	24	635	16000000	0.000	0	635	16000000	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.486				0.496			0.504				0.538				0.548				0.548
LOS			A				A			A				A				A				A

04:03 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by: NDS
2 Capacity expressed in veh/hour of green
3 Freeflow right-turn lane.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Civic Center Way
Peak hr: SAT
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-7

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	30	1600	0.019 *	0	30	1600	0.019 *	1	31	0.020 *	0	31	1600	0.020	0	31	1600	0.020	0	31	1600	0.020
Nb Thru	329	3200	0.103	0	329	3200	0.103	13	342	0.107	25	367	3200	0.115 *	0	367	3200	0.115 *	0	367	3200	0.115 *
Nb Right [3]	79	16000000	0.000	0	79	16000000	0.000	3	82	0.000	67	149	16000000	0.000	0	149	16000000	0.000	0	149	16000000	0.000
SB Left	216	1600	0.135	22	238	1600	0.149	9	225	0.140	64	289	1600	0.180 *	22	311	1600	0.194 *	0	311	1600	0.194 *
Sb Thru	798	3200	0.249 *	0	798	3200	0.249 *	32	830	0.259 *	32	862	3200	0.269	0	862	3200	0.269	0	862	3200	0.269
Sb Right [3]	70	16000000	0.000	0	70	16000000	0.000	3	73	0.000	0	73	16000000	0.000	0	73	16000000	0.000	0	73	16000000	0.000
Eb Left	69	0	0.022	0	69	0	0.022	3	72	0.022	0	72	0	0.022	0	72	0	0.022	0	72	0	0.022
Eb Thru	49	3200	0.037 *	0	49	3200	0.037 *	2	51	0.038 *	0	51	3200	0.038 *	0	51	3200	0.038 *	0	51	3200	0.038 *
Eb Right [3]	50	16000000	0.000	0	50	16000000	0.000	2	52	0.000	0	52	16000000	0.000	0	52	16000000	0.000	0	52	16000000	0.000
Wb Left	54	1600	0.034	0	54	1600	0.034	2	56	0.035	3	59	1600	0.037	0	59	1600	0.037	0	59	1600	0.037
Wb Thru	74	1600	0.046 *	0	74	1600	0.046 *	3	77	0.048 *	0	77	1600	0.048 *	0	77	1600	0.048 *	0	77	1600	0.048 *
Wb Right [3	203	16000000	0.000	17	220	16000000	0.000	8	211	0.000	18	229	16000000	0.000	17	246	16000000	0.000	0	246	16000000	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.401				0.401			0.415				0.432				0.445				0.445
LOS			A				A			A				A				A				A

04:03 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Freeflow right-turn lane.

APPENDIX E

ICU AND LEVELS OF SERVICE EXPLANATION
ICU DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS
SUMMERTIME CONDITIONS

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Kanan Dume Road @ Pacific Coast Highway (SR-1)

N-S St: Kanan Dume Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-1

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	192	2880	0.067	5	197	2880	0.068	8	200	0.069	12	212	2880	0.074	5	217	2880	0.075	0	217	2880	0.075
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	340	1600	0.101 *	0	340	1600	0.101 *	14	354	0.105 *	0	354	1600	0.105 *	0	354	1600	0.105 *	0	354	1600	0.105 *
Eb Left	178	1600	0.111 *	0	178	1600	0.111 *	7	185	0.116 *	0	185	1600	0.116 *	0	185	1600	0.116 *	0	185	1600	0.116 *
Eb Thru	768	3200	0.240	19	787	3200	0.246	31	799	0.250	47	846	3200	0.264	19	865	3200	0.270	0	865	3200	0.270
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	567	3200	0.177 *	6	573	3200	0.179 *	23	590	0.184 *	26	616	3200	0.192 *	6	622	3200	0.194 *	0	622	3200	0.194 *
Wb Right	125	1600	0.078	1	126	1600	0.079	5	130	0.081	8	138	1600	0.086	1	139	1600	0.087	0	139	1600	0.087
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.440				0.442			0.455				0.463				0.465				0.465
LOS			A				A			A				A				A				A

01:48 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Kanan Dume Road @ Pacific Coast Highway (SR-1)

N-S St: Kanan Dume Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-1

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	164	2880	0.057	5	169	2880	0.059	7	171	0.059	29	200	2880	0.069	5	205	2880	0.071	0	205	2880	0.071
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	287	1600	0.000	0	287	1600	0.000	11	298	0.000	0	298	1600	0.000	0	298	1600	0.000	0	298	1600	0.000
Eb Left	417	1600	0.261 *	0	417	1600	0.261 *	17	434	0.271 *	0	434	1600	0.271 *	0	434	1600	0.271 *	0	434	1600	0.271 *
Eb Thru	974	3200	0.304	20	994	3200	0.311	39	1013	0.317	80	1093	3200	0.342	20	1113	3200	0.348	0	1113	3200	0.348
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1127	3200	0.352 *	31	1158	3200	0.362 *	45	1172	0.366 *	69	1241	3200	0.388 *	31	1272	3200	0.398 *	0	1272	3200	0.398 *
Wb Right	211	1600	0.132	8	219	1600	0.137	8	219	0.137	25	244	1600	0.153	8	252	1600	0.158	0	252	1600	0.158
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.720				0.731			0.747				0.778				0.790				0.790
LOS			C				C			C				C				C				C

01:48 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase

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INTERSECTION CAPACITY UTILIZATION

Kanan Dume Road @ Pacific Coast Highway (SR-1)

N-S St: Kanan Dume Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-1

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	258	2880	0.090	7	265	2880	0.092	10	268	0.093	43	311	2880	0.108	7	318	2880	0.111	0	318	2880	0.111
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	685	1600	0.171 *	0	685	1600	0.171 *	27	712	0.177 *	0	712	1600	0.177 *	0	712	1600	0.177 *	0	712	1600	0.177 *
Eb Left	412	1600	0.258 *	0	412	1600	0.258 *	16	428	0.268 *	0	428	1600	0.268 *	0	428	1600	0.268 *	0	428	1600	0.268 *
Eb Thru	961	3200	0.300	29	990	3200	0.309	38	999	0.312	116	1115	3200	0.349	29	1144	3200	0.358	0	1144	3200	0.358
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1177	3200	0.368 *	23	1200	3200	0.375 *	47	1224	0.383 *	85	1309	3200	0.409 *	23	1332	3200	0.416 *	0	1332	3200	0.416 *
Wb Right	165	1600	0.103	6	171	1600	0.107	7	172	0.107	34	206	1600	0.129	6	212	1600	0.132	0	212	1600	0.132
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.846				0.853			0.878				0.904				0.912				0.912
LOS			D				D			D				E				E				E

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** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase

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INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Pacific Coast Highway (SR-1)
Peak hr: AM
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-2

Date: 04/26/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	11	0	0.003	0	11	0	0.003	0	11	0.004	3	14	0	0.005	0	14	0	0.005	0	14	0	0.005
Nb Thru [3]	13	3200	0.014 *	0	13	3200	0.014 *	1	14	0.015 *	1	15	3200	0.017 *	0	15	3200	0.017 *	0	15	3200	0.017 *
Nb Right	22	0	-	0	22	0	-	1	23	-	2	25	0	-	0	25	0	-	0	25	0	-
Sb Left	839	0	0.262	15	854	0	0.267	34	873	0.273	33	906	0	0.283	15	921	0	0.288	0	921	0	0.288
Sb Thru [3]	12	3200	0.266 *	0	12	3200	0.271 *	0	12	0.277 *	0	12	3200	0.287 *	0	12	3200	0.292 *	0	12	3200	0.292 *
Sb Right [4]	219	1600	0.093	0	219	1600	0.093	9	228	0.097	1	229	1600	0.097	0	229	1600	0.097	0	229	1600	0.097
Eb Left	125	2880	0.043	0	125	2880	0.043	5	130	0.045	3	133	2880	0.046	0	133	2880	0.046	0	133	2880	0.046
Eb Thru	862	3200	0.275 *	29	891	3200	0.284 *	34	896	0.286 *	69	965	3200	0.308 *	29	994	3200	0.317 *	0	994	3200	0.317 *
Eb Right	18	0	-	0	18	0	-	1	19	-	1	20	0	-	0	20	0	-	0	20	0	-
Wb Left	8	1600	0.005 *	0	8	1600	0.005 *	0	8	0.005 *	1	9	1600	0.006 *	0	9	1600	0.006 *	0	9	1600	0.006 *
Wb Thru	686	3200	0.214	9	695	3200	0.217	27	713	0.223	39	752	3200	0.235	9	761	3200	0.238	0	761	3200	0.238
Wb Right [4	186	1600	0.000	0	186	1600	0.000	7	193	0.000	11	204	1600	0.000	0	204	1600	0.000	0	204	1600	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.610				0.624			0.633				0.667				0.681				0.681
LOS			B				B			B				B				B				B

11:42 AM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase. The westbound right-turn lane has an overlapping phase with southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Pacific Coast Highway (SR-1)
Peak hr: PM
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-2

Date: 04/26/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	11	0	0.003	0	11	0	0.003	0	11	0.004	17	28	0	0.009	0	28	0	0.009	0	28	0	0.009
Nb Thru [3]	19	3200	0.014 *	0	19	3200	0.014 *	1	20	0.014 *	3	23	3200	0.025 *	0	23	3200	0.025 *	0	23	3200	0.025 *
Nb Right	14	0	-	0	14	0	-	1	15	-	13	28	0	-	0	28	0	-	0	28	0	-
Sb Left	405	0	0.127	0	405	0	0.127	16	421	0.132	29	450	0	0.141	0	450	0	0.141	0	450	0	0.141
Sb Thru [3]	12	3200	0.130 *	0	12	3200	0.130 *	0	12	0.136 *	4	16	3200	0.146 *	0	16	3200	0.146 *	0	16	3200	0.146 *
Sb Right [4]	172	1600	0.000	0	172	1600	0.000	7	179	0.000	1	180	1600	0.000	0	180	1600	0.000	0	180	1600	0.000
Eb Left	356	2880	0.124 *	0	356	2880	0.124 *	14	370	0.129 *	4	374	2880	0.130 *	0	374	2880	0.130 *	0	374	2880	0.130 *
Eb Thru	1169	3200	0.371	30	1199	3200	0.381	47	1216	0.386	94	1310	3200	0.421	30	1340	3200	0.430	0	1340	3200	0.430
Eb Right	19	0	-	0	19	0	-	1	20	-	18	38	0	-	0	38	0	-	0	38	0	-
Wb Left	14	1600	0.009	0	14	1600	0.009	1	15	0.009	14	29	1600	0.018	0	29	1600	0.018	0	29	1600	0.018
Wb Thru	1270	3200	0.397 *	47	1317	3200	0.412 *	51	1321	0.413 *	91	1412	3200	0.441 *	47	1459	3200	0.456 *	0	1459	3200	0.456 *
Wb Right [4	238	1600	0.022	0	238	1600	0.022	10	248	0.023	36	284	1600	0.037	0	284	1600	0.037	0	284	1600	0.037
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.715				0.729			0.741				0.792				0.806				0.806
LOS			C				C			C				C				D				D

11:42 AM

** Key conflicting movement as a part of ICU*
1 Counts conducted by: NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase. The westbound right-turn lane has an overlapping phase with southbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Pacific Coast Highway (SR-1)
Peak hr: SAT
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-2

Date: 04/26/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	8	0	0.003	0	8	0	0.003	0	8	0.003	25	33	0	0.010	0	33	0	0.010	0	33	0	0.010
Nb Thru [3]	15	3200	0.020 *	0	15	3200	0.020 *	1	16	0.020 *	5	21	3200	0.036 *	0	21	3200	0.036 *	0	21	3200	0.036 *
Nb Right	40	0	-	0	40	0	-	2	42	-	20	62	0	-	0	62	0	-	0	62	0	-
Sb Left	311	0	0.097	0	311	0	0.097	12	323	0.101	35	358	0	0.112	0	358	0	0.112	0	358	0	0.112
Sb Thru [3]	20	3200	0.103	0	20	3200	0.103	1	21	0.108	5	26	3200	0.120	0	26	3200	0.120	0	26	3200	0.120
Sb Right [4]	381	1600	0.158 *	0	381	1600	0.158 *	15	396	0.165 *	5	401	1600	0.161 *	0	401	1600	0.161 *	0	401	1600	0.161 *
Eb Left	230	2880	0.080 *	0	230	2880	0.080 *	9	239	0.083 *	20	259	2880	0.090 *	0	259	2880	0.090 *	0	259	2880	0.090 *
Eb Thru	1121	3200	0.356	44	1165	3200	0.370	45	1166	0.370	112	1278	3200	0.413	44	1322	3200	0.427	0	1322	3200	0.427
Eb Right	18	0	-	0	18	0	-	1	19	-	26	45	0	-	0	45	0	-	0	45	0	-
Wb Left	27	1600	0.017	0	27	1600	0.017	1	28	0.018	20	48	1600	0.030	0	48	1600	0.030	0	48	1600	0.030
Wb Thru	1374	3200	0.429 *	34	1408	3200	0.440 *	55	1429	0.447 *	111	1540	3200	0.481 *	34	1574	3200	0.492 *	0	1574	3200	0.492 *
Wb Right [4	187	1600	0.020	0	187	1600	0.020	7	194	0.020	62	256	1600	0.048	0	256	1600	0.048	0	256	1600	0.048
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.737				0.748			0.765				0.818				0.829				0.829
LOS			C				C			C				D				D				D

11:42 AM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase. The westbound right-turn lane has an overlapping phase with southbound left-turn phase.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Webb Way @ Pacific Coast Highway (SR-1)

N-S St: Webb Way
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-3

Peak hr: AM
Annual Growth: 1.00%

Date: 04/29/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	32	1600	0.020	0	32	1600	0.020	1	33	0.021	0	33	1600	0.021	0	33	1600	0.021	0	33	1600	0.021
Nb Thru [3]	33	1600	0.028 *	5	38	1600	0.031 *	1	34	0.029 *	7	41	1600	0.034 *	5	46	1600	0.037 *	0	46	1600	0.037 *
Nb Right	11	0	-	0	11	0	-	0	11	-	1	12	0	-	0	12	0	-	0	12	0	-
Sb Left	25	0	0.008	0	25	0	0.008	1	26	0.008	11	37	0	0.012	0	37	0	0.012	0	37	0	0.012
Sb Thru [3]	33	3200	0.018 *	1	34	3200	0.018 *	1	34	0.019 *	3	37	3200	0.023 *	1	38	3200	0.024 *	0	38	3200	0.024 *
Sb Right [4]	51	1600	0.000	9	60	1600	0.000	2	53	0.000	43	96	1600	0.000	9	105	1600	0.000	0	105	1600	0.000
Eb Left	117	1600	0.073	44	161	1600	0.101	5	122	0.076	94	216	1600	0.135 *	44	260	1600	0.162 *	0	260	2880	0.090
Eb Thru	1499	4800	0.312 *	0	1499	4800	0.312 *	60	1559	0.325 *	14	1573	4800	0.328	0	1573	4800	0.328	0	1573	4800	0.328 *
Eb Right	80	1600	0.050	0	80	1600	0.050	3	83	0.052	0	83	1600	0.052	0	83	1600	0.052	0	83	1600	0.052
Wb Left	105	1600	0.066 *	0	105	1600	0.066 *	4	109	0.068 *	1	110	1600	0.069	0	110	1600	0.069	0	110	1600	0.069 *
Wb Thru	814	3200	0.254	0	814	3200	0.254	33	847	0.265	14	861	3200	0.269 *	0	861	3200	0.269 *	0	861	3200	0.269
Wb Right [5]	199	1600	0.117	0	199	1600	0.117	8	207	0.121	20	227	1600	0.130	0	227	1600	0.130	0	227	1600	0.130
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.474				0.477			0.490				0.511				0.541				0.507
LOS			A				A			A				A				A				A

04:06 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 Right turns on red from exclusive lanes, 50% of overlapping left turn
5 *The westbound right-turn lane has an overlapping phase with soundbound left-turn phase.*

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Webb Way @ Pacific Coast Highway (SR-1)
Peak hr: PM
Annual Growth: 1.00%

N-S St: Webb Way
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-3

Date: 04/29/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH				2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	119	1600	0.074 *	0	119	1600	0.074	5	124	0.077 *		0	124	1600	0.077	0	124	1600	0.077	0	124	1600	0.077
Nb Thru [3]	80	1600	0.073	5	85	1600	0.076 *	3	83	0.075		12	95	1600	0.084 *	5	100	1600	0.087 *	0	100	1600	0.087 *
Nb Right	36	0	-	0	36	0	-	1	37	-		1	38	0	-	0	38	0	-	0	38	0	-
Sb Left	122	0	0.038	0	122	0	0.038	5	127	0.040		46	173	0	0.054	0	173	0	0.054	0	173	0	0.054
Sb Thru [3]	76	3200	0.062 *	8	84	3200	0.064 *	3	79	0.064 *		11	90	3200	0.082 *	8	98	3200	0.085 *	0	98	3200	0.085 *
Sb Right [4]	76	1600	0.017	47	123	1600	0.037	3	79	0.018		86	165	1600	0.031	47	212	1600	0.051	0	212	1600	0.051
Eb Left	98	1600	0.061 *	30	128	1600	0.080 *	4	102	0.064 *		129	231	1600	0.144 *	30	261	1600	0.163 *	0	261	2880	0.091 *
Eb Thru	1371	4800	0.286	0	1371	4800	0.286	55	1426	0.297		27	1453	4800	0.303	0	1453	4800	0.303	0	1453	4800	0.303
Eb Right	63	1600	0.039	0	63	1600	0.039	3	66	0.041		0	66	1600	0.041	0	66	1600	0.041	0	66	1600	0.041
Wb Left	188	1600	0.118	0	188	1600	0.118	8	196	0.122		1	197	1600	0.123	0	197	1600	0.123	0	197	1600	0.123
Wb Thru	1277	3200	0.399 *	0	1277	3200	0.399 *	51	1328	0.415 *		36	1364	3200	0.426 *	0	1364	3200	0.426 *	0	1364	3200	0.426 *
Wb Right [5]	325	1600	0.165	0	325	1600	0.165	13	338	0.172		35	373	1600	0.179	0	373	1600	0.179	0	373	1600	0.179
Yellow Allowance:			0.050 *				0.050 *			0.050 *					0.050 *				0.050 *				0.050 *
ICU			0.647				0.669			0.670					0.786				0.811				0.738
LOS			B				B			B					C				D				C

04:06 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 Right turns on red from exclusive lanes, 50% of overlapping left turn
5 *The westbound right-turn lane has an overlapping phase with soundbound left-turn phase.*

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(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Webb Way @ Pacific Coast Highway (SR-1)

N-S St: Webb Way
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-3

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/29/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH				2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	138	1600	0.086 *	0	138	1600	0.086 *	6	144	0.090 *		2	146	1600	0.091 *	0	146	1600	0.091 *	0	146	1600	0.091 *
Nb Thru [3]	72	1600	0.064	7	79	1600	0.068	3	75	0.066		15	90	1600	0.077	7	97	1600	0.081	0	97	1600	0.081
Nb Right	30	0	-	0	30	0	-	1	31	-		2	33	0	-	0	33	0	-	0	33	0	-
Sb Left	93	0	0.029	0	93	0	0.029	4	97	0.030		60	157	0	0.049	0	157	0	0.049	0	157	0	0.049
Sb Thru [3]	61	3200	0.048 *	6	67	3200	0.050 *	2	63	0.050 *		11	74	3200	0.072 *	6	80	3200	0.074 *	0	80	3200	0.074 *
Sb Right [4]	65	1600	0.002	34	99	1600	0.009	3	68	0.002		108	176	1600	0.018	34	210	1600	0.025	0	210	1600	0.025
Eb Left	124	1600	0.078 *	44	168	1600	0.105 *	5	129	0.081 *		165	294	1600	0.184 *	44	338	1600	0.211 *	0	338	2880	0.117 *
Eb Thru	1235	4800	0.257	0	1235	4800	0.257	49	1284	0.268		45	1329	4800	0.277	0	1329	4800	0.277	0	1329	4800	0.277
Eb Right	99	1600	0.062	0	99	1600	0.062	4	103	0.064		1	104	1600	0.065	0	104	1600	0.065	0	104	1600	0.065
Wb Left	243	1600	0.152	0	243	1600	0.152	10	253	0.158		1	254	1600	0.159	0	254	1600	0.159	0	254	1600	0.159
Wb Thru	1269	3200	0.397 *	0	1269	3200	0.397 *	51	1320	0.412 *		77	1397	3200	0.436 *	0	1397	3200	0.436 *	0	1397	3200	0.436 *
Wb Right [5]	116	1600	0.043	0	116	1600	0.043	5	121	0.045		40	161	1600	0.051	0	161	1600	0.051	0	161	1600	0.051
Yellow Allowance:			0.050 *				0.050 *			0.050 *					0.050 *				0.050 *				0.050 *
ICU			0.658				0.688			0.683					0.833				0.863				0.769
LOS			B				B			B					D				D				C

04:06 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 Right turns on red from exclusive lanes, 50% of overlapping left turn
5 *The westbound right-turn lane has an overlapping phase with soundbound left-turn phase.*

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INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Pacific Coast Highway (SR-1)

N-S St: Cross Creek Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-18-0246-1
File: ICU-4

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	1	0	0.001	0	1	0	0.001	0	1	0.001	0	1	0	0.001	0	1	0	0.001	0	1	0	0.001
Nb Thru [3]	0	1600	0.001	0	0	1600	0.001	0	0	0.001	0	0	1600	0.001	0	0	1600	0.001	0	0	1600	0.001
Nb Right	2	1600	0.001 *	0	2	1600	0.001 *	0	2	0.001 *	0	2	1600	0.001 *	0	2	1600	0.001 *	0	2	1600	0.001 *
Sb Left	79	0	0.025	15	94	0	0.029	3	82	0.026	44	126	0	0.039	15	141	0	0.044	0	141	0	0.044
Sb Thru [3]	2	3200	0.025 *	0	2	3200	0.030 *	0	2	0.026 *	0	2	3200	0.040 *	0	2	3200	0.045 *	0	2	3200	0.045 *
Sb Right [4]	55	1600	0.009	0	55	1600	0.009	2	57	0.010	0	57	1600	0.010	0	57	1600	0.010	0	57	1600	0.010
Eb Left	80	1600	0.050	0	80	1600	0.050	3	83	0.052	0	83	1600	0.052	0	83	1600	0.052	0	83	1600	0.052
Eb Thru	1529	3200	0.479 *	0	1529	3200	0.479 *	61	1590	0.499 *	26	1616	3200	0.507 *	0	1616	3200	0.507 *	0	1616	3200	0.507 *
Eb Right	5	0	-	0	5	0	-	0	5	-	0	5	0	-	0	5	0	-	0	5	0	-
Wb Left	0	1600	0.000 *	0	0	1600	0.000 *	0	0	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *	0	0	1600	0.000 *
Wb Thru	1040	3200	0.358	0	1040	3200	0.374	42	1082	0.373	35	1117	3200	0.409	0	1117	3200	0.425	0	1117	3200	0.349
Wb Right	107	0	-	49	156	0	-	4	111	-	82	193	0	-	49	242	0	-	0	242	1600	0.151
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.556				0.561			0.576				0.598				0.603				0.603
LOS			A				A			A				A				B				B

03:48 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Northbound and southbound operate with split phasing.
4 Right turns on red from exclusive lanes, 50% of overlapping left turn

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Pacific Coast Highway (SR-1)

N-S St: Cross Creek Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-18-0246-1
File: ICU-4

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	14	0	0.009	0	14	0	0.009	1	15	0.009	0	15	0	0.009	0	15	0	0.009	0	15	0	0.009
Nb Thru [3]	5	1600	0.012	0	5	1600	0.012	0	5	0.012	0	5	1600	0.012	0	5	1600	0.012	0	5	1600	0.012
Nb Right	25	1600	0.016 *	0	25	1600	0.016 *	1	26	0.016 *	0	26	1600	0.016 *	0	26	1600	0.016 *	0	26	1600	0.016 *
Sb Left	194	0	0.061 *	79	273	0	0.085 *	8	202	0.063 *	95	297	0	0.093 *	79	376	0	0.117 *	0	376	0	0.117 *
Sb Thru [3]	0	3200	0.061 *	0	0	3200	0.085 *	0	0	0.063 *	0	0	3200	0.093 *	0	0	3200	0.117 *	0	0	3200	0.117 *
Sb Right [4]	110	1600	0.036	0	110	1600	0.036	4	114	0.038	0	114	1600	0.038	0	114	1600	0.038	0	114	1600	0.038
Eb Left	104	1600	0.065 *	0	104	1600	0.065 *	4	108	0.068 *	0	108	1600	0.068 *	0	108	1600	0.068 *	0	108	1600	0.068 *
Eb Thru	1557	3200	0.490	0	1557	3200	0.490	62	1619	0.510	75	1694	3200	0.533	0	1694	3200	0.533	0	1694	3200	0.533
Eb Right	11	0	-	0	11	0	-	0	11	-	0	11	0	-	0	11	0	-	0	11	0	-
Wb Left	19	1600	0.012	0	19	1600	0.012	1	20	0.012	0	20	1600	0.012	0	20	1600	0.012	0	20	1600	0.012
Wb Thru	1643	3200	0.560 *	0	1643	3200	0.576 *	66	1709	0.582 *	73	1782	3200	0.646 *	0	1782	3200	0.661 *	0	1782	3200	0.557 *
Wb Right	148	0	-	51	199	0	-	6	154	-	130	284	0	-	51	335	0	-	0	335	1600	0.209
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.751				0.792			0.779				0.872				0.913				0.808
LOS			C				C			C				D				E				D

03:48 PM

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Pacific Coast Highway (SR-1)

N-S St: Cross Creek Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-18-0246-1
File: ICU-4

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	18	0	0.011	0	18	0	0.011	1	19	0.012	0	19	0	0.012	0	19	0	0.012	0	19	0	0.012
Nb Thru [3]	10	1600	0.018	0	10	1600	0.018	0	10	0.018	0	10	1600	0.018	0	10	1600	0.018	0	10	1600	0.018
Nb Right	40	1600	0.025 *	0	40	1600	0.025 *	2	42	0.026 *	0	42	1600	0.026 *	0	42	1600	0.026 *	0	42	1600	0.026 *
Sb Left	207	0	0.065	57	264	0	0.083	8	215	0.067	115	330	0	0.103	57	387	0	0.121	0	387	0	0.121
Sb Thru [3]	4	3200	0.066 *	0	4	3200	0.084 *	0	4	0.069 *	0	4	3200	0.105 *	0	4	3200	0.122 *	0	4	3200	0.122 *
Sb Right [4]	120	1600	0.035	0	120	1600	0.035	5	125	0.037	0	125	1600	0.037	0	125	1600	0.037	0	125	1600	0.037
Eb Left	127	1600	0.079 *	0	127	1600	0.079 *	5	132	0.083 *	0	132	1600	0.083 *	0	132	1600	0.083 *	0	132	1600	0.083 *
Eb Thru	1460	3200	0.460	0	1460	3200	0.460	58	1518	0.478	107	1625	3200	0.512	0	1625	3200	0.512	0	1625	3200	0.512
Eb Right	12	0	-	0	12	0	-	0	12	-	0	12	0	-	0	12	0	-	0	12	0	-
Wb Left	63	1600	0.039	0	63	1600	0.039	3	66	0.041	0	66	1600	0.041	0	66	1600	0.041	0	66	1600	0.041
Wb Thru	1454	3200	0.527 *	0	1454	3200	0.549 *	58	1512	0.548 *	118	1630	3200	0.639 *	0	1630	3200	0.662 *	0	1630	3200	0.509 *
Wb Right	231	0	-	73	304	0	-	9	240	-	174	414	0	-	73	487	0	-	0	487	1600	0.305
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.747				0.788			0.775				0.902				0.943				0.790
LOS			C				C			C				E				E				C

03:48 PM

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(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Las Flores Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Las Flores Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-5

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	3	0	0.002 *	0	3	0	0.002 *	0	3	0.002 *	0	3	0	0.002 *	0	3	0	0.002 *	0	3	0	0.002 *
Nb Thru	0	1600	0.003	0	0	1600	0.003	0	0	0.003	0	0	1600	0.003	0	0	1600	0.003	0	0	1600	0.003
Nb Right	2	0	-	0	2	0	-	0	2	-	0	2	0	-	0	2	0	-	0	2	0	-
Sb Left	33	0	0.021	0	33	0	0.021	1	34	0.021	1	35	0	0.022	0	35	0	0.022	0	35	0	0.022
Sb Thru	1	1600	0.035 *	0	1	1600	0.036 *	0	1	0.036 *	0	1	1600	0.040 *	0	1	1600	0.041 *	0	1	1600	0.041 *
Sb Right [3]	22	0	-	2	24	0	-	1	23	-	4	27	0	-	2	29	0	-	0	29	0	-
Eb Left	21	1600	0.013	1	22	1600	0.014	1	22	0.014	2	24	1600	0.015	1	25	1600	0.016	0	25	1600	0.016
Eb Thru	1526	3200	0.478 *	10	1536	3200	0.481 *	61	1587	0.497 *	46	1633	3200	0.511 *	10	1643	3200	0.514 *	0	1643	3200	0.514 *
Eb Right	2	0	-	0	2	0	-	0	2	-	0	2	0	-	0	2	0	-	0	2	0	-
Wb Left	5	1600	0.003 *	0	5	1600	0.003 *	0	5	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *	0	5	1600	0.003 *
Wb Thru	1265	3200	0.395	34	1299	3200	0.406	51	1316	0.411	75	1391	3200	0.435	34	1425	3200	0.445	0	1425	3200	0.445
Wb Right	27	1600	0.017	0	27	1600	0.017	1	28	0.018	1	29	1600	0.018	0	29	1600	0.018	0	29	1600	0.018
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.568				0.572			0.588				0.606				0.610				0.610
LOS			A				A			A				B				B				B

01:56 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Las Flores Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Las Flores Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-5

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	11	0	0.007	0	11	0	0.007	0	11	0.007	0	11	0	0.007	0	11	0	0.007	0	11	0	0.007
Nb Thru	4	1600	0.030 *	0	4	1600	0.030 *	0	4	0.031 *	0	4	1600	0.031 *	0	4	1600	0.031 *	0	4	1600	0.031 *
Nb Right	33	0	-	0	33	0	-	1	34	-	0	34	0	-	0	34	0	-	0	34	0	-
Sb Left	43	0	0.027 *	0	43	0	0.027 *	2	45	0.028 *	1	46	0	0.029 *	0	46	0	0.029 *	0	46	0	0.029 *
Sb Thru	2	1600	0.044	0	2	1600	0.045	0	2	0.046	0	2	1600	0.051	0	2	1600	0.052	0	2	1600	0.052
Sb Right [3]	25	0	-	2	27	0	-	1	26	-	7	33	0	-	2	35	0	-	0	35	0	-
Eb Left	31	1600	0.019	3	34	1600	0.021	1	32	0.020	7	39	1600	0.025	3	42	1600	0.026	0	42	1600	0.026
Eb Thru	1801	3200	0.571 *	55	1856	3200	0.588 *	72	1873	0.594 *	120	1993	3200	0.631 *	55	2048	3200	0.648 *	0	2048	3200	0.648 *
Eb Right	26	0	-	0	26	0	-	1	27	-	0	27	0	-	0	27	0	-	0	27	0	-
Wb Left	31	1600	0.019 *	0	31	1600	0.019 *	1	32	0.020 *	0	32	1600	0.020 *	0	32	1600	0.020 *	0	32	1600	0.020 *
Wb Thru	1652	3200	0.516	35	1687	3200	0.527	66	1718	0.537	136	1854	3200	0.579	35	1889	3200	0.590	0	1889	3200	0.590
Wb Right	31	1600	0.019	0	31	1600	0.019	1	32	0.020	1	33	1600	0.021	0	33	1600	0.021	0	33	1600	0.021
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.697				0.714			0.723				0.761				0.778				0.778
LOS			B				C			C				C				C				C

01:56 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Las Flores Canyon Road @ Pacific Coast Highway (SR-1)

N-S St: Las Flores Canyon Road
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-5

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	20	0	0.013	0	20	0	0.013	1	21	0.013	0	21	0	0.013	0	21	0	0.013 *	0	21	0	0.013 *
Nb Thru	1	1600	0.041 *	0	1	1600	0.041 *	0	1	0.042 *	0	1	1600	0.042 *	0	1	1600	0.042	0	1	1600	0.042
Nb Right	44	0	-	0	44	0	-	2	46	-	0	46	0	-	0	46	0	-	0	46	0	-
Sb Left	37	0	0.023 *	0	37	0	0.023 *	1	38	0.024 *	2	40	0	0.025 *	0	40	0	0.025	0	40	0	0.025
Sb Thru	3	1600	0.044	0	3	1600	0.046	0	3	0.046	0	3	1600	0.054	0	3	1600	0.056 *	0	3	1600	0.056 *
Sb Right [3]	30	0	-	3	33	0	-	1	31	-	11	42	0	-	3	45	0	-	0	45	0	-
Eb Left	44	1600	0.028 *	2	46	1600	0.029 *	2	46	0.029 *	7	53	1600	0.033 *	2	55	1600	0.034 *	0	55	1600	0.034 *
Eb Thru	1427	3200	0.465	40	1467	3200	0.478	57	1484	0.484	160	1644	3200	0.534	40	1684	3200	0.546	0	1684	3200	0.546
Eb Right	61	0	-	0	61	0	-	2	63	-	0	63	0	-	0	63	0	-	0	63	0	-
Wb Left	52	1600	0.033	0	52	1600	0.033	2	54	0.034	0	54	1600	0.034	0	54	1600	0.034	0	54	1600	0.034
Wb Thru	1832	3200	0.573 *	51	1883	3200	0.588 *	73	1905	0.595 *	200	2105	3200	0.658 *	51	2156	3200	0.674 *	0	2156	3200	0.674 *
Wb Right	30	1600	0.019	0	30	1600	0.019	1	31	0.020	1	32	1600	0.020	0	32	1600	0.020	0	32	1600	0.020
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.714				0.731			0.740				0.808				0.827				0.827
LOS			C				C			C				D				D				D

01:56 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 No right-turn on red.

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20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Topanga Canyon Road (SR-27) @ Pacific Coast Highway (SR-1)

N-S St: Topanga Canyon Road (SR-27)
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-6

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	1079	2880	0.375	0	1079	2880	0.375	43	1122	0.390	0	1122	2880	0.390	0	1122	2880	0.390	0	1122	2880	0.390
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	45	1600	0.011	5	50	1600	0.014	2	47	0.012	12	59	1600	0.015	5	64	1600	0.018	0	64	1600	0.018
Eb Left	27	1600	0.017	1	28	1600	0.018	1	28	0.018	6	34	1600	0.021	1	35	1600	0.022	0	35	1600	0.022
Eb Thru	1560	3200	0.488 *	6	1566	3200	0.489 *	62	1622	0.507 *	25	1647	3200	0.515 *	6	1653	3200	0.517 *	0	1653	3200	0.517 *
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	1283	4800	0.307	19	1302	4800	0.311	51	1334	0.320	42	1376	4800	0.328	19	1395	4800	0.332	0	1395	4800	0.332
Wb Right	192	0	-	0	192	0	-	8	200	-	0	200	0	-	0	200	0	-	0	200	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.912				0.914			0.947				0.954				0.956				0.956
LOS			E				E			E				E				E				E

04:09 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Topanga Canyon Road (SR-27) @ Pacific Coast Highway (SR-1)

N-S St: Topanga Canyon Road (SR-27)
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-6

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	266	2880	0.092	0	266	2880	0.092	11	277	0.096	0	277	2880	0.096	0	277	2880	0.096	0	277	2880	0.096
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	64	1600	0.000	5	69	1600	0.000	3	67	0.000	23	90	1600	0.000	5	95	1600	0.000	0	95	1600	0.000
Eb Left	167	1600	0.104 *	8	175	1600	0.109 *	7	174	0.109 *	19	193	1600	0.120 *	8	201	1600	0.125 *	0	201	1600	0.125 *
Eb Thru	1812	3200	0.566	31	1843	3200	0.576	72	1884	0.589	71	1955	3200	0.611	31	1986	3200	0.621	0	1986	3200	0.621
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1680	4800	0.562 *	20	1700	4800	0.566 *	67	1747	0.585 *	72	1819	4800	0.600 *	20	1839	4800	0.604 *	0	1839	4800	0.604 *
Wb Right	1019	0	-	0	1019	0	-	41	1060	-	0	1060	0	-	0	1060	0	-	0	1060	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.809				0.818			0.839				0.866				0.875				0.875
LOS			D				D			D				D				D				D

04:09 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Topanga Canyon Road (SR-27) @ Pacific Coast Highway (SR-1)

N-S St: Topanga Canyon Road (SR-27)
E-W St: Pacific Coast Highway (SR-1)
Project: La Paz Ranch/5-16-0246-1
File: ICU-6

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	501	2880	0.174	0	501	2880	0.174	20	521	0.181	0	521	2880	0.181	0	521	2880	0.181	0	521	2880	0.181
Sb Thru	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Right [3]	196	1600	0.055	7	203	1600	0.056	8	204	0.057	33	237	1600	0.063	7	244	1600	0.063	0	244	1600	0.063
Eb Left	108	1600	0.068 *	6	114	1600	0.071 *	4	112	0.070 *	24	136	1600	0.085 *	6	142	1600	0.089 *	0	142	1600	0.089 *
Eb Thru	1476	3200	0.461	23	1499	3200	0.468	59	1535	0.480	90	1625	3200	0.508	23	1648	3200	0.515	0	1648	3200	0.515
Eb Right	0	0	-	0	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Thru	1917	4800	0.459 *	29	1946	4800	0.465 *	77	1994	0.477 *	113	2107	4800	0.501 *	29	2136	4800	0.507 *	0	2136	4800	0.507 *
Wb Right	286	0	-	0	286	0	-	11	297	-	0	297	0	-	0	297	0	-	0	297	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.750				0.760			0.778				0.817				0.827				0.827
LOS			C				C			C				D				D				D

04:09 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 The southbound right-turn lane has an overlapping phase with eastbound left-turn phase.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Civic Center Way

N-S St: Malibu Canyon Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-7

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	36	1600	0.023 *	0	36	1600	0.023 *	1	37	0.023 *	0	37	1600	0.023 *	0	37	1600	0.023 *	0	37	1600	0.023 *
Nb Thru	225	3200	0.070	0	225	3200	0.070	9	234	0.073	5	239	3200	0.075	0	239	3200	0.075	0	239	3200	0.075
Nb Right [3]	56	16000000	0.000	0	56	16000000	0.000	2	58	0.000	9	67	16000000	0.000	0	67	16000000	0.000	0	67	16000000	0.000
Sb Left [4]	31	1600	0.019	0	31	1600	0.019	1	32	0.020	0	32	1600	0.020	0	32	1600	0.020	0	32	1600	0.020
Sb Thru	1050	3200	0.328 *	15	1065	3200	0.333 *	42	1092	0.341 *	36	1128	3200	0.353 *	15	1143	3200	0.357 *	0	1143	3200	0.357 *
Sb Right [3]	242	16000000	0.000	0	242	16000000	0.000	10	252	0.000	0	252	16000000	0.000	0	252	16000000	0.000	0	252	16000000	0.000
Eb Left	24	0	0.008	0	24	0	0.008	1	25	0.008	0	25	0	0.008	0	25	0	0.008	0	25	0	0.008
Eb Thru	22	3200	0.014 *	0	22	3200	0.014 *	1	23	0.015 *	0	23	3200	0.015 *	0	23	3200	0.015 *	0	23	3200	0.015 *
Eb Right [3]	11	16000000	0.000	0	11	16000000	0.000	0	11	0.000	0	11	16000000	0.000	0	11	16000000	0.000	0	11	16000000	0.000
Wb Left	19	1600	0.012	0	19	1600	0.012	1	20	0.012	0	20	1600	0.012	0	20	1600	0.012	0	20	1600	0.012
Wb Thru	52	1600	0.033 *	0	52	1600	0.033 *	2	54	0.034 *	0	54	1600	0.034 *	0	54	1600	0.034 *	0	54	1600	0.034 *
Wb Right [3	200	16000000	0.000	4	204	16000000	0.000	8	208	0.000	9	217	16000000	0.000	4	221	16000000	0.000	0	221	16000000	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.448				0.452			0.463				0.475				0.479				0.479
LOS			A				A			A				A				A				A

02:00 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Free-flow right-turn lane.
4 Southbound left-turns prohibited Monday-Friday, 6-9 AM.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Civic Center Way
Peak hr: PM
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-7

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	12	1600	0.008	0	12	1600	0.008	0	12	0.008	0	12	1600	0.008	0	12	1600	0.008	0	12	1600	0.008
Nb Thru	562	3200	0.176 *	0	562	3200	0.176 *	22	584	0.183 *	13	597	3200	0.187 *	0	597	3200	0.187 *	0	597	3200	0.187 *
Nb Right [3]	20	16000000	0.000	0	20	16000000	0.000	1	21	0.000	41	62	16000000	0.000	0	62	16000000	0.000	0	62	16000000	0.000
SB Left	151	1600	0.094 *	15	166	1600	0.104 *	6	157	0.098 *	49	206	1600	0.129 *	15	221	1600	0.138 *	0	221	1600	0.138 *
Sb Thru	526	3200	0.164	0	526	3200	0.164	21	547	0.171	11	558	3200	0.174	0	558	3200	0.174	0	558	3200	0.174
Sb Right [3]	29	16000000	0.000	0	29	16000000	0.000	1	30	0.000	0	30	16000000	0.000	0	30	16000000	0.000	0	30	16000000	0.000
Eb Left	229	0	0.072	0	229	0	0.072	9	238	0.074	0	238	0	0.074	0	238	0	0.074	0	238	0	0.074
Eb Thru	35	3200	0.083 *	0	35	3200	0.083 *	1	36	0.086 *	0	36	3200	0.086 *	0	36	3200	0.086 *	0	36	3200	0.086 *
Eb Right [3]	75	16000000	0.000	0	75	16000000	0.000	3	78	0.000	0	78	16000000	0.000	0	78	16000000	0.000	0	78	16000000	0.000
Wb Left	28	1600	0.018	0	28	1600	0.018	1	29	0.018	1	30	1600	0.019	0	30	1600	0.019	0	30	1600	0.019
Wb Thru	29	1600	0.018 *	0	29	1600	0.018 *	1	30	0.019 *	0	30	1600	0.019 *	0	30	1600	0.019 *	0	30	1600	0.019 *
Wb Right [3	574	16000000	0.000	24	598	16000000	0.000	23	597	0.000	12	609	16000000	0.000	24	633	16000000	0.000	0	633	16000000	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.421				0.430			0.435				0.470				0.480				0.480
LOS			A				A			A				A				A				A

02:00 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Free-flow right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Malibu Canyon Road @ Civic Center Way
Peak hr: SAT
Annual Growth: 1.00%

N-S St: Malibu Canyon Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-7

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	28	1600	0.018	0	28	1600	0.018	1	29	0.018	0	29	1600	0.018	0	29	1600	0.018	0	29	1600	0.018
Nb Thru	366	3200	0.114 *	0	366	3200	0.114 *	15	381	0.119 *	25	406	3200	0.127 *	0	406	3200	0.127 *	0	406	3200	0.127 *
Nb Right [3]	37	16000000	0.000	0	37	16000000	0.000	1	38	0.000	67	105	16000000	0.000	0	105	16000000	0.000	0	105	16000000	0.000
SB Left	206	1600	0.129 *	22	228	1600	0.143 *	8	214	0.134 *	64	278	1600	0.174 *	22	300	1600	0.188 *	0	300	1600	0.188 *
Sb Thru	686	3200	0.214	0	686	3200	0.214	27	713	0.223	32	745	3200	0.233	0	745	3200	0.233	0	745	3200	0.233
Sb Right [3]	30	16000000	0.000	0	30	16000000	0.000	1	31	0.000	0	31	16000000	0.000	0	31	16000000	0.000	0	31	16000000	0.000
Eb Left	41	0	0.013	0	41	0	0.013	2	43	0.013	0	43	0	0.013	0	43	0	0.013	0	43	0	0.013
Eb Thru	18	3200	0.018 *	0	18	3200	0.018 *	1	19	0.019 *	0	19	3200	0.019 *	0	19	3200	0.019 *	0	19	3200	0.019 *
Eb Right [3]	16	16000000	0.000	0	16	16000000	0.000	1	17	0.000	0	17	16000000	0.000	0	17	16000000	0.000	0	17	16000000	0.000
Wb Left	23	1600	0.014	0	23	1600	0.014	1	24	0.015	3	27	1600	0.017	0	27	1600	0.017	0	27	1600	0.017
Wb Thru	27	1600	0.017 *	0	27	1600	0.017 *	1	28	0.018 *	0	28	1600	0.018 *	0	28	1600	0.018 *	0	28	1600	0.018 *
Wb Right [3	234	16000000	0.000	17	251	16000000	0.000	9	243	0.000	18	261	16000000	0.000	17	278	16000000	0.000	0	278	16000000	0.000
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.328				0.342			0.340				0.387				0.401				0.401
LOS			A				A			A				A				A				A

02:00 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green
3 Free-flow right-turn lane.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Stuart Ranch Road-Webb Way @ Civic Center Way

N-S St: Stuart Ranch Road-Webb Way
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-8

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	195	0	0.122	0	195	0	0.122	8	203	0.127	0	203	0	0.127	0	203	0	0.127	0	203	0	0.127
Nb Thru	57	1600	0.158 *	0	57	1600	0.158 *	2	59	0.164 *	0	59	1600	0.164 *	0	59	1600	0.164	0	59	1600	0.164
Nb Right	103	1600	0.064	49	152	1600	0.095	4	107	0.067	121	228	1600	0.143	49	277	1600	0.173 *	0	277	1600	0.173 *
Sb Left	3	0	0.002 *	0	3	0	0.002 *	0	3	0.002 *	0	3	0	0.002 *	0	3	0	0.002 *	0	3	0	0.002 *
Sb Thru	14	1600	0.014	0	14	1600	0.014	1	15	0.014	0	15	1600	0.014	0	15	1600	0.014	0	15	1600	0.014
Sb Right	5	0	-	0	5	0	-	0	5	-	0	5	0	-	0	5	0	-	0	5	0	-
Eb Left	16	0	0.010	0	16	0	0.010	1	17	0.010	0	17	0	0.010	0	17	0	0.010	0	17	0	0.010
Eb Thru	76	1600	0.058 *	0	76	1600	0.058 *	3	79	0.060 *	0	79	1600	0.060 *	0	79	1600	0.060 *	0	79	1600	0.060 *
Eb Right	39	1600	0.024	0	39	1600	0.024	2	41	0.025	4	45	1600	0.028	0	45	1600	0.028	0	45	1600	0.028
Wb Left	59	1600	0.037 *	10	69	1600	0.043 *	2	61	0.038 *	45	106	1600	0.066 *	10	116	1600	0.073 *	0	116	1600	0.073 *
Wb Thru	50	1600	0.038	4	54	1600	0.041	2	52	0.040	15	67	1600	0.049	4	71	1600	0.052	0	71	1600	0.052
Wb Right	11	0	-	0	11	0	-	0	11	-	0	11	0	-	0	11	0	-	0	11	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.304				0.310			0.314				0.342				0.358				0.358
LOS			A				A			A				A				A				A

12:59 PM

** Key conflicting movement as a part of ICU*
1 Counts conducted by. NDS
2 Capacity expressed in veh/hour of green

LINSCOTT, LAW & GREENSPAN, ENGINEERS
20931 Burbank Boulevard, Suite C, Woodland Hills, CA 91367
(818) 835.8648 Fax (818) 835.8649

INTERSECTION CAPACITY UTILIZATION

Stuart Ranch Road-Webb Way @ Civic Center Way

N-S St: Stuart Ranch Road-Webb Way
E-W St: Civic Center Way
Project: La Paz Ranch/5-16-0246-1
File: ICU-8

Peak hr: PM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	421	0	0.263 *	0	421	0	0.263 *	17	438	0.274 *	0	438	0	0.274 *	0	438	0	0.274 *	0	438	0	0.274 *
Nb Thru	11	1600	0.270	0	11	1600	0.270	0	11	0.281	0	11	1600	0.281	0	11	1600	0.281	0	11	1600	0.281
Nb Right	80	1600	0.050	35	115	1600	0.072	3	83	0.052	150	233	1600	0.146	35	268	1600	0.168	0	268	1600	0.168
Sb Left	11	0	0.007	0	11	0	0.007	0	11	0.007	0	11	0	0.007	0	11	0	0.007	0	11	0	0.007
Sb Thru	47	1600	0.068 *	0	47	1600	0.068 *	2	49	0.070 *	0	49	1600	0.070 *	0	49	1600	0.070 *	0	49	1600	0.070 *
Sb Right	50	0	-	0	50	0	-	2	52	-	0	52	0	-	0	52	0	-	0	52	0	-
Eb Left	7	0	0.004	0	7	0	0.004	0	7	0.005	0	7	0	0.005	0	7	0	0.005	0	7	0	0.005
Eb Thru	83	1600	0.056	15	98	1600	0.066	3	86	0.059	50	136	1600	0.090 *	15	151	1600	0.099 *	0	151	1600	0.099 *
Eb Right	129	1600	0.081 *	0	129	1600	0.081 *	5	134	0.084 *	7	141	1600	0.088	0	141	1600	0.088	0	141	1600	0.088
Wb Left	89	1600	0.056 *	55	144	1600	0.090 *	4	93	0.058 *	129	222	1600	0.138 *	55	277	1600	0.173 *	0	277	1600	0.173 *
Wb Thru	175	1600	0.113	24	199	1600	0.128	7	182	0.118	40	222	1600	0.143	24	246	1600	0.158	0	246	1600	0.158
Wb Right	6	0	-	0	6	0	-	0	6	-	0	6	0	-	0	6	0	-	0	6	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.517				0.551			0.536				0.622				0.666				0.666
LOS			A				A			A				B				B				B

12:59 PM

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Project: La Paz Ranch/5-16-0246-1
File: ICU-8

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	179	0	0.112 *	0	179	0	0.112 *	7	186	0.116 *	0	186	0	0.116	0	186	0	0.116	0	186	0	0.116
Nb Thru	13	1600	0.120	0	13	1600	0.120	1	14	0.125	0	14	1600	0.125	0	14	1600	0.125	0	14	1600	0.125
Nb Right	137	1600	0.086	51	188	1600	0.118	5	142	0.089	189	331	1600	0.207 *	51	382	1600	0.239 *	0	382	1600	0.239 *
Sb Left	8	0	0.005	0	8	0	0.005	0	8	0.005	0	8	0	0.005 *	0	8	0	0.005 *	0	8	0	0.005 *
Sb Thru	24	1600	0.026 *	0	24	1600	0.026 *	1	25	0.027 *	0	25	1600	0.027	0	25	1600	0.027	0	25	1600	0.027
Sb Right	10	0	-	0	10	0	-	0	10	-	0	10	0	-	0	10	0	-	0	10	0	-
Eb Left	5	0	0.003	0	5	0	0.003	0	5	0.003	0	5	0	0.003	0	5	0	0.003	0	5	0	0.003
Eb Thru	160	1600	0.103 *	22	182	1600	0.117 *	6	166	0.107 *	67	233	1600	0.149 *	22	255	1600	0.163 *	0	255	1600	0.163 *
Eb Right	105	1600	0.066	0	105	1600	0.066	4	109	0.068	47	156	1600	0.098	0	156	1600	0.098	0	156	1600	0.098
Wb Left	119	1600	0.074 *	40	159	1600	0.099 *	5	124	0.077 *	144	268	1600	0.167 *	40	308	1600	0.192 *	0	308	1600	0.192 *
Wb Thru	108	1600	0.074	17	125	1600	0.084	4	112	0.077	49	161	1600	0.107	17	178	1600	0.118	0	178	1600	0.118
Wb Right	10	0	-	0	10	0	-	0	10	-	0	10	0	-	0	10	0	-	0	10	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.366				0.404			0.378				0.579				0.649				0.649
LOS			A				A			A				A				B				B

12:59 PM

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INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Civic Center Way

N-S St: Cross Creek Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-18-0246-1
File: ICU-9

Peak hr: AM
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	77	0	0.048 *	49	126	0	0.079 *	3	80	0.050 *	61	141	0	0.088 *	49	190	0	0.119 *	0	190	0	0.119 *
Nb Thru	49	1600	0.081	0	49	1600	0.111	2	51	0.084	21	72	1600	0.135	0	72	1600	0.166	0	72	1600	0.166
Nb Right	3	0	-	0	3	0	-	0	3	-	0	3	0	-	0	3	0	-	0	3	0	-
Sb Left	1	0	0.001	0	1	0	0.001	0	1	0.001	0	1	0	0.001	0	1	0	0.001	0	1	0	0.001
Sb Thru	52	1600	0.066 *	0	52	1600	0.066 *	2	54	0.069 *	12	66	1600	0.076 *	0	66	1600	0.076 *	0	66	1600	0.076 *
Sb Right	53	0	-	0	53	0	-	2	55	-	0	55	0	-	0	55	0	-	0	55	0	-
Eb Left	60	1600	0.038	0	60	1600	0.038	2	62	0.039	0	62	1600	0.039	0	62	1600	0.039	0	62	1600	0.039
Eb Thru	3	1600	0.053 *	0	3	1600	0.063 *	0	3	0.055 *	0	3	1600	0.075 *	0	3	1600	0.084 *	0	3	1600	0.084 *
Eb Right	82	0	-	15	97	0	-	3	85	-	31	116	0	-	15	131	0	-	0	131	0	-
Wb Left	0	0	0.000 *	0	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	1	1600	0.002	0	1	1600	0.002	0	1	0.002	0	1	1600	0.002	0	1	1600	0.002	0	1	1600	0.002
Wb Right	2	0	-	0	2	0	-	0	2	-	0	2	0	-	0	2	0	-	0	2	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.218				0.258			0.224				0.289				0.329				0.329
LOS			A				A			A				A				A				A

12:59 PM

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INTERSECTION CAPACITY UTILIZATION

Cross Creek Road @ Civic Center Way
Peak hr: PM
Annual Growth: 1.00%

N-S St: Cross Creek Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-18-0246-1
File: ICU-9

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH				2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C		Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio		Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	178	0	0.111 *	51	229	0	0.143 *	7	185	0.116 *		99	284	0	0.178 *	51	335	0	0.209 *	0	335	0	0.209 *
Nb Thru	29	1600	0.133	0	29	1600	0.164	1	30	0.138		31	61	1600	0.219	0	61	1600	0.251	0	61	1600	0.251
Nb Right	5	0	-	0	5	0	-	0	5	-		0	5	0	-	0	5	0	-	0	5	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0.000		0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	52	1600	0.074 *	0	52	1600	0.074 *	2	54	0.077 *		16	70	1600	0.088 *	0	70	1600	0.088 *	0	70	1600	0.088 *
Sb Right	67	0	-	0	67	0	-	3	70	-		1	71	0	-	0	71	0	-	0	71	0	-
Eb Left	34	1600	0.021	0	34	1600	0.021	1	35	0.022		1	36	1600	0.023	0	36	1600	0.023	0	36	1600	0.023
Eb Thru	2	1600	0.096 *	0	2	1600	0.145 *	0	2	0.099 *		0	2	1600	0.149 *	0	2	1600	0.198 *	0	2	1600	0.198 *
Eb Right	151	0	-	79	230	0	-	6	157	-		79	236	0	-	79	315	0	-	0	315	0	-
Wb Left	7	0	0.004 *	0	7	0	0.004 *	0	7	0.005 *		0	7	0	0.005 *	0	7	0	0.005 *	0	7	0	0.005 *
Wb Thru	5	1600	0.008	0	5	1600	0.008	0	5	0.008		0	5	1600	0.008	0	5	1600	0.008	0	5	1600	0.008
Wb Right	0	0	-	0	0	0	-	0	0	-		0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *					0.050 *				0.050 *				0.050 *
ICU			0.336				0.417			0.347					0.469				0.550				0.550
LOS			A				A			A					A				A				A

12:59 PM

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Cross Creek Road @ Civic Center Way

N-S St: Cross Creek Road
E-W St: Civic Center Way
Project: La Paz Ranch/5-18-0246-1
File: ICU-9

Peak hr: SAT
Annual Growth: 1.00%

Date: 04/25/2019
Date of Count: 2018
Projection Year: 2022

	2018 EXIST. TRAFFIC			2018 W/PROJECT SITE TRAFFIC				2022 W/AMBIENT GROWTH			2022 W/RELATED PROJECTS				2022 W/PROJECT SITE TRAFFIC				2022 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	214	0	0.134 *	73	287	0	0.179 *	9	223	0.139 *	128	351	0	0.219 *	73	424	0	0.265 *	0	424	0	0.265 *
Nb Thru	35	1600	0.164	0	35	1600	0.210	1	36	0.171	46	82	1600	0.280	0	82	1600	0.325	0	82	1600	0.325
Nb Right	14	0	-	0	14	0	-	1	15	-	0	15	0	-	0	15	0	-	0	15	0	-
Sb Left	0	0	0.000	0	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	39	1600	0.052 *	0	39	1600	0.052 *	2	41	0.054 *	23	64	1600	0.070 *	0	64	1600	0.070 *	0	64	1600	0.070 *
Sb Right	44	0	-	0	44	0	-	2	46	-	3	49	0	-	0	49	0	-	0	49	0	-
Eb Left	38	1600	0.024	0	38	1600	0.024	2	40	0.025	3	43	1600	0.027	0	43	1600	0.027	0	43	1600	0.027
Eb Thru	13	1600	0.161 *	0	13	1600	0.196 *	1	14	0.167 *	0	14	1600	0.224 *	0	14	1600	0.260 *	0	14	1600	0.260 *
Eb Right	244	0	-	57	301	0	-	10	254	-	91	345	0	-	57	402	0	-	0	402	0	-
Wb Left	5	0	0.003 *	0	5	0	0.003 *	0	5	0.003 *	0	5	0	0.003 *	0	5	0	0.003 *	0	5	0	0.003 *
Wb Thru	8	1600	0.009	0	8	1600	0.009	0	8	0.009	0	8	1600	0.009	0	8	1600	0.009	0	8	1600	0.009
Wb Right	1	0	-	0	1	0	-	0	1	-	0	1	0	-	0	1	0	-	0	1	0	-
Yellow Allowance:			0.050 *				0.050 *			0.050 *				0.050 *				0.050 *				0.050 *
ICU			0.399				0.481			0.413				0.566				0.648				0.648
LOS			A				A			A				A				B				B

12:59 PM

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2 Capacity expressed in veh/hour of green

APPENDIX F

HCM AND LEVELS OF SERVICE EXPLANATION
HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS
SCHOOL TIME CONDITIONS

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*8/15/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*14*	*95*	*123*	*57*	*59*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*297*	*39*	*109*	*6*	*2*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*109*	*123*	*57*	*65*	*336*	*109*	*19*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.3*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.6*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.10*	*0.11*	*0.05*	*0.06*	*0.30*	*0.10*	*0.02*	
hd, final value (s)	*6.05*	*5.28*	*6.62*	*6.05*	*5.92*	*4.78*	*5.78*	
x, final value	*0.18*	*0.18*	*0.10*	*0.11*	*0.55*	*0.14*	*0.03*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.7*	*3.0*	*4.3*	*3.7*	*3.6*	*2.5*	*3.5*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*359*	*373*	*307*	*315*	*586*	*359*	*269*	
Delay (s/veh)	*10.10*	*9.13*	*10.09*	*9.49*	*15.71*	*8.29*	*8.66*	
LOS	*B*	*A*	*B*	*A*	*C*	*A*	*A*	
Approach: Delay (s/veh)	*9.59*		*9.77*		*13.89*		*8.66*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*11.93*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/30/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*14*	*95*	*123*	*67*	*63*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*297*	*39*	*158*	*6*	*2*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*109*	*123*	*67*	*69*	*336*	*158*	*19*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.3*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.6*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.10*	*0.11*	*0.06*	*0.06*	*0.30*	*0.14*	*0.02*	
hd, final value (s)	*6.17*	*5.40*	*6.72*	*6.15*	*5.98*	*4.84*	*5.88*	
x, final value	*0.19*	*0.18*	*0.13*	*0.12*	*0.56*	*0.21*	*0.03*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.9*	*3.1*	*4.4*	*3.9*	*3.7*	*2.5*	*3.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*359*	*373*	*317*	*319*	*586*	*408*	*269*	
Delay (s/veh)	*10.28*	*9.31*	*10.38*	*9.68*	*15.97*	*8.84*	*8.76*	
LOS	*B*	*A*	*B*	*A*	*C*	*A*	*A*	
Approach: Delay (s/veh)	*9.77*		*10.02*		*13.69*		*8.76*	
LOS	*A*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*11.99*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/30/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*15*	*99*	*132*	*104*	*76*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*309*	*41*	*234*	*6*	*12*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*114*	*132*	*104*	*82*	*350*	*234*	*29*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.2*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.10*	*0.12*	*0.09*	*0.07*	*0.31*	*0.21*	*0.03*	
hd, final value (s)	*6.52*	*5.75*	*7.02*	*6.47*	*6.23*	*5.09*	*6.32*	
x, final value	*0.21*	*0.21*	*0.20*	*0.15*	*0.61*	*0.33*	*0.05*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.2*	*3.4*	*4.7*	*4.2*	*3.9*	*2.8*	*4.0*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*364*	*382*	*354*	*332*	*568*	*484*	*279*	
Delay (s/veh)	*10.91*	*9.98*	*11.50*	*10.28*	*18.02*	*10.28*	*9.36*	
LOS	*B*	*A*	*B*	*B*	*C*	*B*	*A*	
Approach: Delay (s/veh)	*10.41*		*10.96*		*14.92*		*9.36*	
LOS	*B*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*13.00*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/30/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*15*	*99*	*132*	*114*	*80*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*309*	*41*	*283*	*6*	*12*	*11*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*114*	*132*	*114*	*86*	*350*	*283*	*29*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.2*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.0*	*0.4*	*-0.7*	*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.10*	*0.12*	*0.10*	*0.08*	*0.31*	*0.25*	*0.03*	
hd, final value (s)	*6.65*	*5.88*	*7.13*	*6.57*	*6.29*	*5.15*	*6.43*	
x, final value	*0.21*	*0.22*	*0.23*	*0.16*	*0.61*	*0.40*	*0.05*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.4*	*3.6*	*4.8*	*4.3*	*4.0*	*2.8*	*4.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*364*	*382*	*364*	*336*	*563*	*533*	*279*	
Delay (s/veh)	*11.12*	*10.18*	*11.90*	*10.49*	*18.38*	*11.30*	*9.48*	
LOS	*B*	*B*	*B*	*B*	*C*	*B*	*A*	
Approach: Delay (s/veh)	*10.62*		*11.29*		*15.21*		*9.48*	
LOS	*B*		*B*		*C*		*A*	
Intersection Delay (s/veh)	*13.34*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*8/15/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*3*	*75*	*145*	*89*	*187*	*3*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*405*	*5*	*75*	*4*	*30*	*21*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*78*	*145*	*89*	*190*	*410*	*75*	*55*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.07*	*0.13*	*0.08*	*0.17*	*0.36*	*0.07*	*0.05*	
hd, final value (s)	*6.73*	*6.00*	*7.09*	*6.57*	*6.54*	*5.35*	*6.58*	
x, final value	*0.15*	*0.24*	*0.18*	*0.35*	*0.75*	*0.11*	*0.10*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.4*	*3.7*	*4.8*	*4.3*	*4.2*	*3.1*	*4.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*328*	*395*	*339*	*440*	*541*	*325*	*305*	
Delay (s/veh)	*10.58*	*10.61*	*11.29*	*12.72*	*25.96*	*8.72*	*10.02*	
LOS	*B*	*B*	*B*	*B*	*D*	*A*	*B*	
Approach: Delay (s/veh)	*10.60*		*12.26*		*23.30*		*10.02*	
LOS	*B*		*B*		*C*		*B*	
Intersection Delay (s/veh)	*16.92*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*3*	*90*	*145*	*144*	*211*	*3*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*405*	*5*	*110*	*4*	*30*	*21*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*93*	*145*	*144*	*214*	*410*	*110*	*55*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.08*	*0.13*	*0.13*	*0.19*	*0.36*	*0.10*	*0.05*	
hd, final value (s)	*7.01*	*6.28*	*7.26*	*6.74*	*6.83*	*5.64*	*6.94*	
x, final value	*0.18*	*0.25*	*0.29*	*0.40*	*0.78*	*0.17*	*0.11*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.7*	*4.0*	*5.0*	*4.4*	*4.5*	*3.3*	*4.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*343*	*395*	*394*	*464*	*519*	*360*	*305*	
Delay (s/veh)	*11.25*	*11.09*	*12.90*	*13.88*	*29.52*	*9.51*	*10.47*	
LOS	*B*	*B*	*B*	*B*	*D*	*A*	*B*	
Approach: Delay (s/veh)	*11.16*		*13.49*		*25.29*		*10.47*	
LOS	*B*		*B*		*D*		*B*	
Intersection Delay (s/veh)	*18.11*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/30/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*3*	*128*	*158*	*222*	*234*	*3*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*421*	*5*	*228*	*4*	*31*	*22*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*131*	*158*	*222*	*237*	*426*	*228*	*57*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.12*	*0.14*	*0.20*	*0.21*	*0.38*	*0.20*	*0.05*	
hd, final value (s)	*7.59*	*6.86*	*7.75*	*7.23*	*7.34*	*6.14*	*7.63*	
x, final value	*0.28*	*0.30*	*0.48*	*0.48*	*0.87*	*0.39*	*0.12*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*5.3*	*4.6*	*5.5*	*4.9*	*5.0*	*3.8*	*5.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*381*	*408*	*453*	*485*	*487*	*478*	*307*	
Delay (s/veh)	*13.15*	*12.49*	*17.34*	*16.33*	*41.59*	*12.69*	*11.37*	
LOS	*B*	*B*	*C*	*C*	*E*	*B*	*B*	
Approach: Delay (s/veh)	*12.79*		*16.82*		*31.51*		*11.37*	
LOS	*B*		*C*		*D*		*B*	
Intersection Delay (s/veh)	*22.40*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* | North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*3*	*143*	*158*	*277*	*258*	*3*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*421*	*5*	*263*	*4*	*31*	*22*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*146*	*158*	*277*	*261*	*426*	*263*	*57*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.13*	*0.14*	*0.25*	*0.23*	*0.38*	*0.23*	*0.05*	
hd, final value (s)	*7.86*	*7.13*	*7.91*	*7.39*	*7.60*	*6.40*	*7.95*	
x, final value	*0.32*	*0.31*	*0.61*	*0.54*	*0.90*	*0.47*	*0.13*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*5.6*	*4.8*	*5.6*	*5.1*	*5.3*	*4.1*	*5.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*396*	*408*	*448*	*478*	*471*	*513*	*307*	
Delay (s/veh)	*14.19*	*13.04*	*22.16*	*18.31*	*47.62*	*14.60*	*11.79*	
LOS	*B*	*B*	*C*	*C*	*E*	*B*	*B*	
Approach: Delay (s/veh)	*13.59*		*20.29*		*35.02*		*11.79*	
LOS	*B*		*C*		*E*		*B*	
Intersection Delay (s/veh)	*25.09*							
Intersection LOS	*D*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*8/15/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*6*	*99*	*106*	*101*	*114*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*215*	*17*	*97*	*2*	*20*	*3*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*105*	*106*	*101*	*120*	*232*	*97*	*25*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.1*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.09*	*0.09*	*0.09*	*0.11*	*0.21*	*0.09*	*0.02*	
hd, final value (s)	*5.85*	*5.12*	*6.29*	*5.75*	*6.13*	*4.96*	*6.04*	
x, final value	*0.17*	*0.15*	*0.18*	*0.19*	*0.39*	*0.13*	*0.04*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.6*	*2.8*	*4.0*	*3.4*	*3.8*	*2.7*	*3.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*355*	*356*	*351*	*370*	*482*	*347*	*275*	
Delay (s/veh)	*9.75*	*8.72*	*10.33*	*9.81*	*12.76*	*8.43*	*9.01*	
LOS	*A*	*A*	*B*	*A*	*B*	*A*	*A*	
Approach: Delay (s/veh)	*9.23*		*10.05*		*11.49*		*9.01*	
LOS	*A*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*10.40*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* | North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*6*	*121*	*106*	*141*	*131*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*215*	*17*	*148*	*2*	*20*	*3*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*127*	*106*	*141*	*137*	*232*	*148*	*25*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.1*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.11*	*0.09*	*0.13*	*0.12*	*0.21*	*0.13*	*0.02*	
hd, final value (s)	*6.09*	*5.36*	*6.48*	*5.95*	*6.36*	*5.20*	*6.36*	
x, final value	*0.21*	*0.16*	*0.25*	*0.23*	*0.41*	*0.21*	*0.04*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.8*	*3.1*	*4.2*	*3.6*	*4.1*	*2.9*	*4.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*377*	*356*	*391*	*387*	*482*	*398*	*275*	
Delay (s/veh)	*10.45*	*9.06*	*11.37*	*10.38*	*13.41*	*9.31*	*9.35*	
LOS	*B*	*A*	*B*	*B*	*B*	*A*	*A*	
Approach: Delay (s/veh)	*9.82*		*10.88*		*11.82*		*9.35*	
LOS	*A*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*10.96*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/30/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*6*	*170*	*157*	*249*	*168*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*224*	*18*	*290*	*2*	*21*	*3*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*176*	*157*	*249*	*174*	*242*	*290*	*26*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.1*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.16*	*0.14*	*0.22*	*0.15*	*0.22*	*0.26*	*0.02*	
hd, final value (s)	*6.88*	*6.15*	*7.19*	*6.66*	*7.10*	*5.94*	*7.41*	
x, final value	*0.34*	*0.27*	*0.50*	*0.32*	*0.48*	*0.48*	*0.05*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.6*	*3.9*	*4.9*	*4.4*	*4.8*	*3.6*	*5.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*426*	*407*	*488*	*424*	*492*	*540*	*276*	
Delay (s/veh)	*13.03*	*11.09*	*16.79*	*12.48*	*16.12*	*13.96*	*10.53*	
LOS	*B*	*B*	*C*	*B*	*C*	*B*	*B*	
Approach: Delay (s/veh)	*12.12*		*15.02*		*14.94*		*10.53*	
LOS	*B*		*C*		*B*		*B*	
Intersection Delay (s/veh)	*14.16*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* | North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*6*	*192*	*157*	*289*	*185*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*224*	*18*	*341*	*2*	*21*	*3*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*198*	*157*	*289*	*191*	*242*	*341*	*26*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.1*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.18*	*0.14*	*0.26*	*0.17*	*0.22*	*0.30*	*0.02*	
hd, final value (s)	*7.17*	*6.45*	*7.42*	*6.89*	*7.35*	*6.18*	*7.78*	
x, final value	*0.39*	*0.28*	*0.60*	*0.37*	*0.49*	*0.59*	*0.06*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.9*	*4.1*	*5.1*	*4.6*	*5.0*	*3.9*	*5.5*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*448*	*407*	*475*	*441*	*479*	*568*	*276*	
Delay (s/veh)	*14.47*	*11.65*	*20.49*	*13.52*	*17.00*	*17.23*	*10.94*	
LOS	*B*	*B*	*C*	*B*	*C*	*C*	*B*	
Approach: Delay (s/veh)	*13.22*		*17.71*		*17.13*		*10.94*	
LOS	*B*		*C*		*C*		*B*	
Intersection Delay (s/veh)	*16.25*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*48*	*3*	*80*	*1*	*1*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*95*	*53*	*1*	*0*	*50*	*54*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*48*	*83*	*2*		*149*		*104*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.5*		*0.6*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.04*	*0.07*	*0.00*		*0.13*		*0.09*	
hd, final value (s)	*5.58*	*4.40*	*4.84*		*4.45*		*4.07*	
x, final value	*0.07*	*0.10*	*0.00*		*0.18*		*0.12*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.3*	*2.1*	*2.8*		*2.5*		*2.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*298*	*333*	*252*		*399*		*354*	
Delay (s/veh)	*8.72*	*7.59*	*7.85*		*8.45*		*7.62*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.01*		*7.85*		*8.45*		*7.62*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.07*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*48*	*3*	*95*	*1*	*1*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*144*	*53*	*1*	*0*	*50*	*54*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*48*	*98*	*2*		*198*		*104*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.5*		*0.7*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.04*	*0.09*	*0.00*		*0.18*		*0.09*	
hd, final value (s)	*5.70*	*4.52*	*4.99*		*4.51*		*4.18*	
x, final value	*0.08*	*0.12*	*0.00*		*0.25*		*0.12*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.4*	*2.2*	*3.0*		*2.5*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*298*	*348*	*252*		*448*		*354*	
Delay (s/veh)	*8.87*	*7.85*	*8.01*		*9.00*		*7.75*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.19*		*8.01*		*9.00*		*7.75*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.44*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*50*	*3*	*114*	*1*	*1*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*160*	*76*	*1*	*0*	*64*	*56*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*50*	*117*	*2*		*237*		*120*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.5*		*0.7*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.04*	*0.10*	*0.00*		*0.21*		*0.11*	
hd, final value (s)	*5.84*	*4.65*	*5.18*		*4.58*		*4.32*	
x, final value	*0.08*	*0.15*	*0.00*		*0.30*		*0.14*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.5*	*2.4*	*3.2*		*2.6*		*2.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*300*	*367*	*252*		*487*		*370*	
Delay (s/veh)	*9.06*	*8.18*	*8.19*		*9.55*		*8.04*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.44*		*8.19*		*9.55*		*8.04*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.85*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*50*	*3*	*129*	*1*	*1*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*209*	*76*	*1*	*0*	*64*	*56*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*50*	*132*	*2*		*286*		*120*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.5*		*0.7*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.04*	*0.12*	*0.00*		*0.25*		*0.11*	
hd, final value (s)	*5.97*	*4.78*	*5.34*		*4.65*		*4.43*	
x, final value	*0.08*	*0.18*	*0.00*		*0.37*		*0.15*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.7*	*2.5*	*3.3*		*2.6*		*2.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*300*	*382*	*252*		*536*		*370*	
Delay (s/veh)	*9.21*	*8.49*	*8.36*		*10.34*		*8.19*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*8.69*		*8.36*		*10.34*		*8.19*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.39*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*29*	*0*	*134*	*4*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*171*	*37*	*4*	*0*	*51*	*42*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*29*	*134*	*9*		*212*		*93*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.12*	*0.01*		*0.19*		*0.08*	
hd, final value (s)	*5.73*	*4.52*	*5.02*		*4.56*		*4.29*	
x, final value	*0.05*	*0.17*	*0.01*		*0.27*		*0.11*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.4*	*2.2*	*3.0*		*2.6*		*2.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*279*	*384*	*259*		*462*		*343*	
Delay (s/veh)	*8.71*	*8.14*	*8.09*		*9.23*		*7.82*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.24*		*8.09*		*9.23*		*7.82*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.60*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*29*	*0*	*213*	*4*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*222*	*37*	*4*	*0*	*51*	*42*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*29*	*213*	*9*		*263*		*93*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.19*	*0.01*		*0.23*		*0.08*	
hd, final value (s)	*5.90*	*4.69*	*5.31*		*4.78*		*4.58*	
x, final value	*0.05*	*0.28*	*0.01*		*0.35*		*0.12*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.6*	*2.4*	*3.3*		*2.8*		*2.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*279*	*463*	*259*		*513*		*343*	
Delay (s/veh)	*8.89*	*9.18*	*8.38*		*10.33*		*8.19*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*9.14*		*8.38*		*10.33*		*8.19*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.50*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*31*	*0*	*218*	*4*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*277*	*69*	*4*	*0*	*69*	*45*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*31*	*218*	*9*		*350*		*114*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.19*	*0.01*		*0.31*		*0.10*	
hd, final value (s)	*6.19*	*4.97*	*5.66*		*4.86*		*4.79*	
x, final value	*0.05*	*0.30*	*0.01*		*0.47*		*0.15*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.9*	*2.7*	*3.7*		*2.9*		*2.8*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*281*	*468*	*259*		*600*		*364*	
Delay (s/veh)	*9.23*	*9.80*	*8.74*		*12.14*		*8.65*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*9.73*		*8.74*		*12.14*		*8.65*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*10.72*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*31*	*0*	*297*	*4*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*328*	*69*	*4*	*0*	*69*	*45*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*31*	*297*	*9*		*401*		*114*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.26*	*0.01*		*0.36*		*0.10*	
hd, final value (s)	*6.38*	*5.17*	*6.03*		*5.11*		*5.14*	
x, final value	*0.05*	*0.43*	*0.02*		*0.57*		*0.16*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.1*	*2.9*	*4.0*		*3.1*		*3.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*281*	*547*	*259*		*651*		*364*	
Delay (s/veh)	*9.45*	*11.66*	*9.12*		*14.66*		*9.14*	
LOS	*A*	*B*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*11.45*		*9.12*		*14.66*		*9.14*	
LOS	*B*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*12.63*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*26*	*2*	*168*	*7*	*2*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*165*	*23*	*9*	*0*	*32*	*31*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*26*	*170*	*9*		*197*		*63*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.8*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.2*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.02*	*0.15*	*0.01*		*0.18*		*0.06*	
hd, final value (s)	*5.63*	*4.44*	*5.02*		*4.59*		*4.32*	
x, final value	*0.04*	*0.21*	*0.01*		*0.25*		*0.08*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.3*	*2.1*	*3.0*		*2.6*		*2.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*276*	*420*	*259*		*447*		*313*	
Delay (s/veh)	*8.57*	*8.31*	*8.08*		*9.12*		*7.67*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.34*		*8.08*		*9.12*		*7.67*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.58*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*26*	*2*	*225*	*7*	*2*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*238*	*23*	*9*	*0*	*32*	*31*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*26*	*227*	*9*		*270*		*63*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.8*		*0.9*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.2*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.02*	*0.20*	*0.01*		*0.24*		*0.06*	
hd, final value (s)	*5.84*	*4.64*	*5.33*		*4.76*		*4.58*	
x, final value	*0.04*	*0.29*	*0.01*		*0.36*		*0.08*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.5*	*2.3*	*3.3*		*2.8*		*2.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*276*	*477*	*259*		*520*		*313*	
Delay (s/veh)	*8.80*	*9.25*	*8.40*		*10.39*		*7.98*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*9.21*		*8.40*		*10.39*		*7.98*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.60*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*30*	*2*	*266*	*7*	*2*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*300*	*70*	*9*	*0*	*56*	*35*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*30*	*268*	*9*		*379*		*91*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.8*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.2*		*0.1*		*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.24*	*0.01*		*0.34*		*0.08*	
hd, final value (s)	*6.24*	*5.03*	*5.86*		*4.96*		*4.99*	
x, final value	*0.05*	*0.37*	*0.01*		*0.52*		*0.13*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.9*	*2.7*	*3.9*		*3.0*		*3.0*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*280*	*518*	*259*		*629*		*341*	
Delay (s/veh)	*9.28*	*10.71*	*8.95*		*13.26*		*8.71*	
LOS	*A*	*B*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*10.57*		*8.95*		*13.26*		*8.71*	
LOS	*B*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*11.64*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*30*	*2*	*323*	*7*	*2*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*373*	*70*	*9*	*0*	*56*	*35*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*30*	*325*	*9*		*452*		*91*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.8*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.2*		*0.2*		*-0.2*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.29*	*0.01*		*0.40*		*0.08*	
hd, final value (s)	*6.49*	*5.28*	*6.27*		*5.17*		*5.34*	
x, final value	*0.05*	*0.48*	*0.02*		*0.65*		*0.13*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.2*	*3.0*	*4.3*		*3.2*		*3.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*280*	*575*	*259*		*679*		*341*	
Delay (s/veh)	*9.56*	*12.70*	*9.37*		*17.23*		*9.17*	
LOS	*A*	*B*	*A*		*C*		*A*	
Approach: Delay (s/veh)	*12.43*		*9.37*		*17.23*		*9.17*	
LOS	*B*		*A*		*C*		*A*	
Intersection Delay (s/veh)	*14.47*							
Intersection LOS	*B*							

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APPENDIX G

HCM AND LEVELS OF SERVICE EXPLANATION
HCM DATA WORKSHEETS – WEEKDAY AM AND PM PEAK HOURS
SUMMERTIME CONDITIONS

LEVEL OF SERVICE FOR UNSIGNALIZED INTERSECTIONS

In the *Highway Capacity Manual (HCM)*, published by the Transportation Research Board, 2000, level of service for unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, in the absence of incidents, control, traffic, or geometric delay. Only the portion of total delay attributed to the traffic control measures, either traffic signals or stop signs, is quantified. This delay is called *control delay*. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of Service criteria for unsignalized intersections are stated in terms of the average control delay per vehicle. The level of service is determined by the computed or measured control delay and is defined for each minor movement. Average control delay for any particular minor movement is a function of the service time for the approach and the degree of utilization. (Level of service is not defined for the intersection as a whole for two-way stop controlled intersections.)

Level of Service Criteria for TWSC/AWSC Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Level of Service (LOS) values are used to describe intersection operations with service levels varying from LOS A (free flow) to LOS F (jammed condition). The following descriptions summarize *HCM* criteria for each level of service:

LOS A describes operations with very low control delay, up to 10 seconds per vehicle.

LOS B describes operations with control delay greater than 10 and up to 15 seconds per vehicle.

LOS C describes operations with control delay greater than 15 and up to 25 seconds per vehicle.

LOS D describes operations with control delay greater than 25 and up to 35 seconds per vehicle.

LOS E describes operations with control delay greater than 35 and up to 50 seconds per vehicle.

LOS F describes operations with control delay in excess of 50 seconds per vehicle. For two-way stop controlled intersections, LOS F exists when there are insufficient gaps of suitable size to allow side-street demand to safely cross through a major-street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches.

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/31/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*16*	*76*	*39*	*59*	*50*	*11*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*195*	*57*	*103*	*3*	*14*	*5*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*92*	*39*	*59*	*61*	*252*	*103*	*22*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*	*0.0*	*1.0*	*0.0*	*0.8*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.2*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.08*	*0.03*	*0.05*	*0.05*	*0.22*	*0.09*	*0.02*	
hd, final value (s)	*5.74*	*4.95*	*6.16*	*5.53*	*5.59*	*4.50*	*5.50*	
x, final value	*0.15*	*0.05*	*0.10*	*0.09*	*0.39*	*0.13*	*0.03*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.4*	*2.6*	*3.9*	*3.2*	*3.3*	*2.2*	*3.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*342*	*289*	*309*	*311*	*502*	*353*	*272*	
Delay (s/veh)	*9.42*	*7.93*	*9.55*	*8.80*	*11.83*	*7.87*	*8.39*	
LOS	*A*	*A*	*A*	*A*	*B*	*A*	*A*	
Approach: Delay (s/veh)	*8.98*		*9.17*		*10.68*		*8.39*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.96*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/31/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*16*	*76*	*39*	*69*	*54*	*11*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*195*	*57*	*152*	*3*	*14*	*5*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*92*	*39*	*69*	*65*	*252*	*152*	*22*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*	*0.0*	*1.0*	*0.0*	*0.8*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.2*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.08*	*0.03*	*0.06*	*0.06*	*0.22*	*0.14*	*0.02*	
hd, final value (s)	*5.86*	*5.07*	*6.27*	*5.64*	*5.64*	*4.55*	*5.60*	
x, final value	*0.15*	*0.05*	*0.12*	*0.10*	*0.39*	*0.19*	*0.03*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.6*	*2.8*	*4.0*	*3.3*	*3.3*	*2.3*	*3.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*342*	*289*	*319*	*315*	*502*	*402*	*272*	
Delay (s/veh)	*9.59*	*8.07*	*9.82*	*8.98*	*11.97*	*8.34*	*8.50*	
LOS	*A*	*A*	*A*	*A*	*B*	*A*	*A*	
Approach: Delay (s/veh)	*9.14*		*9.41*		*10.60*		*8.50*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*10.03*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/31/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*17*	*79*	*45*	*106*	*67*	*11*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*203*	*59*	*228*	*3*	*15*	*5*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*96*	*45*	*106*	*78*	*262*	*228*	*23*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*	*0.0*	*1.0*	*0.0*	*0.8*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.09*	*0.04*	*0.09*	*0.07*	*0.23*	*0.20*	*0.02*	
hd, final value (s)	*6.17*	*5.37*	*6.51*	*5.90*	*5.84*	*4.75*	*5.90*	
x, final value	*0.16*	*0.07*	*0.19*	*0.13*	*0.43*	*0.30*	*0.04*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.9*	*3.1*	*4.2*	*3.6*	*3.5*	*2.5*	*3.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*346*	*295*	*356*	*328*	*512*	*478*	*273*	
Delay (s/veh)	*10.08*	*8.46*	*10.74*	*9.47*	*12.79*	*9.49*	*8.83*	
LOS	*B*	*A*	*B*	*A*	*B*	*A*	*A*	
Approach: Delay (s/veh)	*9.56*		*10.20*		*11.25*		*8.83*	
LOS	*A*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*10.67*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/31/2018*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*17*	*79*	*45*	*116*	*71*	*11*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*203*	*59*	*277*	*3*	*15*	*5*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*96*	*45*	*116*	*82*	*262*	*277*	*23*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.2*	*0.0*	*1.0*	*0.0*	*0.8*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.1*	*-0.7*	*0.5*	*-0.1*	*0.4*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.09*	*0.04*	*0.10*	*0.07*	*0.23*	*0.25*	*0.02*	
hd, final value (s)	*6.30*	*5.50*	*6.62*	*6.02*	*5.90*	*4.81*	*6.01*	
x, final value	*0.17*	*0.07*	*0.21*	*0.14*	*0.43*	*0.37*	*0.04*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.0*	*3.2*	*4.3*	*3.7*	*3.6*	*2.5*	*3.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*346*	*295*	*366*	*332*	*512*	*527*	*273*	
Delay (s/veh)	*10.27*	*8.61*	*11.10*	*9.67*	*12.96*	*10.31*	*8.95*	
LOS	*B*	*A*	*B*	*A*	*B*	*B*	*A*	
Approach: Delay (s/veh)	*9.74*		*10.51*		*11.60*		*8.95*	
LOS	*A*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*11.00*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*8/15/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*7*	*83*	*129*	*89*	*175*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*421*	*11*	*80*	*11*	*47*	*50*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*90*	*129*	*89*	*181*	*432*	*80*	*108*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.08*	*0.11*	*0.08*	*0.16*	*0.38*	*0.07*	*0.10*	
hd, final value (s)	*7.04*	*6.29*	*7.37*	*6.84*	*6.67*	*5.48*	*6.62*	
x, final value	*0.18*	*0.23*	*0.18*	*0.34*	*0.80*	*0.12*	*0.20*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.7*	*4.0*	*5.1*	*4.5*	*4.4*	*3.2*	*4.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*340*	*379*	*339*	*431*	*533*	*330*	*358*	
Delay (s/veh)	*11.24*	*10.81*	*11.71*	*13.09*	*30.95*	*8.94*	*10.96*	
LOS	*B*	*B*	*B*	*B*	*D*	*A*	*B*	
Approach: Delay (s/veh)	*10.99*		*12.64*		*27.52*		*10.96*	
LOS	*B*		*B*		*D*		*B*	
Intersection Delay (s/veh)	*19.02*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*7*	*98*	*129*	*144*	*199*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*421*	*11*	*115*	*11*	*47*	*50*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*105*	*129*	*144*	*205*	*432*	*115*	*108*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.1*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.09*	*0.11*	*0.13*	*0.18*	*0.38*	*0.10*	*0.10*	
hd, final value (s)	*7.35*	*6.60*	*7.57*	*7.04*	*6.99*	*5.80*	*7.01*	
x, final value	*0.21*	*0.24*	*0.30*	*0.40*	*0.84*	*0.19*	*0.21*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*5.0*	*4.3*	*5.3*	*4.7*	*4.7*	*3.5*	*4.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*355*	*379*	*394*	*455*	*510*	*365*	*358*	
Delay (s/veh)	*12.04*	*11.33*	*13.52*	*14.36*	*36.34*	*9.81*	*11.57*	
LOS	*B*	*B*	*B*	*B*	*E*	*A*	*B*	
Approach: Delay (s/veh)	*11.65*		*14.01*		*30.76*		*11.57*	
LOS	*B*		*B*		*D*		*B*	
Intersection Delay (s/veh)	*20.75*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/31/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*7*	*136*	*141*	*222*	*222*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*438*	*11*	*233*	*11*	*49*	*52*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*143*	*141*	*222*	*228*	*449*	*233*	*112*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.13*	*0.13*	*0.20*	*0.20*	*0.40*	*0.21*	*0.10*	
hd, final value (s)	*7.95*	*7.21*	*8.08*	*7.55*	*7.55*	*6.35*	*7.71*	
x, final value	*0.32*	*0.28*	*0.50*	*0.48*	*0.94*	*0.41*	*0.24*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*5.7*	*4.9*	*5.8*	*5.2*	*5.2*	*4.0*	*5.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*393*	*391*	*436*	*466*	*476*	*483*	*362*	
Delay (s/veh)	*14.28*	*12.72*	*18.54*	*16.97*	*55.05*	*13.41*	*12.83*	
LOS	*B*	*B*	*C*	*C*	*F*	*B*	*B*	
Approach: Delay (s/veh)	*13.50*		*17.74*		*40.82*		*12.83*	
LOS	*B*		*C*		*E*		*B*	
Intersection Delay (s/veh)	*26.90*							
Intersection LOS	*D*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*7*	*151*	*141*	*277*	*246*	*6*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*438*	*11*	*268*	*11*	*49*	*52*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*158*	*141*	*277*	*252*	*449*	*268*	*112*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*1.0*	*0.0*	*0.1*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.0*	*0.0*	*1.0*	*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.14*	*0.13*	*0.25*	*0.22*	*0.40*	*0.24*	*0.10*	
hd, final value (s)	*8.23*	*7.49*	*8.25*	*7.72*	*7.83*	*6.64*	*8.04*	
x, final value	*0.36*	*0.29*	*0.63*	*0.54*	*0.98*	*0.49*	*0.25*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*5.9*	*5.2*	*5.9*	*5.4*	*5.5*	*4.3*	*5.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*408*	*391*	*432*	*461*	*459*	*518*	*362*	
Delay (s/veh)	*15.52*	*13.27*	*24.20*	*19.12*	*64.29*	*15.64*	*13.41*	
LOS	*C*	*B*	*C*	*C*	*F*	*C*	*B*	
Approach: Delay (s/veh)	*14.46*		*21.78*		*46.10*		*13.41*	
LOS	*B*		*C*		*E*		*B*	
Intersection Delay (s/veh)	*30.42*							
Intersection LOS	*D*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*8/15/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*5*	*160*	*105*	*119*	*108*	*10*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*179*	*13*	*137*	*8*	*24*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*165*	*105*	*119*	*118*	*192*	*137*	*42*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.2*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.1*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.15*	*0.09*	*0.11*	*0.10*	*0.17*	*0.12*	*0.04*	
hd, final value (s)	*5.92*	*5.20*	*6.42*	*5.86*	*6.36*	*5.20*	*6.21*	
x, final value	*0.27*	*0.15*	*0.21*	*0.19*	*0.34*	*0.20*	*0.07*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.6*	*2.9*	*4.1*	*3.6*	*4.1*	*2.9*	*3.9*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*415*	*355*	*369*	*368*	*442*	*387*	*292*	
Delay (s/veh)	*10.81*	*8.83*	*10.85*	*9.95*	*12.30*	*9.17*	*9.39*	
LOS	*B*	*A*	*B*	*A*	*B*	*A*	*A*	
Approach: Delay (s/veh)	*10.04*		*10.40*		*11.00*		*9.39*	
LOS	*B*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*10.46*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*5*	*182*	*105*	*159*	*125*	*10*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*179*	*13*	*188*	*8*	*24*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*187*	*105*	*159*	*135*	*192*	*188*	*42*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.2*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.1*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.17*	*0.09*	*0.14*	*0.12*	*0.17*	*0.17*	*0.04*	
hd, final value (s)	*6.18*	*5.46*	*6.64*	*6.09*	*6.61*	*5.45*	*6.55*	
x, final value	*0.32*	*0.16*	*0.29*	*0.23*	*0.35*	*0.28*	*0.08*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*3.9*	*3.2*	*4.3*	*3.8*	*4.3*	*3.1*	*4.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*437*	*355*	*409*	*385*	*442*	*438*	*292*	
Delay (s/veh)	*11.78*	*9.20*	*12.08*	*10.58*	*12.88*	*10.30*	*9.79*	
LOS	*B*	*A*	*B*	*B*	*B*	*B*	*A*	
Approach: Delay (s/veh)	*10.85*		*11.39*		*11.60*		*9.79*	
LOS	*B*		*B*		*B*		*A*	
Intersection Delay (s/veh)	*11.25*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*10/31/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* | North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*5*	*233*	*156*	*268*	*161*	*10*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*186*	*14*	*331*	*8*	*25*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*238*	*156*	*268*	*171*	*200*	*331*	*43*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.2*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.21*	*0.14*	*0.24*	*0.15*	*0.18*	*0.29*	*0.04*	
hd, final value (s)	*7.05*	*6.32*	*7.42*	*6.87*	*7.39*	*6.22*	*7.67*	
x, final value	*0.47*	*0.27*	*0.55*	*0.33*	*0.41*	*0.57*	*0.09*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*4.7*	*4.0*	*5.1*	*4.6*	*5.1*	*3.9*	*5.4*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*488*	*406*	*473*	*421*	*450*	*562*	*293*	
Delay (s/veh)	*15.74*	*11.39*	*18.91*	*12.87*	*15.14*	*16.89*	*11.14*	
LOS	*C*	*B*	*C*	*B*	*C*	*C*	*B*	
Approach: Delay (s/veh)	*14.02*		*16.56*		*16.23*		*11.14*	
LOS	*B*		*C*		*C*		*B*	
Intersection Delay (s/veh)	*15.56*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*11/6/2018*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #8*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* | North/South Street: *Stuart Ranch Road-Webb Way*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*5*	*255*	*156*	*308*	*178*	*10*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*186*	*14*	*382*	*8*	*25*	*10*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*LT*	*R*	*L*	*TR*	*LT*	*R*	*LTR*	
PHF	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	
Flow Rate (veh/h)	*260*	*156*	*308*	*188*	*200*	*382*	*43*	
% Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
No. Lanes	*2*		*2*		*2*		*1*	
Geometry Group	*5*		*5*		*5*		*4b*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*0.0*	*0.0*	*1.0*	*0.0*	*0.9*	*0.0*	*0.2*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*	*0.1*	*0.0*	*1.0*	*0.2*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	
hLT-adj	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.7*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.0*	*-0.7*	*0.5*	*-0.0*	*0.5*	*-0.7*	*-0.1*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	*3.20*	
x, initial	*0.23*	*0.14*	*0.27*	*0.17*	*0.18*	*0.34*	*0.04*	
hd, final value (s)	*7.37*	*6.65*	*7.69*	*7.15*	*7.65*	*6.47*	*8.08*	
x, final value	*0.53*	*0.29*	*0.66*	*0.37*	*0.42*	*0.69*	*0.10*	
Move-up time, m (s)	*2.3*		*2.3*		*2.3*		*2.3*	
Service Time, t_s (s)	*5.1*	*4.3*	*5.4*	*4.8*	*5.3*	*4.2*	*5.8*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*475*	*406*	*460*	*438*	*450*	*545*	*293*	
Delay (s/veh)	*18.15*	*12.01*	*24.00*	*14.04*	*15.87*	*22.18*	*11.64*	
LOS	*C*	*B*	*C*	*B*	*C*	*C*	*B*	
Approach: Delay (s/veh)	*15.85*		*20.22*		*20.01*		*11.64*	
LOS	*C*		*C*		*C*		*B*	
Intersection Delay (s/veh)	*18.72*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*60*	*3*	*82*	*0*	*1*	*2*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*77*	*49*	*3*	*1*	*52*	*53*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*60*	*85*	*3*		*129*		*106*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.0*		*0.6*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.7*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*-0.4*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.05*	*0.08*	*0.00*		*0.11*		*0.09*	
hd, final value (s)	*5.54*	*4.36*	*4.31*		*4.47*		*4.10*	
x, final value	*0.09*	*0.10*	*0.00*		*0.16*		*0.12*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.2*	*2.1*	*2.3*		*2.5*		*2.1*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*310*	*335*	*253*		*379*		*356*	
Delay (s/veh)	*8.80*	*7.56*	*7.33*		*8.32*		*7.67*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.07*		*7.33*		*8.32*		*7.67*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.04*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*60*	*3*	*97*	*0*	*1*	*2*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*126*	*49*	*3*	*1*	*52*	*53*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*60*	*100*	*3*		*178*		*106*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.0*		*0.7*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.7*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*-0.4*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.05*	*0.09*	*0.00*		*0.16*		*0.09*	
hd, final value (s)	*5.66*	*4.48*	*4.47*		*4.54*		*4.20*	
x, final value	*0.09*	*0.12*	*0.00*		*0.22*		*0.12*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.4*	*2.2*	*2.5*		*2.5*		*2.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*310*	*350*	*253*		*428*		*356*	
Delay (s/veh)	*8.95*	*7.81*	*7.48*		*8.85*		*7.80*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.24*		*7.48*		*8.85*		*7.80*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.37*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*62*	*3*	*116*	*0*	*1*	*2*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*141*	*72*	*3*	*1*	*66*	*55*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*62*	*119*	*3*		*216*		*122*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.0*		*0.7*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.7*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*-0.4*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.06*	*0.11*	*0.00*		*0.19*		*0.11*	
hd, final value (s)	*5.80*	*4.61*	*4.64*		*4.61*		*4.34*	
x, final value	*0.10*	*0.15*	*0.00*		*0.28*		*0.15*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.5*	*2.3*	*2.6*		*2.6*		*2.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*312*	*369*	*253*		*466*		*372*	
Delay (s/veh)	*9.15*	*8.14*	*7.66*		*9.37*		*8.09*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.49*		*7.66*		*9.37*		*8.09*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.75*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday AM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*62*	*3*	*131*	*0*	*1*	*2*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*190*	*72*	*3*	*1*	*66*	*55*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*62*	*134*	*3*		*265*		*122*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.0*		*0.7*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.7*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*-0.4*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.06*	*0.12*	*0.00*		*0.24*		*0.11*	
hd, final value (s)	*5.93*	*4.74*	*4.81*		*4.68*		*4.45*	
x, final value	*0.10*	*0.18*	*0.00*		*0.34*		*0.15*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.6*	*2.4*	*2.8*		*2.7*		*2.5*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*312*	*384*	*253*		*515*		*372*	
Delay (s/veh)	*9.31*	*8.46*	*7.83*		*10.11*		*8.24*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*8.73*		*7.83*		*10.11*		*8.24*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.25*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*34*	*2*	*151*	*7*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*178*	*29*	*5*	*0*	*52*	*67*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*34*	*153*	*12*		*212*		*119*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.6*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.6*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.14*	*0.01*		*0.19*		*0.11*	
hd, final value (s)	*5.80*	*4.60*	*5.16*		*4.67*		*4.30*	
x, final value	*0.05*	*0.20*	*0.02*		*0.27*		*0.14*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.5*	*2.3*	*3.2*		*2.7*		*2.3*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*284*	*403*	*262*		*462*		*369*	
Delay (s/veh)	*8.84*	*8.42*	*8.25*		*9.43*		*8.01*	
LOS	*A*	*A*	*A*		*A*		*A*	
Approach: Delay (s/veh)	*8.50*		*8.25*		*9.43*		*8.01*	
LOS	*A*		*A*		*A*		*A*	
Intersection Delay (s/veh)	*8.76*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*34*	*2*	*230*	*7*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*229*	*29*	*5*	*0*	*52*	*67*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*34*	*232*	*12*		*263*		*119*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.6*		*0.9*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.6*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.21*	*0.01*		*0.23*		*0.11*	
hd, final value (s)	*5.98*	*4.77*	*5.46*		*4.90*		*4.60*	
x, final value	*0.06*	*0.31*	*0.02*		*0.36*		*0.15*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.7*	*2.5*	*3.5*		*2.9*		*2.6*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*284*	*482*	*262*		*513*		*369*	
Delay (s/veh)	*9.03*	*9.58*	*8.56*		*10.60*		*8.42*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*9.51*		*8.56*		*10.60*		*8.42*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.73*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*36*	*2*	*236*	*7*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*284*	*61*	*5*	*0*	*70*	*71*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*36*	*238*	*12*		*350*		*141*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.6*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.21*	*0.01*		*0.31*		*0.13*	
hd, final value (s)	*6.27*	*5.07*	*5.83*		*4.99*		*4.83*	
x, final value	*0.06*	*0.34*	*0.02*		*0.48*		*0.19*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.0*	*2.8*	*3.8*		*3.0*		*2.8*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*286*	*488*	*262*		*600*		*391*	
Delay (s/veh)	*9.39*	*10.30*	*8.95*		*12.59*		*8.95*	
LOS	*A*	*B*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*10.18*		*8.95*		*12.59*		*8.95*	
LOS	*B*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*11.02*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekday PM Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*36*	*2*	*315*	*7*	*5*	*0*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*335*	*61*	*5*	*0*	*70*	*71*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*36*	*317*	*12*		*401*		*141*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.6*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.0*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.1*		*0.2*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.28*	*0.01*		*0.36*		*0.13*	
hd, final value (s)	*6.48*	*5.27*	*6.22*		*5.25*		*5.20*	
x, final value	*0.06*	*0.46*	*0.02*		*0.58*		*0.20*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.2*	*3.0*	*4.2*		*3.3*		*3.2*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*286*	*567*	*262*		*651*		*391*	
Delay (s/veh)	*9.63*	*12.46*	*9.36*		*15.37*		*9.52*	
LOS	*A*	*B*	*A*		*C*		*A*	
Approach: Delay (s/veh)	*12.18*		*9.36*		*15.37*		*9.52*	
LOS	*B*		*A*		*C*		*A*	
Intersection Delay (s/veh)	*13.14*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*38*	*13*	*244*	*5*	*8*	*1*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*214*	*35*	*14*	*0*	*39*	*44*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*38*	*257*	*14*		*263*		*83*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*0.9*	*0.1*		*0.1*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.0*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.23*	*0.01*		*0.23*		*0.07*	
hd, final value (s)	*5.90*	*4.73*	*5.31*		*4.89*		*4.69*	
x, final value	*0.06*	*0.34*	*0.02*		*0.36*		*0.11*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.6*	*2.4*	*3.3*		*2.9*		*2.7*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*288*	*507*	*264*		*513*		*333*	
Delay (s/veh)	*8.99*	*9.82*	*8.43*		*10.58*		*8.26*	
LOS	*A*	*A*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*9.71*		*8.43*		*10.58*		*8.26*	
LOS	*A*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*9.85*							
Intersection LOS	*A*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2018 (Existing + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*38*	*13*	*301*	*5*	*8*	*1*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*287*	*35*	*14*	*0*	*39*	*44*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*38*	*314*	*14*		*336*		*83*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.9*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.1*		*0.0*		*0.5*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.0*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.03*	*0.28*	*0.01*		*0.30*		*0.07*	
hd, final value (s)	*6.14*	*4.95*	*5.68*		*5.08*		*5.00*	
x, final value	*0.06*	*0.43*	*0.02*		*0.47*		*0.12*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*3.8*	*2.7*	*3.7*		*3.1*		*3.0*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*288*	*564*	*264*		*586*		*333*	
Delay (s/veh)	*9.26*	*11.37*	*8.80*		*12.59*		*8.65*	
LOS	*A*	*B*	*A*		*B*		*A*	
Approach: Delay (s/veh)	*11.14*		*8.80*		*12.59*		*8.65*	
LOS	*B*		*A*		*B*		*A*	
Intersection Delay (s/veh)	*11.46*							
Intersection LOS	*B*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*43*	*14*	*345*	*5*	*8*	*1*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*351*	*82*	*15*	*0*	*64*	*49*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*43*	*359*	*14*		*448*		*113*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.1*		*0.0*		*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.0*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.04*	*0.32*	*0.01*		*0.40*		*0.10*	
hd, final value (s)	*6.59*	*5.40*	*6.34*		*5.35*		*5.50*	
x, final value	*0.08*	*0.54*	*0.02*		*0.67*		*0.17*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.3*	*3.1*	*4.3*		*3.3*		*3.5*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*293*	*609*	*264*		*656*		*363*	
Delay (s/veh)	*9.85*	*14.23*	*9.50*		*18.33*		*9.64*	
LOS	*A*	*B*	*A*		*C*		*A*	
Approach: Delay (s/veh)	*13.76*		*9.50*		*18.33*		*9.64*	
LOS	*B*		*A*		*C*		*A*	
Intersection Delay (s/veh)	*15.32*							
Intersection LOS	*C*							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	*JAS*
Agency/Co.	*LLG*
Date Performed	*5/13/2019*
Analysis Time Period	*Weekend Midday Peak Hour*

Site Information

Intersection	*Intersection #9*
Jurisdiction	*City of Malibu*
Analysis Year	*2022 (Future + Project)*

Project ID *La Paz Ranch - 5-16-0246-1*

East/West Street: *Civic Center Way* North/South Street: *Cross Creek Road*

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*43*	*14*	*402*	*5*	*8*	*1*
%Thrus Left Lane						

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume (veh/h)	*424*	*82*	*15*	*0*	*64*	*49*
%Thrus Left Lane						

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	*L*	*TR*	*LTR*		*LTR*		*LTR*	
PHF	*1.00*	*1.00*	*1.00*		*1.00*		*1.00*	
Flow Rate (veh/h)	*43*	*416*	*14*		*521*		*113*	
% Heavy Vehicles	*0*	*0*	*0*		*0*		*0*	
No. Lanes	*2*		*1*		*1*		*1*	
Geometry Group	*5*		*4a*		*2*		*2*	
Duration, T	*0.25*							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	*1.0*	*0.0*	*0.4*		*0.8*		*0.0*	
Prop. Right-Turns	*0.0*	*1.0*	*0.1*		*0.0*		*0.4*	
Prop. Heavy Vehicle	*0.0*	*0.0*	*0.0*		*0.0*		*0.0*	
hLT-adj	*0.5*	*0.5*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*	*0.2*
hRT-adj	*-0.7*	*-0.7*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*	*-0.6*
hHV-adj	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*	*1.7*
hadj, computed	*0.5*	*-0.7*	*0.0*		*0.1*		*-0.3*	

Departure Headway and Service Time

hd, initial value (s)	*3.20*	*3.20*	*3.20*		*3.20*		*3.20*	
x, initial	*0.04*	*0.37*	*0.01*		*0.46*		*0.10*	
hd, final value (s)	*6.88*	*5.68*	*6.84*		*5.59*		*5.91*	
x, final value	*0.08*	*0.66*	*0.03*		*0.81*		*0.19*	
Move-up time, m (s)	*2.3*		*2.0*		*2.0*		*2.0*	
Service Time, t_s (s)	*4.6*	*3.4*	*4.8*		*3.6*		*3.9*	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	*293*	*611*	*264*		*634*		*363*	
Delay (s/veh)	*10.19*	*18.57*	*10.03*		*27.91*		*10.26*	
LOS	*B*	*C*	*B*		*D*		*B*	
Approach: Delay (s/veh)	*17.79*		*10.03*		*27.91*		*10.26*	
LOS	*C*		*B*		*D*		*B*	
Intersection Delay (s/veh)	*21.68*							
Intersection LOS	*C*							

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APPENDIX H

UNSIGNALIZED INTERSECTION ANALYSIS SUPPLEMENTAL STUDY

LINSCOTT LAW & GREENSPAN
engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
20931 Burbank Boulevard
Suite C
Woodland Hills, CA 91367
818.835.8648 T
818.835.8649 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

October 22, 2019

LLG Reference: 5-16-0246-1

Subject: **La Paz Malibu: Supplemental Review of the Calculated Motorist Delay Values and Levels of Service at the Cross Creek Road / Civic Center Way Intersection, City of Malibu**

Overview of 2008 Approved Project and 2019 Project Modifications

I. In 2008, the City of Malibu approved the La Paz Ranch Project located at 23465 Civic Center Way in the City of Malibu (the "2008 Approved Project"). The 2008 Approved Project consists of 112,058 square feet of retail, restaurant, and office space comprised of 69,502 square feet of retail and restaurant and 42,556 square feet of office space. The 2008 Approved Project also included 20,000 square feet of municipal uses to be developed by the City.

II. In the process of preparing to develop the 2008 Approved Project, Malibu Development Company LLC ("MDC"), the owner of La Paz Ranch, identified improvements to the 2008 Approved Project (which seek to enhance the pedestrian experience, including an upgraded design, improved pedestrian walkways, plazas and courtyards, and better pedestrian access; provide improved vehicular access and parking that increases pedestrian and vehicular safety; and provide for a balanced mix of uses (the "2019 Project Modifications"). On September 26, 2017, MDC submitted applications for the 2019 Project Modifications.

III. The 2019 Project Modifications do not change the square footages approved by the City as part of the 2008 Approved Project. Accordingly, there is no change in the 2008 Approved Project-related traffic as a result of the Project Modifications.

Addendum Traffic Study for 2019 Project Modifications

IV. Linscott, Law & Greenspan, Engineers (LLG) prepared an addendum traffic study (the "Addendum Traffic Study") for the Project Modifications.

Philip M. Linscott, PE (1924-2000)
William A. Law, PE (1921-2018)
Jack M. Greenspan, PE (Ret.)
Paul W. Wilkinson, PE (Ret.)
John P. Keating, PE
David S. Shender, PE
John A. Boarman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE
Walter B. Musial, PE
An LG2WB Company Founded 1966

a. The Addendum Traffic Study was prepared in compliance with the current City of Malibu Traffic Impact Analysis Guidelines[1] (the "Guidelines").

b. Section 3.e.ii of the Guidelines state that Levels of Service at unsignalized intersections under all-way stop control (AWSC) shall be determined using the average intersection control delay as determined by the methodology provided in the *Highway Capacity Manual* (HCM).

c. While there is no change in the 2008 Approved Project-related traffic as a result of the 2019 Project Modifications, for informational purposes, the Addendum Traffic Study provides an update to the 2008 Approved Project to reflect current intersection traffic counts, updated information regarding related projects, and changes to the travel lane configurations, as well as use of the Guidelines, the current version of the *Trip Generation Manual*, and the current version of the HCM software.

Prior Traffic Study

V. A prior traffic study[2] ("Traffic Study") was prepared and incorporated into the Environmental Impact Report certified by the City for the Project. The Traffic Study evaluated a proposed development consisting of 130,935 square feet of retail, restaurant, and office space, comprised of 77,110 square feet of retail and restaurant and 53,825 square feet of office space (the "2005 Analyzed Project"). It is noted that 20,000 square feet of the analyzed 53,825 square feet of office space was assumed to be the municipal use developed by the City.

a. The current City's Guidelines had not been adopted when the Traffic Study was prepared.

b. The Traffic Study evaluated operations at the study intersections during the weekday AM, weekday PM, and Saturday MD peak hours based on traffic counts conducted in April and May 2003, which reflected school-time traffic conditions. The Traffic Study did not include summertime traffic counts or analyze the study intersections to reflect summertime conditions.

[1] *Traffic Impact Analysis Guidelines*, City of Malibu, August 2012.
[2] *Traffic and Circulation Study for the Malibu La Paz Project*, Kaku Associates, April 2005.

2008 Approved Project

VI. While slightly different than what was evaluated in the Traffic Study, the City of Malibu approved the 2008 Approved Project consisting of 132,058 square feet of retail, restaurant, and office space comprised of 69,502 square feet of retail and restaurant and 62,556 square feet of office space. The 62,556 square feet of office in the 2008 Approved Project included the 20,000 square feet of municipal uses to be developed by the City.

Unsignalized Intersection at Cross Creek Road / Civic Center Way

VII. While there is no change in the 2008 Approved Project-related traffic as a result of the Project Modifications, for informational purposes, the Addendum Traffic Study's evaluation of operations at the study intersections included analysis of the calculated average motorist delay and corresponding Levels of Service at the Cross Creek Cross Road / Civic Center Way intersection during the analyzed peak hours.

Traffic Study / 2005 Analyzed Project

VIII. The Cross Creek Road / Civic Center Way intersection was evaluated in the Traffic Study based on the roadway configurations that existed at the time the Traffic Study was prepared.

a. Continuous traffic movements were provided between the south leg of Cross Creek Road and west leg of Civic Center Way.

b. Southbound Cross Creek Road traffic approaching the intersection, as well as traffic from the commercial center on the east leg of the current intersection was required to stop.

c. The Traffic Study utilized the Intersection Capacity Utilization (ICU) method for purposes of determining changes in operation at the intersection and assessing the relative significance of the traffic impacts due to the 2005 Analyzed Project.

d. For informational purposes, the Traffic Study also provides average motorist delay as calculated at the intersection based on methodologies provided in the *Highway Capacity Manual* (HCM). As LLG does not have copies of the traffic analysis worksheets, it is estimated that the Traffic Study would have utilized the HCM2000 software for purposes of calculating intersection delay, as it was available at the time the Traffic Study was prepared.

IX. The following ***Table A*** provides Existing and Cumulative + Project delay and Level of Service for the Cross Creek Road / Civic Center Way intersection as reported in the Traffic Study.

TABLE A
TRAFFIC STUDY - 2005 ANALYZED PROJECT
DELAY AND LEVELS OF SERVICE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	CERTIFIED EIR [1] (SCHOOL-TIME COUNTS) ANALYZED PROJECT Delay [2]	LOS
Weekday AM	Existing	9.5	A
	Cumulative	--	--
	Cumulative + Project	18.0	C
	Delay Due to Project	--	--
Weekday PM	Existing	10.9	B
	Cumulative	--	--
	Cumulative + Project	39.8	E
	Delay Due to Project	--	--
Saturday MD	Existing	9.3	A
	Cumulative	--	--
	Cumulative + Project	22.3	C
	Delay Due to Project	--	--

[1] Certified EIR, Tables V.K-3 and V.K-4 (Existing) and Tables V.K-9 and V.K-10 (Cumulative + Project). Certified EIR does not provide delay values for Cumulative scenario, and therefore does not provide values for changes in intersection delay due to the Analyzed Project (53,825 s.f. of office and 77,110 s.f. of retail/restaurant).

[2] Average delay reported in seconds.

X. The Traffic Study did not provide delay and Level of Service values for the Cumulative condition and, accordingly, did not provide change in delay values due to the 2005 Analyzed Project.[3]

XI. For the Cross Creek Road / Civic Center Way intersection, the Certified EIR concluded that the 2005 Analyzed Project would cause a significant traffic impact during the weekday PM peak hour. This is because, per the ICU method, traffic from the 2005 Analyzed Project caused a change in the intersection volume-to-capacity (v/c) ratio increase by 0.020 or more, with the final v/c ratio at 0.800 or greater (i.e., LOS D, E or F).

XII. As noted in VIII.d. above, the delay values provided in the Traffic Study for the Cross Creek Road / Civic Center Way intersection were provided for information purposes only, and were not used for purposes of assessing the relative significance of the traffic impacts associated with the 2005 Analyzed Project.

2005 Analyzed Project with the Cumulative Condition and Change in Delay Values Incorporated

XIII. As noted above, the Traffic Study did not provide delay and Level of Service values for the Cumulative condition and, accordingly, did not provide change in delay values due to the 2005 Analyzed Project.

XIV. To provide the calculated changes in delay at the intersection due to the 2005 Analyzed Project, LLG modeled the traffic volume forecasts provided in the Traffic Study for the Cumulative and Cumulative + Project conditions.

a. LLG utilized the HCM2000 software in an attempt to replicate the traffic analysis methodology available at the time the Traffic Study was prepared. LLG also considered the travel lane configurations at the intersection provided at the time the Traffic Study was prepared.

b. The change in delay values due to the 2005 Analyzed Project as modeled by LLG were applied to the Cumulative + Project delay values reported in the Traffic Study. The resultant Cumulative delay values as calculated by LLG (which were not provided in the Traffic Study), are shown in the following ***Table B***.

[3] The Traffic Study did not evaluate an Existing + Project condition. The Addendum Traffic Study provides the Existing + Project analysis (in addition to the Cumulative + Project analysis) as required in the current Guidelines.

TABLE B
2005 ANALYZED PROJECT CALCULATED WITH DELAY
DELAY AND LEVELS OF SERVICE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	CERTIFIED EIR (SCHOOL-TIME COUNTS) WITH CALCULATED DELAY DUE TO ANALYZED PROJECT [1]	
		Delay [2]	LOS
Weekday AM	Existing	9.5	A
	Cumulative	14.38	B
	Cumulative + Project	18.0	C
	Delay Due to Project	3.62	--
Weekday PM	Existing	10.9	B
	Cumulative	27.03	D
	Cumulative + Project	39.8	E
	Delay Due to Project	12.77	--
Saturday MD	Existing	9.3	A
	Cumulative	17.49	C
	Cumulative + Project	22.3	C
	Delay Due to Project	4.81	--

[1] Intersection delay due to Analyzed Project calculated by LLG using Cumulative and Cumulative + Analyzed Project traffic volume data provided in Certified EIR (Figures V.K-4 and V.K-5 for Cumulative and Figures V.K-8 and V.K-9 for Cumulative + Project).

[2] Average delay reported in seconds.

LINSCOTT LAW & GREENSPAN engineers

2008 Approved Project

XV. As stated above, the 2008 Approved Project provides slightly different retail and restaurant, and office space square footage than the 2005 Analyzed Project in the Traffic Study. LLG modeled the 2008 Approved Project and the results of this analysis are provided in ***Table C*** below.

a. LLG estimated vehicle trip generation for the 2008 Approved Project during the peak hours.[4] The peak hour trips for the 2008 Approved Project were assigned to the Cross Creek Road / Civic Center Way intersection following the methodology provided in the Traffic Study for the 2005 Analyzed Project.

b. Similar to the analysis provided for the 2005 Analyzed Project in *Table B*, LLG modeled changes in delay values due to the 2008 Approved Project by comparing calculated Cumulative and Cumulative + 2008 Approved Project delay values during the three peak hours.

Addendum Traffic Study - 2019 Approved Project Update

XVI. For informational purposes, the Addendum Traffic Study provides an update to the 2008 Approved Project to reflect current intersection traffic counts, updated information regarding related projects, and changes to the travel lane configurations, as well as use of the Guidelines, the current version of the *Trip Generation Manual*, and the current version of the HCM software (the "2019 Approved Project Update"). In addition to a school-time update, the City required summertime analysis, which was not done as part of the Traffic Study.

XVII. The Cross Creek Road / Civic Center Way intersection was evaluated in the Addendum Traffic Study based on the roadway configurations which existed at the time the Addendum Traffic Study was prepared.

a. Unlike conditions when the Traffic Study was prepared, the configuration is now a more traditional four-way intersection, with each leg under stop sign control (i.e., all-way stop control).

[4] See Appendix B of the Addendum Traffic Study which provides a trip generation calculation for the 2008 Approved Project based on the methodology used in the Traffic Study for the 2005 Analyzed Project.

TABLE C
2008 APPROVED PROJECT CALCULATED WITH DELAY
DELAY AND LEVELS OF SERVICE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	CERTIFIED EIR (SCHOOL-TIME COUNTS) WITH CALCULATED DELAY DUE TO ANALYZED PROJECT [1]	
		Delay [2]	LOS
Weekday AM	Existing	9.5	A
	Cumulative	14.38	B
	Cumulative + Project	17.79	C
	Delay Due to Project	3.41	--
Weekday PM	Existing	10.9	B
	Cumulative	27.03	D
	Cumulative + Project	34.90	D
	Delay Due to Project	7.87	--
Saturday MD	Existing	9.3	A
	Cumulative	17.49	C
	Cumulative + Project	20.13	C
	Delay Due to Project	2.64	--

[1] Intersection delay due to Approved Project (62,556 s.f. of office and 69,502 s.f. of retail/restaurant) calculated by LLG based on Cumulative intersection delay provided in Table B, and determining added intersection delay caused by peak hour trips due to Approved Project at the Cross Creek Road / Civic Center Way intersection utilizing trip generation forecast and Project trip assignment methodolody provided in Certified EIR.

[2] Average delay reported in seconds.

b. Based on the requirements for analysis of stop-controlled intersections as provided in the Guidelines, the Addendum Traffic Study reports average motorist delay as calculated at the intersection based on more current HCS+ software used to replicate the methodologies provided in the HCM.

c. As the basis for determining significant impacts at unsignalized intersections per the Guidelines rely solely on the HCM methodology, the Cross Creek Road / Civic Center Way intersection was not evaluated under the ICU method in the Addendum Traffic Study.

XVIII. ***Table D*** shows the 2019 Approved Project Update for Existing, Cumulative, and Cumulative + Project delay values based on the school-time traffic counts.

XIX. ***Table E*** shows the 2019 Approved Project Update for Existing, Cumulative, and Cumulative + Project delay values based on the summertime traffic counts.

XX. The 2019 Approved Project Update in the Addendum Traffic Study concluded the intersection is calculated to operate at good Levels of Service (LOS A, B or C) based on the analysis using the summertime counts. However, traffic related to the 2019 Approved Project Update is calculated to cause a change in delay that exceeds 5 seconds during the Saturday MD peak hour (i.e., 6.36 seconds). Therefore, a finding of a significant impact is shown on *Table E* due to the change in delay.

TABLE D
2019 APPROVED PROJECT UPDATE
SCHOOL-TIME COUNTS
DELAY AND LEVELS OF SERVICE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	ADDENDUM TRAFFIC STUDY [1] (SCHOOL-TIME COUNTS) Delay [2]	LOS
Weekday AM	Existing	8.07	A
	Cumulative	8.85	A
	Cumulative + Project	9.39	A
	Delay Due to Project	0.54	--
Weekday PM	Existing	8.60	A
	Cumulative	10.72	B
	Cumulative + Project	12.63	B
	Delay Due to Project	1.91	--
Saturday MD	Existing	8.58	A
	Cumulative	11.64	B
	Cumulative + Project	14.47	B
	Delay Due to Project	2.83	--

[1] Addendum Traffic Impact Study, Table 9-1.
[2] Average delay reported in seconds.

TABLE E
2019 APPROVED PROJECT UPDATE
SUMMERTIME COUNTS
DELAY AND LEVELS OF SERVICE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	ADDENDUM TRAFFIC STUDY [1] (SUMMERTIME COUNTS) Delay [2]	LOS
Weekday AM	Existing	8.04	A
	Cumulative	8.75	A
	Cumulative + Project	9.25	A
	Delay Due to Project	0.50	--
Weekday PM	Existing	8.76	A
	Cumulative	11.02	B
	Cumulative + Project	13.14	B
	Delay Due to Project	2.12	--
Saturday MD	Existing	9.85	A
	Cumulative	15.32	C
	Cumulative + Project	21.68	C
	Delay Due to Project	6.36	--

[1] Addendum Traffic Impact Study, Table 9-2.
[2] Average delay reported in seconds.

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Comparison of 2005 Analyzed Project and the 2019 Approved Project Update

XXI. ***Table F*** provides a comparison between the 2005 Analyzed Project (*Table B***)** and the 2019 Approved Project Update (for school-time, *Table D*).

XXII. As shown in *Table F*, the relative comparison of the change in delay due to the 2019 Approved Project Update as compared to the 2005 Analyzed Project is as follows:

a. A reduction of 3.08 seconds in the weekday AM peak hour;
b. A reduction of 10.86 seconds in the weekday PM peak hour; and
c. A reduction of 1.98 seconds in the Saturday MD peak hour.

XXIII. ***Table G*** provides a comparison between the 2008 Approved Project (*Table C***)** and the 2019 Approved Project Update (for school-time, *Table D*).

TABLE F
DELAY COMPARISON: 2005 ANALYZED PROJECT AND 2019 APPROVED PROJECT UPDATE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	[A] CERTIFIED EIR (SCHOOL-TIME COUNTS) WITH CALCULATED DELAY DUE TO ANALYZED PROJECT [1]		[B] ADDENDUM TRAFFIC STUDY [2] (SCHOOL-TIME COUNTS)		CHANGE IN DELAY [B]-[A]
		Delay [3]	LOS	Delay [3]	LOS	
Weekday AM	Existing	9.5	A	8.07	A	--
	Cumulative	14.38	B	8.85	A	--
	Cumulative + Project	18.0	C	9.39	A	--
	Delay Due to Project	3.62	--	0.54	--	-3.08
Weekday PM	Existing	10.9	B	8.60	A	--
	Cumulative	27.03	D	10.72	B	--
	Cumulative + Project	39.8	E	12.63	B	--
	Delay Due to Project	12.77	--	1.91	--	-10.86
Saturday MD	Existing	9.3	A	8.58	A	--
	Cumulative	17.49	C	11.64	B	--
	Cumulative + Project	22.3	C	14.47	B	--
	Delay Due to Project	4.81	--	2.83	--	-1.98

[1] Intersection delay due to Analyzed Project calculated by LLG using Cumulative and Cumulative + Analyzed Project traffic volume data provided in Certified EIR (Figures V.K-4 and V.K-5 for Cumulative and Figures V.K-8 and V.K-9 for Cumulative + Project).
[2] Addendum Traffic Impact Study, Table 9-1.
[3] Average delay reported in seconds.

TABLE G
DELAY COMPARISON: 2008 APPROVED PROJECT AND 2019 APPROVED PROJECT UPDATE
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	[A] CERTIFIED EIR (SCHOOL-TIME COUNTS) WITH CALCULATED DELAY DUE TO APPROVED PROJECT [1]		[B] ADDENDUM TRAFFIC STUDY [2] (SCHOOL-TIME COUNTS)		CHANGE IN DELAY [B]-[A]
		Delay [3]	LOS	Delay [3]	LOS	
Weekday AM	Existing	9.5	A	8.07	A	--
	Cumulative	14.38	B	8.85	A	--
	Cumulative + Project	17.79	C	9.39	A	--
	Delay Due to Project	3.41	--	0.54	--	-2.87
Weekday PM	Existing	10.9	B	8.60	A	--
	Cumulative	27.03	D	10.72	B	--
	Cumulative + Project	34.90	D	12.63	B	--
	Delay Due to Project	7.87	--	1.91	--	-5.96
Saturday MD	Existing	9.3	A	8.58	A	--
	Cumulative	17.49	C	11.64	B	--
	Cumulative + Project	20.13	C	14.47	B	--
	Delay Due to Project	2.64	--	2.83	--	+0.19

[1] Intersection delay due to Approved Project (62,556 s.f. of office and 69,502 s.f. of retail/restaurant) calculated by LLG based on Cumulative intersection delay provided in Table B, and determining added intersection delay caused by peak hour trips due to Approved Project.
[2] Addendum Traffic Impact Study, Table 9-1.
[3] Average delay reported in seconds.

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I. As shown in *Table G*, the relative comparison of the change in delay due to the 2019 Approved Project Update as compared to the 2008 Approved Project is as follows:

a. A reduction of 2.87 seconds in the weekday AM peak hour;
b. A reduction of 5.96 seconds in the weekday PM peak hour; and
c. An increase of 0.19 second in the Saturday MD peak hour.

II. The Project Modifications do not change the square footages approved by the City as part of the 2008 Approved Project. Accordingly, there is no change in the 2008 Approved Project-related traffic as a result of the Project Modifications. As shown in *Tables F and G*, however, the LOS and delay does vary between the Traffic Study and Addendum Traffic Study and, the delay was decreased in all comparisons except for a slight increase of 0.19 second in the Saturday MD peak hour for the 2019 Project Modifications as compared to the 2008 Approved Project. The variations are likely due to several factors, including:

a. The slight change in square footage between the 2005 Analyzed Project and the 2008 Approved Project;

b. Updated intersection traffic counts (i.e., the Traffic Study utilized counts from 2003, while the Addendum Traffic Study utilized counts from 2018);

c. Updated information regarding related projects analyzed in the Traffic Study and Addendum Traffic Study;

d. The Traffic Study utilized the 6th Edition and the Addendum Traffic Study used the updated 10th Edition of the *Trip Generation Manual* for forecasting peak hour vehicle trips generated by the Project and related projects;

e. Changes to the travel lane configurations at the Cross Creek Road / Civic Center Way intersection; and

f. Use of current version of the HCM software to calculate intersection delay values.

III. The Traffic Study in the Certified EIR only evaluated traffic operations based on school-time traffic counts. However, a comparison of the delay values and Levels of Service related to the 2005 Analyzed Project (*Table B*) or the 2008 Approved Project (*Table C*) to the delay values and Levels of Service provided in the Addendum Traffic Study for the analysis based on summertime counts (*Table E*) was prepared by:

a. Comparing the school-time and summertime Existing and Cumulative baseline traffic volumes at the Cross Creek Road / Civic Center Way intersection as provided in the LLG Addendum Traffic Study and determining the relative differences in the turning movement data in each peak hour;

b. Applying the factored differences between the school-time and summertime volumes in the Addendum traffic study to the school-time traffic data provided in the Traffic Study for the Existing and Cumulative baseline conditions to derive estimated summertime peak hour volumes at the Cross Creek Road / Civic Center Way intersection;

c. Adding the peak hour traffic volumes forecast to be generated by the 2005 Analyzed Project and 2008 Approved Project to the derived summertime Cumulative baseline traffic volumes at the Cross Creek Road / Civic Center Way intersection to arrive at Cumulative + Project volumes for purposes of preparing the Level of Service calculations; and

d. Preparing Level of Service calculations for Existing, Cumulative, and Cumulative + Project conditions during the weekday AM, weekday PM, and Saturday MD peak hours for both the 2005 Analyzed Project and 2008 Approved Project using the *Highway Capacity Manual* software likely used in the Traffic Study and considering the geometric alignment of the Cross Creek Road / Civic Center Way intersection in effect at the time the Traffic Study was prepared.

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IV. The following tables related to the summertime analysis of the Cross Creek Road / Civic Center Way intersection:

a. ***Table H***: Provides the Existing and Cumulative baseline delay values and Levels of Service derived for summertime conditions if provided in the Traffic Study, as well as the resultant Cumulative + 2005 Analyzed Project results and changes in delay.

b. ***Table I***: Same as *Table H*, with the resultant Cumulative + 2008 Approved Project results and changes in delay.

c. ***Table J***: Compares the delay values and Levels of Service from *Table H* (2005 Analyzed Project) to those provided in the Addendum Traffic Study. Note the relative change in delay values for the 2019 Approved Project Update are less in all peak hours as compared to the calculated change in the delay for the 2005 Analyzed Project.

d. ***Table K***: Compares the delay values and Levels of Service from *Table I* (Approved Project) to those provided in the Addendum Traffic Study. Note the relative change in delay values for the 2019 Approved Project Update are less in all peak hours as compared to the calculated change in the delay for the 2008 Approved Project.

TABLE H
2005 ANALYZED PROJECT CALCULATED WITH DELAY
DELAY AND LEVELS OF SERVICE (SUMMERTIME)
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	CERTIFIED EIR (ESTIMATED SUMMERTIME COUNTS) WITH CALCULATED DELAY DUE TO ANALYZED PROJECT [1]	
		Delay [2]	LOS
Weekday AM	Existing	9.28	A
	Cumulative	12.48	B
	Cumulative + Project	15.07	C
	Delay Due to Project	2.59	--
Weekday PM	Existing	11.53	B
	Cumulative	22.35	C
	Cumulative + Project	41.90	E
	Delay Due to Project	19.55	--
Saturday MD	Existing	11.49	B
	Cumulative	20.24	C
	Cumulative + Project	31.97	D
	Delay Due to Project	11.73	--

[1] Intersection delay due to Analyzed Project calculated by LLG.
[2] Average delay reported in seconds.

TABLE I
2008 APPROVED PROJECT CALCULATED WITH DELAY
DELAY AND LEVELS OF SERVICE (SUMMERTIME)
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	CERTIFIED EIR (ESTIMATED SUMMERTIME COUNTS) WITH CALCULATED DELAY DUE TO APPROVED PROJECT [1]	
		Delay [2]	LOS
Weekday AM	Existing	9.28	A
	Cumulative	12.48	B
	Cumulative + Project	15.29	C
	Delay Due to Project	2.81	--
Weekday PM	Existing	11.53	B
	Cumulative	22.35	C
	Cumulative + Project	41.35	E
	Delay Due to Project	19.00	--
Saturday MD	Existing	11.49	B
	Cumulative	20.24	C
	Cumulative + Project	30.51	D
	Delay Due to Project	10.27	--

[1] Intersection delay due to Approved Project (62,556 s.f. of office and 69,502 s.f. of retail/restaurant) calculated by LLG.

[2] Average delay reported in seconds.

TABLE J
DELAY COMPARISON: 2005 ANALYZED PROJECT AND 2019 APPROVED PROJECT UPDATE (SUMMERTIME)
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	[A] CERTIFIED EIR (ESTIMATED SUMMERTIME COUNTS) WITH CALCULATED DELAY DUE TO ANALYZED PROJECT [1]		[B] ADDENDUM TRAFFIC STUDY [2] (SUMMERTIME COUNTS)		CHANGE IN DELAY [B]-[A]
		Delay [3]	LOS	Delay [3]	LOS	
Weekday AM	Existing	9.28	A	8.04	A	--
	Cumulative	12.48	B	8.75	A	--
	Cumulative + Project	15.07	C	9.25	A	--
	Delay Due to Project	2.59	--	0.50	--	-2.09
Weekday PM	Existing	11.53	B	8.76	A	--
	Cumulative	22.35	C	11.02	B	--
	Cumulative + Project	41.90	E	13.14	B	--
	Delay Due to Project	19.55	--	2.12	--	-17.43
Saturday MD	Existing	11.49	B	9.85	A	--
	Cumulative	20.24	C	15.32	C	--
	Cumulative + Project	31.97	D	21.68	C	--
	Delay Due to Project	11.73	--	6.36	--	-5.37

[1] Intersection delay due to Analyzed Project calculated by LLG.
[2] Addendum Traffic Impact Study, Table 9-2.
[3] Average delay reported in seconds.

TABLE K
DELAY COMPARISON: 2008 APPROVED PROJECT AND 2019 APPROVED PROJECT UPDATE (SUMMERTIME)
CROSS CREEK ROAD / CIVIC CENTER WAY

Peak Hour	Condition	[A] CERTIFIED EIR (ESTIMATED SUMMERTIME COUNTS) WITH CALCULATED DELAY DUE TO APPROVED PROJECT [1]		[B] ADDENDUM TRAFFIC STUDY [2] (SUMMERTIME COUNTS)		CHANGE IN DELAY [B]-[A]
		Delay [3]	LOS	Delay [3]	LOS	
Weekday AM	Existing	9.28	A	8.04	A	--
	Cumulative	12.48	B	8.75	A	--
	Cumulative + Project	15.29	C	9.25	A	--
	Delay Due to Project	2.81	--	0.50	--	-2.31
Weekday PM	Existing	11.53	B	8.76	A	--
	Cumulative	22.35	C	11.02	B	--
	Cumulative + Project	41.35	E	13.14	B	--
	Delay Due to Project	19.00	--	2.12	--	-16.88
Saturday MD	Existing	11.49	B	9.85	A	--
	Cumulative	20.24	C	15.32	C	--
	Cumulative + Project	30.51	D	21.68	C	--
	Delay Due to Project	10.27	--	6.36	--	-3.91

[1] Intersection delay due to Approved Project (62,556 s.f. of office and 69,502 s.f. of retail/restaurant) calculated by LLG.
[2] Addendum Traffic Impact Study, Table 9-2.
[3] Average delay reported in seconds.

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Summary and Conclusion

V. An Addendum Traffic Study was prepared for the Project Modifications. While the Project Modifications do not change the 2008 Approved Project square footage and, accordingly, there is no change in the 2008 Approved Project-related traffic as a result of the 2019 Project Modifications, for informational purposes, the Addendum Traffic Study evaluates 2019 Approved Project Update due to:

a. Changed environmental conditions (e.g., updated traffic counts, updated list of related projects, evaluation of current intersection configurations and controls, etc.); and

b. Current practices and standards for evaluating trip generation (changes to the ITE *Trip Generation Manual*), analyzing evaluating traffic operations (updates to the HCM methodologies and software), and use of the current Guidelines, including thresholds of significance.

VI. As would be expected, there are differences in terms of the findings with respect to motorist delay and Levels of Service at the Cross Creek Road / Civic Center Way intersection for Existing, Cumulative, and Cumulative + Project conditions during the weekday AM, weekday PM, and Saturday MD peak hours when comparing 2005 Analyzed Project, the 2008 Approved Project, and the 2019 Approved Project Update.

a. The Certified EIR concluded that a significant traffic impact would occur due to the 2005 Analyzed Project at Cross Creek Road/Civic Center Way intersection during the weekday PM peak hour based on school-time traffic counts.

b. The Addendum Traffic Study concludes that traffic impacts based on the 2019 Approved Project Update would be less than significant during all analyzed peak hours based on school-time traffic counts. However, a significant traffic impact due to the 2019 Approve Project Update is identified during the Saturday MD peak hour based on summertime traffic counts. Further, good Levels of Service (i.e. LOS C) are calculated for the intersection during the affected hour.

c. In all peak hours, the forecast delay at the intersection due to the 2019 Approved Project Update is less than the calculated delay associated with the 2005 Analyzed Project.

d. For the school-time analysis, in the weekday AM and PM peak hours, the forecast delay at the intersection due to the 2019 Approved Project Update is less than the calculated delay associated with the 2008 Approved Project. Only in the Saturday MD peak hour is the 2019 Approved Project Update estimated to result in a slightly greater delay (an increase of 0.19 seconds) than the 2008 Approved Project.

e. For the summertime analysis, the forecast delay at the intersection due to the 2019 Approved Project Update is less than the calculated delay associated with the 2008 Approved Project in the weekday AM, weekday PM, and Saturday MD peak hours.

APPENDIX I

MINI-ROUNDABOUT SUPPLEMENTAL STUDY

LINSCOTT LAW & GREENSPAN engineers

Engineers & Planners
Traffic
Transportation
Parking

Linscott, Law & Greenspan, Engineers
20931 Burbank Boulevard
Suite C
Woodland Hills, CA 91367
818.835.8648 T
818.835.8649 F
www.llgengineers.com

Pasadena
Irvine
San Diego
Woodland Hills

October 22, 2019

LLG Reference: 5-16-0246-1

Subject: **Malibu La Paz Ranch**
Feasibility Review of a Potential Mini-Roundabout at the Cross Creek Road/Civic Center Way Intersection

This memorandum has been prepared by Linscott, Law & Greenspan, Engineers (LLG) to provide a feasibility review of a potential mini-roundabout at the existing Cross Creek Road/Civic Center Way intersection in the City of Malibu. City staff requested the feasibility assessment in conjunction with its review of the Addendum Traffic Impact Study prepared by LLG for the La Paz Ranch Project (the "2019 Project Modifications) located at 23465 Civic Center Way (the "Project site").

Existing Intersection Configuration and Operations

Traffic movements at the Cross Creek Road/Civic Center Way intersection are currently controlled by all-way stop signs. It is noted that the easterly leg of the intersection is a driveway providing access to an existing commercial development (e.g., the Urban Outfitters building at 3806 Cross Creek Road). Crosswalks for pedestrians are provided on all four legs of the intersection. The crosswalks accommodate pedestrians walking between the commercial centers adjacent to the intersection, including the new Park at Cross Creek (Whole Foods) center.

Tables 9-1 and 9-2 in the Addendum Traffic Impact Study provide a summary of the calculated existing and forecast future[1] traffic operations at the Cross Creek Road/Civic Center Way intersection during weekday morning (AM), weekday afternoon (PM), and Saturday midday (MD) peak hours for both school time and summertime conditions, respectively. As shown in Tables 9-1 and 9-2, the intersection under the current all-way stop control is calculated to operate at the following Levels of Service (LOS) for existing and future conditions during school time and summertime conditions, respectively:

- School Time Conditions:
  - Weekday AM Peak Hour: LOS A existing and future
  - Weekday PM Peak Hour: LOS A existing, LOS B future
  - Saturday MD Peak Hour: LOS A existing, LOS B future

[1] Forecast future conditions include existing traffic, as well as additional traffic due to regional ambient growth, traffic due to known related projects (such as the Park at Cross Creek center), and forecast traffic due to the 2019 Project Modifications.

Philip M. Linscott, PE (1924-2000)
William A. Law, PE (1921-2018)
Jack M. Greenspan, PE (Ret.)
Paul W. Wilkinson, PE (Ret.)
John P. Keating, PE
David S. Shender, PE
John A. Boarman, PE
Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE
Walter B. Musial, PE
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- Summertime Conditions:
  - Weekday AM Peak Hour: LOS A existing and future
  - Weekday PM Peak Hour: LOS A existing, LOS B future
  - Saturday MD Peak Hour: LOS A existing, LOS C future

As noted above, the Cross Creek Road/Civic Center Way intersection is calculated to operate at very good service levels (LOS A and B) during all time periods under existing and future conditions, with LOS C operations forecast only during the summertime Saturday MD peak hour under future conditions.

Review of Potential Mini-Roundabout

As requested by City staff, a potential mini-roundabout was reviewed for installation at the Cross Creek Road/Civic Center Way intersection to replace the existing all-way stop control. Per direction from City staff, the mini-roundabout configuration was evaluated using a 90-foot diameter for the inscribed circle so as to accommodate turning movements by larger vehicles including trucks, as well as transit buses operated by Los Angeles County Metro.

The attached Exhibit C provides a conceptual plan of a mini-roundabout with the corresponding maneuvering by a WB-40 truck as requested by City staff. The plan provides the 90-foot diameter inscribed circle; a smaller mini-roundabout would likely not sufficiently accommodate the turning movements by large vehicles. Also attached is an LOS calculation worksheet produced by the SIDRA software as requested by City staff for the Saturday MD peak hour in the future summertime scenario. As shown in the worksheet, the roundabout would provide LOS B conditions in this scenario, as compared to LOS C shown in the Addendum Traffic Impact Study for the Cross Creek Road/Civic Center Way intersection.

Briefly, it is concluded that while the mini-roundabout could be constructed at the Cross Creek Road/Civic Center Way intersection, it is not considered feasible due to the street improvements that require taking of private property, including demolition of an existing building. In addition, since the mini-roundabout would also require the removal of landscape/hardscape improvements, as well as street parking spaces within the right-of-way, it would also be considered not desirable due to the adverse effects to pedestrians and parking availability. Removal of such improvements would also eliminate the positive vehicle traffic calming aspects and pedestrian connectivity associated with the existing pedestrian and street parking features at the Cross Creek Road/Civic Center Way intersection.

Additional details are provided below:

- Impacts to Existing Buildings. As shown on Exhibit C, the construction of a mini-roundabout and associated improvements to the intersection approaches would require the demolition of the Urban Outfitters building located at the southeast corner of the Cross Creek Road/Civic Center Way intersection.

- Potential Need for Private Right-of-Way. As shown on Exhibit C, the construction of a mini-roundabout and associated improvements to the intersection approaches would likely require the acquisition of existing private right-of-way on both the east and west sides of Cross Creek Road north of Civic Center Way.

- Impacts to Existing Street Parking. As shown on Exhibit C, the construction of a mini-roundabout and associated improvements to the intersection approaches would require the removal of existing street parking spaces on the south leg of Cross Creek Road and west leg of Civic Center Way. LLG estimates that up to 36 existing street parking spaces may be impacted as follows:

    - South Leg (Cross Creek Road).
        - 13 spaces west side
        - 6 spaces east side

    - West Leg (Civic Center Way)
        - 5 spaces north side
        - 12 spaces south side (2 of which are designated for commercial loading)

- Removal of Existing Landscape and other Hardscape Improvements. As shown on Exhibit C, the construction of a mini-roundabout and associated improvements to the intersection approaches will require the removal of significant portions of existing landscape and other hardscape improvements. It is reasonable to assume these landscape and hardscape improvements were previously installed by the City to promote vehicle traffic calming and facilitate pedestrian movements. The removal of the landscape and hardscape improvements in conjunction with a mini-roundabout would eliminate these traffic calming features and cause a relatively adverse pedestrian environment.

- Pedestrian Safety Concerns. The construction of a mini-roundabout and associated improvements would cause the following adverse impacts related to pedestrian safety:

- The existing commercial developments at the intersection are designed to facilitate pedestrians at the current corners of the intersection. This includes the recently developed Park at Cross Creek center, which specifically designed its pedestrian path to the northwest corner of the intersection to align with the existing crosswalks, creating the shortest (and safest) routing for pedestrians.

- A mini-roundabout would cause the relocation of the existing crosswalks approximately 40 feet away from their current location. The relocation of the crosswalks in conjunction with a mini-roundabout would result in confusion to pedestrians, as well as potential jaywalking through a mini-roundabout as pedestrians seek the shortest path between the commercial centers when walking across Civic Center Way and/or Cross Creek Road.

- Under a mini-roundabout operation, vehicles are only required to stop prior to traversing a crosswalk if there is a pedestrian crossing the street (thereby creating a potential safety issue if a motorist enters and travels through the mini-roundabout, but does not see a crossing pedestrian). By contrast, all vehicles are currently required to stop at the all-way stop intersection, whether pedestrians are present or not.

- As vehicles entering and traveling through a mini-roundabout are required to stop for pedestrians, any traffic flow benefits as compared to an all-way stop intersection (where all vehicles are required to stop) are negated.

In summary, in consideration of the existing and forecast future excellent Levels of Service at the Cross Creek Road/Civic Center Way intersection in all peak hours (with moderate LOS C conditions forecast for the future Saturday MD peak hour in summertime conditions) under the current all-way stop control operation, a mini-roundabout is not recommended for implementation due to the need to obtain and demolish an existing commercial building adjacent to the intersection, the potential need to obtain private right-of-way, impacts to existing street parking, removal of existing landscape and other hardscape improvements, and adverse impacts to pedestrian safety and mobility.

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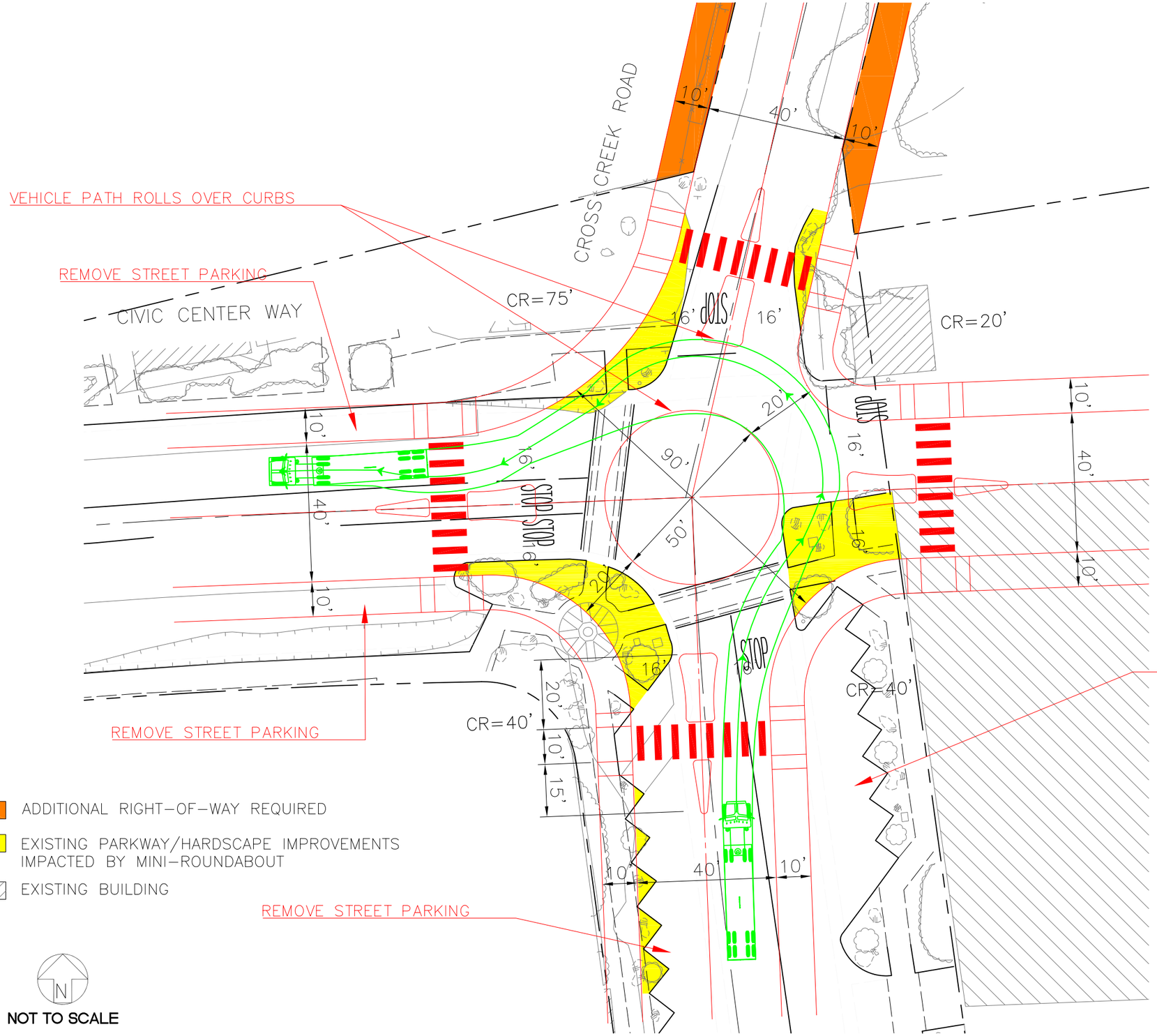

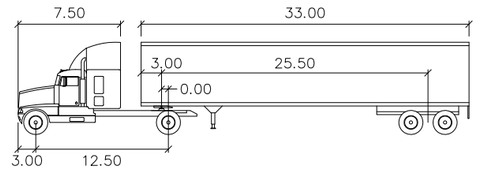

WB–40

	feet		
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.00	Steering Angle	: 20.3
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.00		

ADDITIONAL RIGHT–OF–WAY REQUIRED

EXISTING PARKWAY/HARDSCAPE IMPROVEMENTS IMPACTED BY MINI–ROUNDABOUT

EXISTING BUILDING

LINSCOTT LAW & GREENSPAN engineers

N

NOT TO SCALE

EXHIBIT C
WB–40 TRUCK
MINI–ROUNDABOUT MANEUVER

CROSS CREEK ROAD / CIVIC CENTER WAY

LA PAZ RANCH PROJECT

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MOVEMENT SUMMARY

Site: 101 [Cross Creek Rd / Civic Center Way]

Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Cross Creek Rd											
3	L2	461	3.0	0.586	11.8	LOS B	4.9	125.7	0.41	0.21	29.2
8	T1	89	3.0	0.586	11.8	LOS B	4.9	125.7	0.41	0.21	29.4
18	R2	16	3.0	0.586	11.8	LOS B	4.9	125.7	0.41	0.21	28.9
Approach		566	3.0	0.586	11.8	LOS B	4.9	125.7	0.41	0.21	29.2
East: Civic Center Way											
1	L2	5	3.0	0.033	8.4	LOS A	0.1	3.1	0.61	0.54	31.3
6	T1	9	3.0	0.033	8.4	LOS A	0.1	3.1	0.61	0.54	31.5
16	R2	1	3.0	0.033	8.4	LOS A	0.1	3.1	0.61	0.54	30.9
Approach		15	3.0	0.033	8.4	LOS A	0.1	3.1	0.61	0.54	31.4
North: Cross Creek Rd											
7	L2	1	3.0	0.219	9.2	LOS A	0.9	23.3	0.61	0.61	31.5
4	T1	70	3.0	0.219	9.2	LOS A	0.9	23.3	0.61	0.61	31.7
14	R2	53	3.0	0.219	9.2	LOS A	0.9	23.3	0.61	0.61	31.1
Approach		124	3.0	0.219	9.2	LOS A	0.9	23.3	0.61	0.61	31.4
West: Civic Center Way											
5	L2	47	3.0	0.525	10.5	LOS B	3.9	99.5	0.40	0.22	30.8
2	T1	15	3.0	0.525	10.5	LOS B	3.9	99.5	0.40	0.22	31.0
12	R2	437	3.0	0.525	10.5	LOS B	3.9	99.5	0.40	0.22	30.4
Approach		499	3.0	0.525	10.5	LOS B	3.9	99.5	0.40	0.22	30.5
All Vehicles		1204	3.0	0.586	11.0	LOS B	4.9	125.7	0.43	0.26	30.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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APPENDIX C

Air Quality and Greenhouse Gas Analysis

MEMORANDUM

TO: Mary Wright, AICP

FROM: Mark Hagmann, P.E.

SUBJECT: Air Quality and Greenhouse Gas Analysis in Support of an Addendum to the La Paz Ranch Revised Final Environmental Impact Report

DATE: May 16, 2019

In 2016, Malibu Development Company LLC ("MDC") acquired the property located at 23465 Civic Center Way in the City of Malibu (the "Property"). In 2008, the City of Malibu approved the La Paz project (the "Approved Project") at the Property.[1] In the process of preparing to develop the Approved Project, MDC identified improvements to the Approved Project (the "Project Modifications"). This memorandum provides analysis of potential air quality and greenhouse gas impacts associated with the proposed modifications to the Approved Project.

Project Description

Project Location

The Project Site is located in Malibu's Civic Center Area, the principal commercial area in the City where the general public and residents visit. The Civic Center Area includes retail shops, restaurants, coffee shops, and other commercial uses. The Project Site is surrounded by a largely undeveloped hillside to the north-northwest, two single-family residences to the northeast, vacant land to the east (currently being developed with the Whole Foods in the Park project), Civic Center Way to the south, and the Los Angeles County–Malibu Civic Center property to the west (proposed to be developed with the Santa Monica College Malibu Campus project). Further to the east across Cross Creek Road are residential, industrial, and commercial uses and the Malibu Legacy Park site.

Approved Project

The Approved Project consists of re-dividing the Property's two existing parcels into three parcels in order to accommodate the conveyance of a 2.3-acre area of the site

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[1] *Revised Final EIR for the La Paz Development Agreement (SCH No. 2003011131), July 2008, www.malibucity.org/376/La-Paz-Ranch-Project.*

2121 Rosecrans Avenue, Suite 3355, El Segundo, CA 90245-4744
Phone (424) 207-5333 • Fax (424) 207-5349

(Parcel C) to the City. The Approved Project provides for 20,000 square feet of municipal uses to be developed on Parcel C. The remaining two parcels (Parcels A and B), or 12.9 acres of the Property, are approved to be developed with 112,058 square feet of retail, restaurant, and office space.

Modified Project

In the process of preparing to develop the Approved Project, MDC identified improvements to the Approved Project ("Modified Project"). The Modified Project proposes to enhance the pedestrian experience and includes an upgraded design; improved pedestrian walkways, plazas, and courtyards; better pedestrian access; improved vehicular access and parking that increases pedestrian and vehicular safety; a balanced mix of uses; and local serving dining options by converting 10,000 square feet of approved retail uses to restaurant uses. The Modified Project does not include any changes to the total square footage or maximum building heights proposed under the Approved Project and would maintain compliance with all setbacks, landscaping, and open space requirements. The Modified Project would commence in 2019 with opening in Spring 2021.

Comparative Analysis of Modified Project

The analyses provided below address potential impacts related to air quality and greenhouse gas emissions from the Modified Project, as compared to the Certified Revised Final Environmental Impact Report for the Approved Project ("Revised Final EIR"). The analysis considers whether the Modified Project results in any air quality or greenhouse gas emissions beyond what was already analyzed in the Revised Final EIR and, if so, whether the incremental increase in emissions is significant. Based on the analyses below, the Modified Project would not result in any new significant air quality and greenhouse gas impacts or substantially increase in the severity of any previously identified significant impacts in the Revised Final EIR.

Subsequent to preparation of the Draft Environmental Impact Report for the Approved Project ("Draft EIR"), localized significance thresholds ("LSTs") were developed by SCAQMD. The LST methodology was approved by SCAQMD in February 2005. On October 6, 2006, the SCAQMD also adopted a methodology to calculate $PM_{2.5}$ emissions and provided $PM_{2.5}$ significance thresholds.[2] In addition, subsequent to certification of the

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[2] *SCAQMD, Final—Methodology to Calculate Particulate Matter (P.M.) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.*

Revised Final EIR, the SCAQMD now recommends use of the California Emissions Estimator Model ("CalEEMod") instead of the previously SCAQMD recommended Urban Emissions Model ("URBEMIS"), which was used for analyzing air quality impacts for the Approved Project. Although these methodological changes are not Project modification, for informational purposes, additional analysis accounting for these methodology changes is provided below.

Air Quality

Approved Project Impacts

Construction

Construction of the Approved Project would generate pollutant emissions from the following activities: (1) grading and excavation; (2) construction workers traveling to and from Project Site; (3) delivery and hauling of construction supplies and debris to and from the Project Site; (4) the fuel combustion by on-site construction equipment; and (5) architectural coating. These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. As shown in Table IV.B-6 of the Revised Final EIR, the estimated daily emissions from construction would not exceed any of the South Coast Air Quality Management District ("SCAQMD") regional air pollutant emissions thresholds. Therefore, project-level and cumulative regional construction-related air quality impacts were concluded to be less than significant.

Operation

Motor vehicles would be the predominant source of long-term emissions for the Approved Project. According to the Approved Project Traffic Study (see Table V.K-8 on page V.K-16 of Section V.K, Transportation and Circulation, of the Revised Final EIR), the Approved Project would generate an additional 2,863 daily vehicle weekday and 2,241 daily vehicle trips during the weekend.[3] As shown in Table IV.B-8, of the Revised Final EIR, the estimated daily emissions from operation would not exceed any of the SCAQMD regional air pollutant emissions thresholds. Therefore, project-level and cumulative regional operational-related air quality impacts were concluded to be less than significant. Localized carbon

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[3] *Trip generation estimates were prepared using rates and equations contained in Institute of Transportation Engineers' Trip Generation, 6th Edition (ITE 6th Edition).*

monoxide (CO) impacts at the study intersections were also concluded to be less than significant.

The Approved Project was concluded to be substantially consistent with the underlying zoning and General Plan designations for the Project Site and would not exacerbate any existing violations of the State one- and eight-hour CO concentration standards. Therefore, the Approved Project was determined to be consistent with the AQMP and impacts would be less than significant.

Modified Project Impacts

Construction

The Modified Project would not include any changes to the total square footage of the Approved Project. Furthermore, construction activities (e.g., approximate number of construction workers, heavy-duty construction equipment, and deliveries) would not change based on the Project Modifications. As such, there are no anticipated incremental increases in construction emissions under the Modified Project and impacts would remain less than significant.

SCAQMD developed localized significance thresholds ("LSTs") and approved the LST methodology in February 2005. On October 6, 2006, the SCAQMD also adopted a methodology to calculate $PM_{2.5}$ emissions and provided $PM_{2.5}$ significance thresholds.[4] Although the Modified Project does not result in an increase in the intensity of proposed construction activities under the Approved Project and localized emissions would not incrementally change under the Modified Project, an evaluation of the Modified Project's localized air quality impacts is provided below for informational purposes.

When quantifying emissions for localized analysis, only emissions that occur on-site are considered. Consistent with the SCAQMD LST methodology guidelines[5], emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. While the Project Site exceeds 5 acres, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed

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[4] *SCAQMD, Final—Methodology to Calculate Particulate Matter (P.M.) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.*

[5] *SCAQMD, Final Localized Significance Threshold Methodology, revised July 2008.*

analysis.[6] This approach is conservative as it assumes that all on-site emissions would occur within a 5-acre area and would over predict potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If the project exceeds the LST look-up values, then the SCAQMD recommends that project specific air quality modeling must be performed.

With respect to construction air toxics, diesel particulate emissions represent the greatest potential for toxic air contaminant (TAC) emissions. The Modified Project does not result in an increase in the intensity of proposed construction activities under the Approved Project and release of TAC emissions would not incrementally change under the Modified Project. As with the Approved Project, construction of the Modified Project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions. Construction-related toxic emission impacts during construction of the Modified Project would be less than significant.

Operation

Similar to the Approved Project, air pollutant emissions associated with occupancy and operation of the Modified Project would primarily be generated by the operation of on-road vehicles. As discussed above, the daily trip generation rate used in the Revised Final EIR were calculated based on ITE's 6th Edition. As such, retail uses were analyzed as "specialty retail". Based on the City's direction, the analysis for the Modified Project includes the trip generation rates from the most recent version of ITE (ITE's 10th Edition) and are provided in Attachment A of this memorandum.[7] The "specialty retail" land use is no longer provided in ITE's 10th Edition. The applicable land use category in ITE's 10th Edition is "shopping center" and would include both retail and restaurant uses under this category. Therefore, the Modified Project impacts were calculated using the updated daily trips (ITE's 10th Edition) and re-evaluted using the SCAQMD's recommended CalEEMod model. The regional pollutant emissions from the Approved Project, provided in Table V.B-8, Proposed Project Daily Emissions, of the Revised Final EIR, were then subtracted from the Modified Project to determine the incremental change in regional emissions that would occur as a result of the Modified Project. The results of the regional operational analysis are shown in Table 1 on page 6. As shown in Table 1, incremental emissions associated with the Modified

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[6] *Telephone Conversation, Ian MacMillan, SCAQMD CEQA Program Supervisor, November 10, 2011.*

[7] *Linscott, Law, & Greenspan, Engineers, Table 1, Modified Project Trip Generation, January 10, 2019.*

Table 1
Modified Project (Total Construction) Unmitigated Localized Construction Emissions
(Pounds per Day)

Emission Source	NO_X	CO	PM_{10}	$PM_{2.5}$
Modified Project (Total Construction)				
2019	27	12	6	4
2020	10	6	1	1
Maximum Peak Daily Emissions	**27**	**12**	**6**	**4**
Comparison to SCAQMD LSTs				
Modified Project Emissions[a]	**27**	**12**	**6**	**4**
SCAQMD Significance Threshold[b]	221	1,531	13	6
Over/(Under)	(194)	(1,519)	(7)	(2)

[a] *The "Modified Project Emissions" provided in this table represent the full localized emissions associated with Modified Project for informational purposes. The incremental change in localized emissions associated with the Modified Project, as compared to the Approved Project, would be substantially lower than the emissions presented here.*

[b] *SCAQMD LSTs based on SRA 2, 5-acre active site area, and 25-meter receptor distance (single-family residences to the northeast of Parcel B of the Project Site).*

Source: Eyestone Environmental, 2019.

Project would not exceed any SCAQMD regional operational significance thresholds. Please note that the change in pollutant emissions under the Modified Project is primarily a function of using the current SCAQMD recommended CalEEMod instead of URBEMIS and the change in the future buildout year (equipment and vehicle emissions decrease (i.e., emissions and vehicles become cleaner over time) in future years as emission control regulations are phased in over time with adoption of more stringent standards for future years).[8] Based on the above, the Modified Project would not result in any new impacts with respect to regional air quality during operation or increase the severity of any previously identified impacts identified in the Revised Final EIR. Therefore, impacts related to regional air quality during operation of the Modified Project would be less than significant. As discussed above, subsequent to preparation of the Draft EIR, the SCAQMD now recommends use of LSTs for evaluation of project impacts. An evaluation of the Modified Project's localized air quality impacts is provided below for informational purposes. The

[8] *California Air Resources Board. EMFAC2017 Volume III—Technical documentation, Chapter 5.1.3. July 20, 2018.*

Table 2
Modified Project Unmitigated Operational Regional Emissions (Buildout 2021)[a]
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Modified Project (Incremental Regional Emissions)						
Modified Project Regional Emissions (Total Project Site)	9	27	64	<1	17	5
On-Site (Area and Energy)	3	<1	<1	<1	<1	<1
Off-Site (Mobile)	6	27	64	<1	17	5
Total	**9**	**27**	**64**	**<1**	**17**	**5**
Approved Project (Total Project Site)[b]	24	46	214	<1	2	NA[c]
Modified Project Increment	**(15)**	**(19)**	**(148)**	**0**	**15**	**5[c]**
SCAQMD Significance Threshold	55	55	550	150	150	55
Significant	No	No	No	No	No	No

[a] *Compiled using the CalEEMod emissions inventory model. The operational emission assumptions are provided in Attachment A of this memorandum.*
[b] *Table V.B-8 on page V.B-17, Section V.B, Air Quality, of the Revised Final EIR.*
[c] *The Revised Final EIR did not evaluate $PM_{2.5}$ impacts.*
Source: Eyestone Environmental, 2019.

results of the localized operational analysis are shown in Table 2 on page 7. As shown in Table 3 on page 8, the Modified Project would not exceed any SCAQMD localized operational significance thresholds.

With regard to traffic-related localized air quality impacts, the incremental change in peak-hour trips under the Modified Project would result in a decrease of 16 percent in peak-hour weekday A.M. trips, an increase of 4 percent peak-hour weekday P.M. trips, and an increase of 32 percent peak-hour weekend trips as compared to the Approved Project.[9] The traffic-related air quality impact analysis for the Approved Project was provided on Tables V.B-9 (Weekday) and V.B-10 (Weekend) on page V.B-19, Section V.B, Air Quality, of the Revised Final EIR. As shown therein, the maximum incremental change as a result of project-generated traffic was 0.3 ppm for the 1-hour CO concentration and 0.2 ppm for the

[9] *Linscott, Law, & Greenspan, Engineers, Table 1, Modified Project Trip Generation, January 10, 2019.*

Table 3
Modified Project Unmitigated Operational Localized Emissions (Buildout 2021)[a]
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Comparison to SCAQMD Thresholds (Localized)						
Modified Project Localized Emissions (Total Project Site)	3	<1	<1	<1	<1	<1
SCAQMD Significance Threshold[b]	—	221	1,531	—	3	2
Over/(Under)	—	(221)	(1,531)	—	(3)	(2)

[a] *Compiled using the CalEEMod emissions inventory model. The operational emission assumptions are provided in Attachment A of this memorandum.*

The "Modified Project Emissions" provided in this table represent the full localized emissions associated with Modified Project for informational purposes. The incremental change in localized emissions associated with the Modified Project, as compared to the Approved Project, would be substantially lower than the emissions presented here.

[b] *SCAQMD LSTs based on SRA 2, 5-acre active site area, and 25-meter receptor distance.*

Source: Eyestone Environmental, 2019.

8-hour CO concentration. Assuming a maximum 32 percent increase in the incremental change of peak-hour trips as the result of the Modified Project would result in an incremental increase of 0.1 ppm for the 1-hour and 8-hour CO concentrations. This incremental increase in CO concentrations would result in a maximum 1-hour CO concentration of 7.2 ppm (threshold is 20 ppm) and an 8-hour CO concentration of 4.4 ppm (threshold is 9.0 ppm) under the Modified Project. Therefore, the incremental changes in traffic-related localized air quality impacts would be slightly more (i.e., 0.1 ppm) for the Modified Project than for the Approved Project. In addition, ambient CO concentrations within the Air Basin have decreased subsequently to completion of the Revised Final EIR. The CO background concentration at the closest monitoring station to the Project Site (Northwest Coastal Los Angeles County) shows that the 1-hour CO concentration has decreased from 4.3 ppm in 2003 to 1.9 in 2017 and 8-hour CO concentration has decreased from 2.7 ppm in 2003 to 1.2 ppm in 2017. The 0.1 ppm CO concentration increase as the result of the increase in peak-hour trips under the Modified Project would be more than offset by the decrease in overall background CO concentrations. Since the localized CO hotspot analysis for the Approved Project did not result in any significant impacts, the Modified Project would likewise not have any localized significant impacts.

An analysis was conducted to determine whether the incremental changes in emissions associated with the Modified Project would result in the siting of substantial sources of toxic air contaminants near any off-site sensitive receptors that would result in a significant health impact. The number of delivery trucks that would occur under the Modified Project would be substantially similar to the number of delivery trucks under the Original Project. Any increase in estimated emissions associated with a relatively minor increase in delivery trucks for retail uses would be more than offset by the decrease in estimated emissions resulting from improved vehicle emission factors for the Modified Project as compared to the Original Project analysis (i.e., vehicles become cleaner over time). As a result, the Modified Project would not result in any new impacts with respect to toxic air contaminants or any increase in the severity of any previously identified impacts, and any such impacts would be similar to those identified in the Revised Final EIR. Therefore, impacts related to toxic air contaminants under the Modified Project would be less than significant.

Mitigation Measures

The mitigation measures set forth in the Mitigation and Monitoring Program (MMRP) included in the Revised Final EIR and provided below remain applicable to the Modified Project. No additional mitigation measures are required due to the development of the Modified Project.

The following mitigation measures, as recommended by the SCAQMD, shall be implemented for all areas (both on-site and off-site) where construction would occur in order to reduce PM_{10} emissions to a less-than-significant level.

B-1. The construction area and vicinity (500-foot radius) shall be swept (preferably with water sweepers) and watered at least twice daily.

B-2. All unpaved roads, parking and staging areas shall be watered at least once every two hours of active operations.

B-3. Site access points shall be swept/washed of visible dirt deposition at the end of each workday.

B-4. On-site stockpiles of debris, dirt or rusty material shall be covered or watered at least twice daily.

B-5. All haul trucks hauling soil, sand, and other loos materials shall either be covered or maintain two feet of freeboard.

B-6. All haul trucks shall have a capacity of no less than twelve and three-quarter (12.75) cubic yard.

B-7. At least 80 percent of all inactive disturbed surface areas shall be watered on a daily basis when there is evidence of wind-driven fugitive dust.

B-8. Operations on any unpaved surfaces shall be suspended when winds exceed 25 mph.

B-9. Traffic speeds on unpaved roads shall be limited to 15 miles per hour.

B-10. Operations on any unpaved surfaces shall be suspended during first and second stage smog alerts.

Impacts After Mitigation

As with the Approved Project, implementation of the above mitigation measures would ensure that fugitive dust emissions from the Modified Project would be reduced, consistent with SCAQMD Rule 403 requirements.

Greenhouse Gas Emissions

Approved Project

Greenhouse Gas ("GHG") impacts were added to the required list of issues to be evaluated under CEQA in 2008, subsequent to certification of the Revised Final EIR. As a result, analysis of GHG impacts associated with the Approved Project were not included in the Revised Final EIR.

Modified Project

As shown above in Table 1 on page 6, incremental regional air pollutant emissions are expected to decrease under the Modified Project. The reduction in incremental emissions under the Modified Project is primarily a function of using the current SCAQMD recommended CalEEMod instead of URBEMIS and the change in the future buildout year (equipment and vehicle emissions decrease (cleaner) in future years as emission control regulations are phased in over time with adoption of more stringent standards for future years). Incremental GHG emissions would similarly decrease under the Modified Project for the same reasons discussed above. Because GHG emissions associated with the Modified Project would be no greater than the Approved Project, there would be no incremental increase in GHG emissions from the Project Modifications and, therefore, the Modified Project would be less than significant with respect to GHG emissions.

For informational purposes, the following provides additional information about the environmental and regulatory setting for GHG emissions and evaluates the consistency of the Modified Project with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Regulatory Updates

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32, into law. AB 32 commits the State to the following:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 levels; and
- By 2050, reduce to 80 percent below 1990 levels.

AB 32 requires that CARB determine what the statewide GHG emissions level was in 1990 and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. Executive Order (EO) B-30-15, which was issued in April 2015 by Governor Brown, requires statewide GHG emissions to be reduced 40 percent below 1990 levels by 2030. SB 32, signed into law in September 2016, codifies the 2030 GHG reduction target in EO B-30-15. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved.

Scoping Plan

CARB approved a Climate Change Scoping Plan (2008 Scoping Plan) required by AB 32 in 2008.[10] The 2008 Scoping Plan proposes a "comprehensive set of actions designed

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[10] *Climate Change Proposed Scoping Plan was approved by the California Air Resources Board on December 11, 2008.*

to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health."[11] The First Update to the AB 32 Scoping Plan (First Update), released on May 22, 2014, found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.[12]

In December 2017, CARB adopted the 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target (2017 Update). The 2017 Update builds upon the successful framework established by the 2008 Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Update includes policies to require direct GHG reductions at some of the state's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constraints and reduces emissions at covered sources.[13]

The California Attorney General's Office has taken an active role in addressing climate change in CEQA documents. The Attorney General's Office has created and routinely updates a Fact Sheet listing project design features to reduce greenhouse gas emissions.[14] The Attorney General's Office created the Fact Sheet primarily for the benefit of local agencies processing CEQA documents, noting that "local agencies will help to move the State away from 'business-as-usual' and toward a low-carbon future." The Fact Sheet explains that the listed "measures can be included as design features of a project," but emphasizes that they "should not be considered in isolation, but as part of a larger set of

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[11] *Climate Change Scoping Plan, CARB, December 2008, www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm, last reviewed April 3, 2013.*

[12] *CARB, First Update to the Climate Change Scoping Plan: Building on the Framework, May 2014, p. 34.*

[13] *CARB, 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target, November 2017, p. 6.*

[14] *California Attorney General's Office Fact Sheet, The CEQA—Addressing Global Warming Impacts at the Local Agency Level, revised January 6, 2010.*

measures that, working together, will reduce greenhouse gas emissions and the effects of global warming."

Southern California Association of Governments

SCAG recently adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (2016–2040 RTP/SCS) on April 7, 2016.[15, 16] The 2016–2040 RTP/SCS reaffirms the land use policies that were incorporated into the 2012–2035 RTP/SCS. These foundational policies, which guided the development of the 2016–2040 RTP/SCS's strategies for land use, include the following:

- Identify regional strategic areas for infill and investment;
- Structure the plan on a three-tiered system of centers development;[17]
- Develop "Complete Communities";
- Develop nodes on a corridor;
- Plan for additional housing and jobs near transit;
- Plan for changing demand in types of housing;
- Continue to protect stable, existing single-family areas;
- Ensure adequate access to open space and preservation of habitat; and
- Incorporate local input and feedback on future growth.

The 2016–2040 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked, and continued recognition of this close relationship will help the region make choices that sustain existing resources and expand efficiency, mobility,

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15 *SCAG, Final 2016–2040 RTP/SCS.*

16 *CARB, Executive Order G-16-066, SCAG 2016 SCS ARB Acceptance of GHG Quantification Determination, June 2016.*

17 *Complete language: "Identify strategic centers based on a three-tiered system of existing, planned and potential relative to transportation infrastructure. This strategy more effectively integrates land use planning and transportation investment." A more detailed description of these strategies and policies can be found on pp. 90–92 of the SCAG 2008 Regional Transportation Plan, adopted in May 2008.*

and accessibility for people across the region. In particular, the 2016–2040 RTP/SCS draws a closer connection between where people live and work, and it offers a blueprint for how Southern California can grow more sustainably. The 2016–2040 RTP/SCS also includes strategies focused on compact infill development and economic growth by building the infrastructure the region needs to promote the smooth flow of goods and easier access to jobs, services, educational facilities, healthcare and more.

The 2016–2040 RTP/SCS states that the SCAG region is home to about 18.3 million people in 2012 and currently includes approximately 5.9 million homes and 7.4 million jobs. By 2040, the integrated growth forecast projects that these figures will increase by 3.8 million people, with nearly 1.5 million more homes and 2.4 million more jobs. High Quality Transit Areas[18] (HQTAs) will account for 3 percent of regional total land but are projected to accommodate 46 percent and 55 percent of future household and employment growth respectively between 2012 and 2040. The 2016–2040 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region's HQTAs. HQTAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2016–2040 RTP/SCS is expected to reduce per capita transportation emissions by 8 percent by 2020 and 18 percent by 2035. This level of reduction would meet and exceed the region's GHG targets set by CARB of 8 percent per capita by 2020 and 13 percent per capita by 2035.[19] Furthermore, although there are no per capita GHG emission reduction targets for passenger vehicles set by CARB for 2040, the 2016–2040 RTP/SCS's GHG emission reduction trajectory shows that more aggressive GHG emission reductions are projected for 2040.[20] The 2016–2040 RTP/SCS would result in an estimated 21 percent decrease in per capita GHG emissions by 2040. By meeting and exceeding the SB 375 targets for 2020 and 2035, as well as achieving an approximately 21-percent decrease in per capita GHG emissions by 2040 (an additional 3-percent reduction in the five years between 2035 [18 percent] and 2040 [21 percent]), the 2016–2040 RTP/SCS is expected to fulfill and

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[18] *Defined by the 2016–2040 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a well-serviced transit stop or a transit corridor with 15-minute or less service frequency during peak commute hours*

[19] *SCAG, Final 2016–2040, RTP/SCS, Executive Summary, p. 8, April 2016.*

[20] *SCAG, Final Program Environmental Impact Report for 2016–2040, RTP/SCS, April 2016, Figure 3.8.4-1.*

exceed its portion of SB 375 compliance with respect to meeting the state's GHG emission reduction goals.

Significance Thresholds

The Governor's Office of Planning and Research (OPR) recommended Amendments to the CEQA Guidelines for GHGs which were adopted on December 30, 2009. CEQA Guidelines Section 15064.4 was adopted to assist lead agencies in determining the significance of the impacts of GHGs. Consistent with the developing practice, this section of the CEQA Guidelines urges lead agencies to quantify GHG emissions of projects where possible and includes language necessary to avoid an implication that a "life-cycle" analysis is required. In addition to quantification, CEQA Guidelines Section 15064.4 recommends consideration of several other qualitative factors that may be used in the determination of significance (i.e., the extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and the extent to which the project complies with regulations or requirements adopted to reduce or mitigate GHGs).

CEQA Guidelines Section 15064.4 does not establish a threshold of significance; instead lead agencies are called on to establish significance thresholds for their respective jurisdictions in which a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officer's Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence.[21] The CEQA Guidelines Amendments also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analyses.[22]

Lead agencies must either establish significance thresholds for their respective jurisdictions or determine significance on a case-by-case basis. The lead agency should use its "careful judgment" in making a determination of significance, and should make a "good-faith" effort to "describe, calculate or estimate" the amount of GHGs that will result from a project.[23,24] The lead agency is given the discretion to select a reasonable model and

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[21] *CEQA Guidelines Section 15064.7(c).*

[22] *CEQA Guidelines Section 15130 (f).*

[23] *CEQA Guidelines Section 15064.4(a).*

[24] *CEQA Guidelines Section 15064.4(a).*

methodology to quantify GHGs and to rely on a qualitative analysis or performance based standards for its determination.[25] A lead agency should also consider the following factors, among others, when assessing the significance of impacts from GHGs: (1) the extent to which the project may increase or reduce GHGs; (2) whether the GHG emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, local plan for the reduction or mitigation of GHG emissions.[26]

The California Supreme Court's decision published on November 30, 2015, in the *Center for Biological Diversity v. California Department of Fish and Wildlife* (62 Cal.4th 204) (also known as the Newhall Ranch Case) reviewed the methodology used to analyze GHG emissions in CEQA. The California Supreme Court suggested regulatory consistency as one pathway to compliance, by stating that a lead agency might assess consistency with AB 32's goal in whole or in part by looking to compliance with regulatory programs designed to reduce GHG emissions from particular activities. This approach is consistent with CEQA Guidelines Section 15064, which provides that a determination that an impact is not cumulatively considerable may rest on compliance with previously adopted plans or regulations, including plans or regulations for the reduction of GHG emissions. Importantly, the Court also suggested: "A lead agency may rely on existing numerical thresholds of significance for greenhouse gas emissions" (bright line threshold approach) if supported by substantial evidence.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[27] Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 metric tons of GHGs measured as an equivalent mass of carbon dioxide ("$MTCO_2e$") per year. Under this proposal, commercial/residential projects that emit fewer than 3,000 $MTCO_2e$ per year would be assumed to have a less than significant impact on climate change. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g.,

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[25] *CEQA Guidelines Section 15064.4(a)(1)-(2).*

[26] *CEQA Guidelines Section 15064.4(b).*

[27] *SCAQMD, Draft Guidance Document—Interim CEQA Greenhouse Gas (GHG) Significance Threshold, October 2008, Attachment E.*

residential/commercial projects); therefore, the commercial/residential thresholds were not formally adopted.[28]

For the Modified Project, no applicable numeric significance threshold for GHG emissions has been adopted by the State, SCAQMD, or the City of Malibu. Although state, regional, and local plans and policies have been adopted to help address climate change (see discussions above), no current law or regulation would regulate all aspects of the Modified Project's GHG emissions.

As indicated above, the Modified Project would not result in an incremental increase in GHG emissions; therefore, the Modified Project would have a less than significant impact with respect to GHG emissions. For informational purposes, in the absence of any adopted numeric threshold, the Modified Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Modified Project is consistent with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. For this Modified Project, as a land use development project, the most directly applicable adopted regulatory plan to reduce GHG emissions are CARB's Scoping Plan, SCAG's 2016–2040 RTP/SCS, , and City of Malibu General Plan.

Modified Project Design Features

The following project design features are proposed conservation measures that meet or go beyond the minimum requirements of the California Green Building Code, the California Code, and local ordinances that would serve to reduce GHG emissions:

GHG-PDF-1: The design of the new building shall incorporate the following sustainability features:

- Exceed Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency by an average of 14 percent, based on the 2016 Building Energy Efficiency Standards requirements.
- Use high-efficiency Energy Star HVAC equipment and appliances.

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[28] *SCAQMD, Greenhouse Gases (GHG) CEQA Significance Thresholds.*

- Use energy-efficient light-emitting diode (LED) lighting fixtures, occupancy sensors, dimming controls, and other lighting control strategies to reduce electricity use.
- The design makes provisions to allow for future installation of photovoltaic panels to reduce utility provided power.
- Use of water-efficient plantings with drought-tolerant species.
- Allocate eight percent of the code-required parking spaces as preferred parking for alternative-fuel vehicles, low-emitting, and fuel-efficient and carpool/van pool vehicles.

GHG-PDF-2: A minimum of six percent of the total code-required parking spaces shall be equipped with EV charging stations. Project plans shall indicate the proposed type and location(s) of charging stations. Plan design shall be based on Level 2 or greater EVSE at its maximum operating capacity.

GHG Emissions Inventory

Construction

As indicated above, the Modified Project will not result in an incremental increase in GHG emissions during construction as compared to the Approved Project. However, for informational purposes, the full GHG emissions of the Modified Project is presented in this subsection.

GHG emissions from construction activities were forecasted using a reasonable estimate of construction schedule and phasing and applying published GHG emission factors. Construction emissions were calculated using the CalEEMod model. The output values used in this analysis were adjusted to be project-specific, based on usage rates, type of fuel, and construction schedule. These values were then applied to the construction phasing assumptions used in the criteria pollutant analysis (discussed above) to generate GHG emissions values for each construction year (refer to Attachment B of this memorandum).

As presented in Table 4 on page 19, construction of the Modified Project is estimated to generate a total of 398 $MTCO_2e$. As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Modified Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction

Table 4
Construction-Related GHG Emissions
($MTCO_2e$)

Year	$MTCO_2e$[a]
2019	272
2020	126
Total	**398**[c]
Amortized Over 30 Years[b]	**13**

[a] *$MTCO_2e$ = metric tons of an equivalent mass of carbon dioxide. CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Attachment B of this memorandum.*

[b] *As recommended by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Modified Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Modified Project's operational emissions) in order to determine the Modified Project's annual GHG emissions inventory.*

[c] *The total GHG emissions of the Modified Project during construction are presented here for informational purposes and do not represent an incremental increase relative to the Approved Project.*

Source: Eyestone Environmental, 2019.

emissions estimate that can be added to the Modified Project's operational emissions) in order to determine the Modified Project's annual GHG emissions inventory.[29] A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Attachment B of this memorandum.

Operation

As indicated above, the Modified Project will not result in an incremental increase in GHG emissions during operations as compared to the Approved Project. However, for informational purposes, the full GHG emissions of the Modified Project during operations is presented in this subsection.

[29] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

The Modified Project would result in direct and indirect GHG emissions in comparison to the existing condition generated by the increase in vehicular trips as well as operations associated with the proposed building, including: (1) building operations: emissions associated with space heating and cooling, water heating, and lighting; (2) water: emissions associated with energy used to pump, convey, treat, deliver, and re-treat water; and (3) solid waste: emissions associated with waste streams (embodied energy of materials). Operational emissions from the sources described above were estimated using CalEEMod for the Modified Project in order to determine the increase in GHG emissions as a result of implementation of the Modified Project. Mobile source emissions are based on the vehicle emission factors from EMFAC and the trip length values for the project land uses in CalEEMod, which are South Coast Air Basin-wide average trip distance values. To estimate the total vehicle miles traveled (VMT) generated by Modified Project trips, trip generation rates provided in the Modified Project's Traffic Memo included in Attachment A of this memorandum were used.[30] CalEEMod calculates reductions in VMT relative to the standard VMT rates in CalEEMod based on site-specific characteristics, such as increased job density and diversity of land uses on the site, using the equations and methods prescribed in the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*.[31]

As noted above, the SCAQMD identified a screening criteria of 3,000 $MTCO_2e$/yr for mixed-use projects to determine whether a land use project could presumptively have less than significant GHG impacts if it produced less GHGs than the screening criteria. As shown in Table 5 on page 21, the Modified Project would result in 2,903 $MTCO_2e$/yr for combined construction and operational GHGs with implementation of project design features. As a result, the net Modified Project GHG emissions of 2,903 $MTCO_2e$/yr would be less than the 2008 SCAQMD draft 3,000 $MTCO_2e$/yr screening level.

Consistency with Applicable Plans and Policies

The analysis below describes the extent to which the Modified Project complies with or exceeds the performance-based standards included in the regulations outlined in CARB's Scoping Plan and subsequent updates, SCAG's 2016–2040 RTP/SCS, and City of Malibu General Plan. As shown herein, the Modified Project would be consistent with the applicable GHG reduction plans and policies.

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[30] *Linscott, Law, & Greenspan, Engineers, Table 1, Modified Project Trip Generation, January 10, 2019.*

[31] *CAPCOA, Quantifying Greenhouse Gas Mitigation Measures (2010).*

Table 5
Operational Greenhouse Gas Emissions

Emission Source	Modified Project With Project Design Features CO_2e (metric tons)
Area[b]	<1
Energy[c]	487
Mobile[d]	2,308
Solid Waste[e]	17
Water/Wastewater[f]	78
Construction	13
Total Emissions	**2,903[g]**

[a] *CO_2e was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Attachment B of this memorandum.*

[b] *Area source emissions are from landscape equipment.*

[c] *Energy source emissions are based on CalEEMod default electricity and natural gas usage rates and includes reductions associated with GHG-PDF-1 (Exceed Title 24, Part 6, California Energy Code baseline standard requirements for energy efficiency by an average of 14 percent and a 25% reduction for use of energy-efficient LED lighting fixtures, occupancy sensors, dimming controls, and other lighting control strategies.*

[d] *Mobile source emission reductions account for internal capture from retail uses and applicable CAPCOA Measures (See Attachment B of this memorandum).*

[e] *Solid waste emissions are calculated based on CalEEMod default solid waste generation rates with a 75 percent diversion rate (Los Angeles County Integrated Waste Management Plan, 2016).*

[f] *Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates and includes reductions associated with applicable provisions of the municipal code (Chapters 9.22 and 15.24).*

[g] *The total GHG emissions of the Modified Project during operations are presented here for informational purposes and do not represent an incremental increase relative to the Approved Project.*

Source: Eyestone Environmental, 2019.

CARB's Climate Change Scoping Plan

The Scoping Plan includes a range of GHG reduction actions that include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a Cap-and-Trade system, and an AB 32 and SB 32 implementation fee to fund the program. Provided in Table 6 on page 22 is an evaluation of applicable reduction actions/strategies by emissions source category to determine how the Modified Project would be consistent with or exceed the reduction

Table 6
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
Area Sources		
SCAQMD Rule 445 (Wood Burning Devices): Requires use of natural gas to power all cooking stoves and fireplaces.	SCAQMD	**Consistent.** The Modified Project would not include wood burning devices or stoves. Accordingly, the Modified Project would be consistent with this regulation.
Energy Usage		
California Renewables Portfolio Standard (RPS) program: SB 2X modified California's RPS program to require that both public and investor-owned utilities in California receive at least 33 percent of their electricity from renewable sources by the year 2020. SB 2X also requires regulated sellers of electricity to meet an interim milestone of procuring 25 percent of their energy supply from certified renewable resources by 2016.	SCE	**Consistent.** SCE's commitment to achieve 33 percent renewables by 2020 would meet the requirement under the RPS program of 33 percent renewables by 2020. In 2017, SCE indicated that 28 percent of its electricity came from renewable resources in Year 2016.[a] As SCE would provide electricity service to the Project Site, the Modified Project would use electricity that is produced consistent with this performance-based standard.
SB 350: SB 350, the Clean Energy and Pollution Reduction Act of 2015 requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030.[a] Required measures include: • Increase RPS to 50 percent of retail sales by 2030. • Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. • Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs. and also requires the	State Energy Resources Conserva-tion and Develop-ment Commission and SCE	**Consistent.** SCE would be required to generate electricity that would increase renewable energy resources to 50 percent by 2030. As SCE would provide electricity service to the Project Site, by 2030, the Modified Project would use electricity consistent with the requirements of SB 350. As required under SB 350, doubling of the energy efficiency savings from final end users of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under the CCR, Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, heating ventilation and air-conditioning (HVAC) systems and insulation. This regulation does not directly apply to the project but GHG emissions from project-related electricity use would benefit from this regulation. The project would not conflict with implementation of SB 350.

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
State Energy Resources Conservation and Development Commission to double the energy efficiency savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation.		
SB 1368: SB 1368 establishes the GHG Emissions Standard for Baseload Generation which prohibits any retail seller of electricity in California from entering into a long-term financial commitment for baseload generation if the GHG emissions are higher than those from a combined-cycle natural gas power plant.	State, CEC, and SCE	**Consistent.** SCE meets the requirements of SB 1368. As SCE would provide electricity service to the Project Site, the Modified Project would use electricity that meets the requirements under SB 1368.
CCR, Title 20: The 2016 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California.	State and CEC	**Consistent.** The Appliance Efficiency Regulations apply to new appliances and lighting that are sold or offered for sale in California. The Modified Project would be outfitted with appliances and lighting that comply with CEC standards. In addition, the Modified Project would implement other sustainability features such as Energy Star appliances and efficient lighting, thus reducing overall energy usage compared to baseline conditions.
CCR Title 24, Building Standards Code: The 2016 Building Energy Efficiency Standards contained in Title 24, Part 6 (also known as the California Energy Code), requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The California Green Building Standards Code (Part 11, Title 24) established mandatory and voluntary standards on planning and design for sustainable site development, energy efficiency (extensive update of the California Energy Code), water conservation, material conservation, and internal air contaminants.	State and CEC	**Consistent.** The California Green Building Standards offer builders better windows, insulation, lighting, ventilation systems and other features that reduce energy consumption in homes and businesses. As discussed above in PDF GHG-1, the Modified Project would exceed Title 24 energy efficiency requirements by 14 percent and implement other sustainability features, thus reducing overall energy usage compared to baseline conditions. Thus, the Modified Project has incorporated energy efficiency standards that are substantially more effective than the measures identified in the Scoping Plan to reduce GHG emissions.

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
Energy Independence and Security Act of 2007 (EISA): EISA requires manufacturing for sale within the United States to phase out incandescent light bulbs between 2012 and 2014 resulting in approximately 25 percent greater efficiency for light bulbs and requires approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020.	Federal/ Manufactur-ers	**Consistent.** The Energy Independence and Security Act of 2007 (EISA) reduces the use of incandescent light bulbs, including within the Modified Project and, thus, reduces energy usage associated with lighting.
Cap-and-Trade Program: The program establishes an overall limit on GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, and cement production). Facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.	State	**Consistent.** As required by AB 32 and SB 32 and the Scoping Plan, the Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, this regulatory program applies to electric service providers and not directly to land use development. The current Cap-and-Trade Program would end on December 31, 2020. AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program from January 1, 2021, through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions. The Modified Project would benefit from this regulatory program in that the GHG emissions associated with the Modified Project's electricity usage would indirectly be covered by the Cap-and-Trade Program. Furthermore, the Cap-and-Trade Program also covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.
Million Solar Roofs Program: The program is implemented through SB 1 (Murray, 2006), which provides up to $3.3 billion in financial incentives for the installation of residential, commercial and institutional solar PV programs.		**Not Applicable.** The Modified Project would exceed Title 24 energy efficiency requirements by 14 percent and incorporate energy-efficient design methods and technologies, such as high-performance window glazing; undergrounding parking to reduce heat island effects; and enhanced insulation to minimize solar heat gain. The Modified Project is not currently anticipated to include solar roofing materials or photovoltaic cells; thus, the

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
		Modified Project would not be eligible for the financial incentives offered by this program. However, the Modified Project would make design provisions to allow for future installation of photovoltaic panels to reduce utility provided power. Thus, the Modified Project would be considered "solar-ready."
Mobile Sources		
Low Carbon Fuel Standard: Adopt a Low Carbon Fuel Standard with a CI reduction of 18 percent.	State, CARB	**Consistent. Consistent.** This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Modified Project would benefit from this regulation through reduced GHG emissions as this program is implemented over time. The Modified Project would not conflict with or impede implementation of the program. The current LCFS, adopted in 2007, requires a reduction of at least 10 percent in the carbon intensity (CI) of California's transportation fuels by 2020. The CARB has proposed an amendment to the LCFS regulation to target a 20-percent reduction in CI from a 2010 baseline by 2030. The amendments were released in March 2018 with the public comment period ending in April 2018. The proposed amendments were adopted in September 2018 with a Board hearing and vote.[b]
Implement Mobile Source Strategy (Cleaner Technology and Fuels) • At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025. • At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030. • Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations.	CARB, CalSTA, SGC, Caltrans CEC, OPR, Local agencies	**Consistent.** CARB approved the Advanced Clean Cars Program in 2012 which establishes an emissions control program for model year 2017 through 2025. Standards under the Advanced Clean Cars Program will apply to all passenger and light duty trucks used by employees and deliveries to the Modified Project. The Program also requires auto manufacturers to produce an increasing number of zero emission vehicles in the 2018 through 2025 model years. Extension of the Advanced Clean Cars Program has not yet

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
• Medium- and heavy-duty GHG Phase 2. • Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard. • Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030. • Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		been adopted, but it is expected that measures will be introduced to increase GHG stringency on light duty autos and continue adding zero emission and plug in vehicles through 2030. CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.[c,d] GHG emissions generated by project-related vehicular travel would benefit from this regulation, and mobile source emissions generated by the Modified Project would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction of GHG emissions under AB 32 and SB 32. The Modified Project would not conflict with implementation of the Advanced Clean Cars Program. Mobile source GHG emissions conservatively do not include this additional 34-percent reduction in mobile source emissions as the CalEEMod model does not yet account for this regulation. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the Modified Project would also benefit from these measures once adopted. SB 375 requires SCAG to direct the development of the SCS for the region, which is discussed further below. The Modified Project represents an infill development within an existing urbanized area. The 2016–2040 RTP/SCS would result in an estimated 18-percent decrease in per capita GHG emissions from passenger vehicles by 2035 and 21-percent decrease in per capita GHG emissions from passenger vehicles by 2040.

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
		The Modified Project results in a mobile GHG emissions reduction of approximately 27 percent compared to the standard VMT rates in CalEEMod for a project within the air basin (see Attachment B of this memorandum) and, therefore, the Modified Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS.
SB 375: SB 375 requires integration of planning processes for transportation, land-use and housing. Under SB 375, each MPO would be required to adopt an SCS to encourage compact development that reduces passenger vehicle miles traveled and trips so that the region will meet a target, created by CARB, for reducing GHG emissions.	State, CARB Regional, SCAG	**Consistent.** Under SB 375, CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region. As required under SB 375, CARB is required to update regional GHG emissions targets every eight years, which was last updated in March 2018. As part of the 2018 updates, CARB has adopted a passenger vehicle related GHG reduction of 19 percent for 2035 for the SCAG region, which is more stringent than the current reduction target of 13 percent for 2035. The Modified Project would be consistent with SB 375 for developing an infill project within an existing urbanized area. Project-related transportation emissions would be reduced by approximately 27 percent relative to the standard VMT rates in CalEEMod for a project within the air basin (see Attachment B of this memorandum) and, therefore, the Modified Project would be consistent with SB 375 and the 2016–2040 RTP/SCS.
By 2019, adjust performance measures used to select and design transportation facilities. Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	**Not Applicable.** The Modified Project would not involve construction of transportation facilities. Therefore, the Modified Project would not interfere or impede the implementation of performance measures used to select and design transportation facilities.
Implement California Sustainable Freight Action Plan:	CARB	**Not Applicable.** The Modified Project land uses would not include freight transportation or

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
• Improve freight system efficiency. Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		warehousing. Therefore, the Modified Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.
Solid Waste		
AB 939: AB 939, the California Integrated Waste Management Act of 1989, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; and (2) diversion of 50 percent of all solid waste on and after January 1, 2000, through source reduction, recycling, and composting facilities.[e] ***AB 341:*** AB 341 amended AB 939 to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.[f]	State	**Consistent.** The Modified Project's solid waste generation would benefit from this regulation as it would decrease the overall amount of solid waste disposed of at landfills. The decrease in solid waste would in turn decrease the amount of methane released from the decomposing solid waste. Project-related GHG emissions from solid waste generation include a 75-percent reduction in solid waste generation, consistent with AB 341. In addition, the Modified Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material. Further, the Modified Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous construction debris.
Water		
CCR, Title 24, Building Standards Code: The CalGreen Code (Part 11, Title 24) includes water efficiency requirements for new residential and non-residential uses, in which buildings shall demonstrate a 20-percent overall water use reduction.	State	**Consistent.** The Modified Project would comply with applicable provisions of the CalGreen code (20-percent overall water use reduction). As shown above in Attachment B of this memorandum, implementation of applicable provisions of the municipal code (Chapters 9.22 and 15.24) such as high-efficiency fixtures and appliances, weather-based irrigation systems, drought-tolerant landscaping, and reclaimed water for irrigation would result in an overall reduction in GHG emissions from water usage by 38 percent as compared to CalEEMod default water consumption rates.
SB X7-7: SB X7-7, the Water Conservation Act of 2009, sets an overall goal of reducing	State	**Consistent.** As discussed above under Title 24, the Modified Project would incorporate

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
per-capita urban water use by 20 percent by December 31, 2020. The state is required to make incremental progress toward this goal by reducing per-capita water use by at least 10 percent by December 31, 2015. This is an implementing measure of the Water Sector of the *Climate Change Scoping Plan*. Reduction in water consumption directly reduces the energy necessary and the associated emissions to convene, treat, and distribute the water; it also reduces emissions from wastewater treatment.		water conservation features that would contribute towards meeting this performance based standard. The Modified Project thereby includes measures consistent with the GHG reductions sought by SB X7-7 related to water conservation and related GHG emissions.
Construction		
CARB In-Use Off-Road Regulation: CARB's in-use off-road diesel vehicle regulation ("Off-Road Diesel Fleet Regulation") requires the owners of off-road diesel equipment fleets to meet fleet average emissions standards pursuant to an established compliance schedule.	CARB	**Consistent.** The Applicant would use construction contractors that comply with this regulation.
CARB In-Use On-Road Regulation: CARB's in-use on-road heavy-duty vehicle regulation ("Truck and Bus Regulation") applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.[g]	CARB	**Consistent.** The Applicant would use construction contractors that comply with this regulation.
Other		
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink: • Protect land from conversion through conservation easements and other incentives. • Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity • Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments	CNRA and departments within, CDFA, CalEPA, CARB	**Not Applicable.** This regulatory program applies to Natural and Working Lands, not directly related to development of the Project. The Modified Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.

Table 6 (Continued)
Consistency Analysis—CARB's Scoping Plan

Actions and Strategies	Responsible Party(ies)	Modified Project Consistency Analysis
• Establish scenario projections to serve as the foundation for the Implementation Plan		
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	**Not Applicable.** This regulatory program applies to Natural and Working Lands, not directly related to development of the Modified Project. The Modified Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Implement Forest Carbon Plan	CNRA, CAL FIRE, CalEPA	**Not Applicable.** This regulatory program applies to state and federal forest land, not directly related to development of the Modified Project. The Modified Project would not interfere or impede implementation of the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	**Not Applicable.** Funding and financing mechanisms are the responsibility of the state and local agencies. The Modified Project would not conflict with funding and financing mechanisms to support GHG reductions.

[a] *Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.*
[b] *CARB, LCFS Rulemaking Documents, www.arb.ca.gov/fuels/lcfs/rulemakingdocs.htm.*
[c] *CARB, Advance Clean Cars, Midterm Review, www.arb.ca.gov/msprog/acc/acc-mtr.htm.*
[d] *CARB, Advanced Clean Local Trucks (Last mile delivery and local trucks), www.arb.ca.gov/msprog/actruck/actruck.htm.*
[e] *California Public Resources Code Section 41780(a).*
[f] *California Public Resources Code Section 41780.01(a).*
[g] *CARB, Truck and Bus Regulation—On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation, www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm, page last reviewed by CARB on December 14, 2017.*

Source: CARB, Climate Change Scoping Plan, December 2008; CARB, First Update to the Climate Change Scoping Plan, 2014; CARB, California's 2017 Climate Change Scoping Plan, 2017.

actions/strategies outlined in the Scoping Plan. As discussed therein, the Modified Project would be consistent with the GHG reduction-related actions and strategies of the Scoping Plan.

SCAG 2016–2040 RTP/SCS

SCAG's 2016–2040 RTP/SCS, adopted on April 7, 2016, presents a long-term transportation vision through the year 2040 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The mission of the 2016–2040 RTP/SCS is to provide "leadership, vision and progress which promote economic growth, personal well-being, and livable communities for all Southern Californians." The 2016–2040 RTP/SCS places a greater emphasis on sustainability and integrated planning compared to previous versions of the RTP, and identifies mobility, accessibility, sustainability, and high quality of life, as the principles most critical to the future of the region. The goals and policies of the 2016–2040 RTP/SCS that focus on reducing VMT feature transportation and land use planning that include adopted after the 2016–2040 RTP/SCS (adopted on April 7, 2016), it is expected that the updated targets will be incorporated into the next RTP/SCS. The 2016–2040 RTP/SCS and/or the next RTP/SCS are expected to fulfill and exceed SB 375 compliance with respect to meeting the State's GHG emission reduction goals. The Modified Project supports a reduction in VMT of approximately 27 percent compared to the standard VMT rates in CalEEMod for a project within the air basin (see Attachment B of this memorandum) and, therefore, the Modified Project would be consistent with SB 375, the reduction in transportation emission per capita provided in the 2016–2040 RTP/SCS.

In sum, the Modified Project is a land use development that is consistent with the 2016-2040 RTP/SCS to support a reduction in regional VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies.32 By furthering implementation of SB 375, the Modified Project would support regional land use and transportation GHG reductions consistent with state regulatory requirements. Therefore, the Modified Project would be consistent with the GHG reduction-related actions and strategies contained in the 2016–2040 RTP/SCS. Overall, the Modified Project would not conflict with the 2016–2040 RTP/SCS, which is intended to reduce GHG emissions.

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[32] *As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.*

City of Malibu

The City of Malibu General Plan identifies goals and policies relating to the improving of safety and health of the community. The current General Plan does not specifically address emissions of GHGs; however, the City supports the SCAQMD's mission to protect public health and welfare from the adverse effects of air pollution. These are summarized identified sustainability policies within its General Plan Conservation Element. The specific policies that relate to energy conservation, water conservation, and solid waste reduction would all have a GHG emissions reduction co-benefit. Consistency with applicable polices included in the Conservation Element of the City of Malibu General Plan are discussed in Table 7 on page 33.

Summary of Consistency with Applicable Plans and Policies

Given the Modified Project's consistency with State, regional, and local GHG emission reduction goals and objectives, the Modified Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Furthermore, the Modified Project would comply with plans, programs, and regulations that reduce GHG emissions. Therefore, impacts with respect to GHG emissions under the Modified Project would be less than significant and not cumulatively considerable. No mitigation measures are required.

MEMORANDUM

Table 7
Consistency with Applicable Conservation Goals of the City of Malibu General Plan

Objective	Policy	Consistency Analysis
Energy Conservation		
Objective 3.1: Use of innovative, energy-efficient techniques and systems.	Policy 3.1.1: The City shall educate the community regarding the importance of and techniques for energy conservation. Policy 3.1.2: The City shall encourage state-of-the-art energy efficiency standards for all new construction design. Policy 3.1.3: The City shall protect solar access. Policy 3.1.4: The City shall encourage uses of solar and other nonpolluting, renewable energy sources.	**Not Applicable.** While this policy applies to the City and not directly to the Modified Project, the Modified Project would comply with applicable portions of the municipal code (Chapter 15.18 incorporates by reference the Title 24 2016 standards) by exceeding Title 24 2016 energy efficiency requirements by 14 percent and incorporating energy-efficient design methods and technologies, such as high-performance window glazing; undergrounding parking to reduce heat island effects; and enhanced insulation to minimize solar heat gain. The Modified Project is not currently anticipated to include solar roofing materials or photovoltaic cells. However, the Modified Project would make design provisions to allow for future installation of photovoltaic panels to reduce utility provided power. Thus, the Modified Project would be considered "solar-ready" and protect solar access.
Water Conservation		
Objective 4.1: Ten percent reduction in the amount of water for residential and commercial uses by 2001 and a three-day emergency water supply in all residential areas.	Policy 4.1.3: The City shall encourage water conservation design measures in residential, commercial, and industrial development. Policy 4.1.4: The City shall promote the use of water-efficient low-flow fixtures. Policy 4.1.5: The City shall encourage the use of drought-resistant landscaping. Policy 4.1.6: The City shall promote the use of reclaimed water that has had pathogens removed for appropriate uses such as landscape irrigation systems. Policy 4.1.7: The City shall promote the use of greywater systems.	**Consistent.** While this policy applies to the City and does not directly apply to the Modified Project, the Modified Project would comply with applicable provisions of the municipal code (Chapters 9.22 and 15.24). As shown in Attachment B of this memorandum, implementation of applicable provisions of the municipal code such as high-efficiency fixtures and appliances, weather-based irrigation systems, drought-tolerant landscaping, and reclaimed water for irrigation would result in an overall reduction in GHG emissions from water usage by 38 percent as compared to CalEEMod default water consumption rates
Solid Waste		
Objective 5.1: Fifty percent reduction in the amount of solid waste generated by	Policy 5.1.1: The City shall reduce solid waste. Policy 5.1.2: The City shall encourage recycling.	**Consistent.** While this action applies to the City and does not apply to the Modified Project, the Modified Project would provide adequate storage areas in accordance with the City of

Table 7 (Continued)
Consistency with Applicable Conservation Goals of the City of Malibu General Plan

Objective	Policy	Consistency Analysis
the community and dispose of in landfills by 2000.	Policy 5.1.3: The City shall encourage co-composting.	Los Angeles Space Allocation Ordinance (Ordinance No. 171,687), which requires that developments include a recycling area of specified size on the Project Site. In addition, the Modified Project would provide recycling bins at appropriate locations to promote recycling of paper, metal, glass and other recyclable material. **Consistent.** While this policy applies to the City and does not apply to the Modified Project, the Modified Project would help the City reduce solid waste generation by 75-percent consistent with AB 341 by providing recycling bins at appropriate locations to promote recycling of paper, metal, glass, and other recyclable material. Further, the Modified Project would implement a construction waste management plan to recycle and/or salvage a minimum of 75 percent of non-hazardous construction debris.

Source: Eyestone Environmental, 2019.

La Paz Modified Project

Attachments for Air Quality and Greenhouse Gas Emissions

- Attachment A: Air Quality Modeling Output Files
- Attachment B: Greenhouse Gas Worksheets and Modeling Output Files

La Paz Modified Project

Attachments for Air Quality and Greenhouse Gas Emissions

Attachment A

Air Quality Modeling Output Files

- Attachment A:
    - CalEEMod Output – Construction
    - CalEEMod Output – Operations

La Paz Ranch Construction

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Site Specific

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Grading -

Construction Off-road Equipment Mitigation -

Trips and VMT - Export to Calabasas Landfill (10.8 mile one-way distance)

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	18.00	109.00
tblConstructionPhase	NumDays	230.00	114.00
tblConstructionPhase	NumDays	8.00	70.00
tblConstructionPhase	NumDays	18.00	22.00
tblConstructionPhase	NumDays	5.00	100.00
tblConstructionPhase	PhaseEndDate	3/11/2020	9/30/2020
tblConstructionPhase	PhaseEndDate	1/21/2020	4/30/2020
tblConstructionPhase	PhaseEndDate	3/5/2019	7/5/2019
tblConstructionPhase	PhaseEndDate	2/14/2020	9/30/2020
tblConstructionPhase	PhaseEndDate	2/21/2019	11/22/2019
tblConstructionPhase	PhaseStartDate	2/15/2020	5/1/2020
tblConstructionPhase	PhaseStartDate	3/6/2019	11/23/2019
tblConstructionPhase	PhaseStartDate	2/22/2019	4/1/2019
tblConstructionPhase	PhaseStartDate	1/22/2020	9/1/2020
tblConstructionPhase	PhaseStartDate	2/15/2019	7/6/2019

tblGrading	MaterialExported	0.00	24,843.00
tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	21.60
tblTripsAndVMT	HaulingTripNumber	0.00	809.00
tblTripsAndVMT	HaulingTripNumber	3,105.00	1,775.00
tblTripsAndVMT	WorkerTripNumber	5.00	34.00
tblTripsAndVMT	WorkerTripNumber	8.00	34.00
tblTripsAndVMT	WorkerTripNumber	43.00	54.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.9777	35.2747	15.2093	0.0474	12.9431	1.3413	14.2844	6.8586	1.2351	8.0937	0.0000	4,897.3022	4,897.3022	0.8752	0.0000	4,919.1829
2020	12.1163	11.3130	8.7895	0.0220	0.7380	0.4904	1.2285	0.1988	0.4586	0.6573	0.0000	2,156.3304	2,156.3304	0.3412	0.0000	2,164.8613
Maximum	**12.1163**	**35.2747**	**15.2093**	**0.0474**	**12.9431**	**1.3413**	**14.2844**	**6.8586**	**1.2351**	**8.0937**	**0.0000**	**4,897.3022**	**4,897.3022**	**0.8752**	**0.0000**	**4,919.1829**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.9777	35.2747	15.2093	0.0474	5.5717	1.3413	6.9130	2.8164	1.2351	4.0515	0.0000	4,897.3022	4,897.3022	0.8752	0.0000	4,919.1829
2020	12.1163	11.3130	8.7895	0.0220	0.7380	0.4904	1.2285	0.1988	0.4586	0.6573	0.0000	2,156.3304	2,156.3304	0.3412	0.0000	2,164.8613
Maximum	**12.1163**	**35.2747**	**15.2093**	**0.0474**	**5.5717**	**1.3413**	**6.9130**	**2.8164**	**1.2351**	**4.0515**	**0.0000**	**4,897.3022**	**4,897.3022**	**0.8752**	**0.0000**	**4,919.1829**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e

Percent Reduction	0.00	0.00	0.00	0.00	53.88	0.00	47.52	57.28	0.00	46.19	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2019	7/5/2019	5	70	
2	Foundation	Site Preparation	7/6/2019	11/22/2019	5	100	
3	Building Construction	Building Construction	11/23/2019	4/30/2020	5	114	
4	Architectural Coating	Architectural Coating	5/1/2020	9/30/2020	5	109	
5	Paving	Paving	9/1/2020	9/30/2020	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 196,410; Non-Residential Outdoor: 65,470; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Foundation	Welders	1	8.00	46	0.45
Foundation	Pumps	1	8.00	84	0.74
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	0	8.00	130	0.42
Paving	Rollers	0	6.00	80	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Foundation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Graders	0	8.00	187	0.41
Paving	Paving Equipment	1	6.00	132	0.36
Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Foundation	2	34.00	0.00	809.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	34.00	0.00	1,775.00	14.70	6.90	21.60	LD_Mix	HDT_Mix	HHDT
Building Construction	4	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					12.0843	0.0000	12.0843	6.6265	0.0000	6.6265			0.0000			0.0000
Off-Road	2.5299	26.8307	11.8314	0.0222		1.3068	1.3068		1.2023	1.2023		2,201.9825	2,201.9825	0.6967		2,219.3996
Total	**2.5299**	**26.8307**	**11.8314**	**0.0222**	**12.0843**	**1.3068**	**13.3911**	**6.6265**	**1.2023**	**7.8288**		**2,201.9825**	**2,201.9825**	**0.6967**		**2,219.3996**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2595	8.3057	1.8734	0.0213	0.4788	0.0312	0.5100	0.1312	0.0298	0.1611		2,306.9952	2,306.9952	0.1652		2,311.1248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134		388.6585
Total	**0.4478**	**8.4440**	**3.3779**	**0.0252**	**0.8588**	**0.0345**	**0.8933**	**0.2320**	**0.0329**	**0.2649**		**2,695.3197**	**2,695.3197**	**0.1786**		**2,699.7833**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7129	0.0000	4.7129	2.5844	0.0000	2.5844			0.0000			0.0000
Off-Road	2.5299	26.8307	11.8314	0.0222		1.3068	1.3068		1.2023	1.2023	0.0000	2,201.9825	2,201.9825	0.6967		2,219.3996
Total	**2.5299**	**26.8307**	**11.8314**	**0.0222**	**4.7129**	**1.3068**	**6.0197**	**2.5844**	**1.2023**	**3.7866**	**0.0000**	**2,201.9825**	**2,201.9825**	**0.6967**		**2,219.3996**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2595	8.3057	1.8734	0.0213	0.4788	0.0312	0.5100	0.1312	0.0298	0.1611		2,306.9952	2,306.9952	0.1652		2,311.1248
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134		388.6585

Total	**0.4478**	**8.4440**	**3.3779**	**0.0252**	**0.8588**	**0.0345**	**0.8933**	**0.2320**	**0.0329**	**0.2649**		**2,695.3197**	**2,695.3197**	**0.1786**		**2,699.7833**

3.3 Foundation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8555	5.4581	5.5884	9.1300e-003		0.3376	0.3376		0.3376	0.3376		830.5123	830.5123	0.0763		832.4209
Total	**0.8555**	**5.4581**	**5.5884**	**9.1300e-003**	**0.0000**	**0.3376**	**0.3376**	**0.0000**	**0.3376**	**0.3376**		**830.5123**	**830.5123**	**0.0763**		**832.4209**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0779	2.5109	0.5640	6.3500e-003	0.1414	9.2600e-003	0.1507	0.0388	8.8600e-003	0.0476		687.5284	687.5284	0.0500		688.7784
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134		388.6585
Total	**0.2662**	**2.6491**	**2.0684**	**0.0103**	**0.5215**	**0.0125**	**0.5340**	**0.1396**	**0.0119**	**0.1514**		**1,075.8529**	**1,075.8529**	**0.0634**		**1,077.4369**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.8555	5.4581	5.5884	9.1300e-003		0.3376	0.3376		0.3376	0.3376	0.0000	830.5123	830.5123	0.0763		832.4209
Total	**0.8555**	**5.4581**	**5.5884**	**9.1300e-003**	**0.0000**	**0.3376**	**0.3376**	**0.0000**	**0.3376**	**0.3376**	**0.0000**	**830.5123**	**830.5123**	**0.0763**		**832.4209**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0779	2.5109	0.5640	6.3500e-003	0.1414	9.2600e-003	0.1507	0.0388	8.8600e-003	0.0476		687.5284	687.5284	0.0500		688.7784
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1883	0.1382	1.5044	3.9000e-003	0.3800	3.2800e-003	0.3833	0.1008	3.0200e-003	0.1038		388.3245	388.3245	0.0134		388.6585

Total	**0.2662**	**2.6491**	**2.0684**	**0.0103**	**0.5215**	**0.0125**	**0.5340**	**0.1396**	**0.0119**	**0.1514**		**1,075.8529**	**1,075.8529**	**0.0634**		**1,077.4369**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1461	9.7370	6.2020	0.0107		0.5438	0.5438		0.5082	0.5082		1,009.9278	1,009.9278	0.2886		1,017.1420
Total	**1.1461**	**9.7370**	**6.2020**	**0.0107**		**0.5438**	**0.5438**		**0.5082**	**0.5082**		**1,009.9278**	**1,009.9278**	**0.2886**		**1,017.1420**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0910	2.4336	0.7108	5.3400e-003	0.1344	0.0158	0.1502	0.0387	0.0151	0.0538		569.6819	569.6819	0.0400		570.6824
Worker	0.2990	0.2196	2.3894	6.2000e-003	0.6036	5.2000e-003	0.6088	0.1601	4.8000e-003	0.1649		616.7506	616.7506	0.0212		617.2811
Total	**0.3901**	**2.6531**	**3.1002**	**0.0115**	**0.7380**	**0.0210**	**0.7590**	**0.1988**	**0.0199**	**0.2186**		**1,186.4326**	**1,186.4326**	**0.0612**		**1,187.9635**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1461	9.7370	6.2020	0.0107		0.5438	0.5438		0.5082	0.5082	0.0000	1,009.9278	1,009.9278	0.2886		1,017.1420
Total	**1.1461**	**9.7370**	**6.2020**	**0.0107**		**0.5438**	**0.5438**		**0.5082**	**0.5082**	**0.0000**	**1,009.9278**	**1,009.9278**	**0.2886**		**1,017.1420**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0910	2.4336	0.7108	5.3400e-003	0.1344	0.0158	0.1502	0.0387	0.0151	0.0538		569.6819	569.6819	0.0400		570.6824
Worker	0.2990	0.2196	2.3894	6.2000e-003	0.6036	5.2000e-003	0.6088	0.1601	4.8000e-003	0.1649		616.7506	616.7506	0.0212		617.2811

Total	**0.3901**	**2.6531**	**3.1002**	**0.0115**	**0.7380**	**0.0210**	**0.7590**	**0.1988**	**0.0199**	**0.2186**		**1,186.4326**	**1,186.4326**	**0.0612**		**1,187.9635**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0268	8.8839	5.9785	0.0107		0.4747	0.4747		0.4437	0.4437		992.4803	992.4803	0.2846		999.5941
Total	**1.0268**	**8.8839**	**5.9785**	**0.0107**		**0.4747**	**0.4747**		**0.4437**	**0.4437**		**992.4803**	**992.4803**	**0.2846**		**999.5941**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0781	2.2334	0.6455	5.3000e-003	0.1344	0.0107	0.1451	0.0387	0.0102	0.0489		565.8430	565.8430	0.0378		566.7890
Worker	0.2760	0.1957	2.1655	6.0000e-003	0.6036	5.0500e-003	0.6086	0.1601	4.6500e-003	0.1647		598.0070	598.0070	0.0189		598.4782
Total	**0.3540**	**2.4291**	**2.8110**	**0.0113**	**0.7380**	**0.0157**	**0.7538**	**0.1988**	**0.0149**	**0.2137**		**1,163.8501**	**1,163.8501**	**0.0567**		**1,165.2672**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0268	8.8839	5.9785	0.0107		0.4747	0.4747		0.4437	0.4437	0.0000	992.4803	992.4803	0.2846		999.5941
Total	**1.0268**	**8.8839**	**5.9785**	**0.0107**		**0.4747**	**0.4747**		**0.4437**	**0.4437**	**0.0000**	**992.4803**	**992.4803**	**0.2846**		**999.5941**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0781	2.2334	0.6455	5.3000e-003	0.1344	0.0107	0.1451	0.0387	0.0102	0.0489		565.8430	565.8430	0.0378		566.7890
Worker	0.2760	0.1957	2.1655	6.0000e-003	0.6036	5.0500e-003	0.6086	0.1601	4.6500e-003	0.1647		598.0070	598.0070	0.0189		598.4782

Total	**0.3540**	**2.4291**	**2.8110**	**0.0113**	**0.7380**	**0.0157**	**0.7538**	**0.1988**	**0.0149**	**0.2137**		**1,163.8501**	**1,163.8501**	**0.0567**		**1,165.2672**

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.1359					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219		562.8961	562.8961	0.0436		563.9856
Total	**11.6203**	**3.3677**	**3.6628**	**5.9400e-003**		**0.2219**	**0.2219**		**0.2219**	**0.2219**		**562.8961**	**562.8961**	**0.0436**		**563.9856**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0460	0.0326	0.3609	1.0000e-003	0.1006	8.4000e-004	0.1014	0.0267	7.7000e-004	0.0275		99.6678	99.6678	3.1400e-003		99.7464
Total	**0.0460**	**0.0326**	**0.3609**	**1.0000e-003**	**0.1006**	**8.4000e-004**	**0.1014**	**0.0267**	**7.7000e-004**	**0.0275**		**99.6678**	**99.6678**	**3.1400e-003**		**99.7464**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	11.1359					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4844	3.3677	3.6628	5.9400e-003		0.2219	0.2219		0.2219	0.2219	0.0000	562.8961	562.8961	0.0436		563.9856
Total	**11.6203**	**3.3677**	**3.6628**	**5.9400e-003**		**0.2219**	**0.2219**		**0.2219**	**0.2219**	**0.0000**	**562.8961**	**562.8961**	**0.0436**		**563.9856**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0460	0.0326	0.3609	1.0000e-003	0.1006	8.4000e-004	0.1014	0.0267	7.7000e-004	0.0275		99.6678	99.6678	3.1400e-003		99.7464

Total	**0.0460**	**0.0326**	**0.3609**	**1.0000e-003**	**0.1006**	**8.4000e-004**	**0.1014**	**0.0267**	**7.7000e-004**	**0.0275**		**99.6678**	**99.6678**	**3.1400e-003**		**99.7464**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4092	3.9873	4.4118	6.6900e-003		0.2242	0.2242		0.2071	0.2071		634.5519	634.5519	0.1969		639.4746
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4092**	**3.9873**	**4.4118**	**6.6900e-003**		**0.2242**	**0.2242**		**0.2071**	**0.2071**		**634.5519**	**634.5519**	**0.1969**		**639.4746**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634
Total	**0.0409**	**0.0290**	**0.3208**	**8.9000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**88.5936**	**88.5936**	**2.7900e-003**		**88.6634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4092	3.9873	4.4118	6.6900e-003		0.2242	0.2242		0.2071	0.2071	0.0000	634.5519	634.5519	0.1969		639.4746
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4092**	**3.9873**	**4.4118**	**6.6900e-003**		**0.2242**	**0.2242**		**0.2071**	**0.2071**	**0.0000**	**634.5519**	**634.5519**	**0.1969**		**639.4746**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0409	0.0290	0.3208	8.9000e-004	0.0894	7.5000e-004	0.0902	0.0237	6.9000e-004	0.0244		88.5936	88.5936	2.7900e-003		88.6634

Total	**0.0409**	**0.0290**	**0.3208**	**8.9000e-004**	**0.0894**	**7.5000e-004**	**0.0902**	**0.0237**	**6.9000e-004**	**0.0244**		**88.5936**	**88.5936**	**2.7900e-003**		**88.6634**

La Paz Ranch (Modified Project)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Specific Acreage

Construction Phase -

Vehicle Trips - ITE 10th Edition

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,560.00	62,556.00
tblLandUse	LandUseSquareFeet	69,500.00	69,502.00
tblLandUse	LotAcreage	1.44	15.20
tblLandUse	LotAcreage	1.60	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	49.97	45.01
tblVehicleTrips	SU_TR	1.05	0.94
tblVehicleTrips	SU_TR	25.24	22.73
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	42.70	33.94

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Area	2.9514	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005						0.0308
Energy	0.0210	0.1909	0.1604	1.1500e-003		0.0145	0.0145		0.0145	0.0145						230.4559
Mobile	6.0244	28.1259	69.8810	0.2283	18.5610	0.2018	18.7628	4.9674	0.1884	5.1558						23,261.0205
Total	**8.9968**	**28.3169**	**70.0549**	**0.2294**	**18.5610**	**0.2164**	**18.7774**	**4.9674**	**0.2030**	**5.1704**						**23,491.5072**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.9514	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005						0.0308
Energy	0.0185	0.1682	0.1413	1.0100e-003		0.0128	0.0128		0.0128	0.0128						203.0666
Mobile	5.7861	26.5116	64.1461	0.2053	16.5542	0.1826	16.7369	4.4304	0.1705	4.6008						20,926.4839
Total	**8.7560**	**26.6800**	**64.3010**	**0.2063**	**16.5542**	**0.1954**	**16.7497**	**4.4304**	**0.1833**	**4.6137**						**21,129.5812**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.68**	**5.78**	**8.21**	**10.06**	**10.81**	**9.68**	**10.80**	**10.81**	**9.70**	**10.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.05**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.7861	26.5116	64.1461	0.2053	16.5542	0.1826	16.7369	4.4304	0.1705	4.6008						20,926.4839
Unmitigated	6.0244	28.1259	69.8810	0.2283	18.5610	0.2018	18.7628	4.9674	0.1884	5.1558						23,261.0205

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	609.33	138.26	58.81	1,492,796	1,331,400
Regional Shopping Center	2,358.83	3,128.20	1579.74	5,098,775	4,547,514
Total	2,968.16	3,266.45	1,638.54	6,591,570	5,878,914

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0185	0.1682	0.1413	1.0100e-003		0.0128	0.0128		0.0128	0.0128						203.0666
NaturalGas Unmitigated	0.0210	0.1909	0.1604	1.1500e-003		0.0145	0.0145		0.0145	0.0145						230.4559

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	1566.47	0.0169	0.1536	0.1290	9.2000e-004		0.0117	0.0117		0.0117	0.0117						185.3858
Regional Shopping Center	380.833	4.1100e-003	0.0373	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003						45.0701
Total		**0.0210**	**0.1909**	**0.1604**	**1.1400e-003**		**0.0145**	**0.0145**		**0.0145**	**0.0145**						**230.4559**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	1.36036	0.0147	0.1334	0.1120	8.0000e-004		0.0101	0.0101		0.0101	0.0101						160.9936
Regional Shopping Center	0.355507	3.8300e-003	0.0349	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003						42.0730
Total		**0.0185**	**0.1682**	**0.1413**	**1.0100e-003**		**0.0128**	**0.0128**		**0.0128**	**0.0128**						**203.0666**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.9514	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005						0.0308
Unmitigated	2.9514	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005						0.0308

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3354					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	2.6148					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.2600e-003	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005						0.0308
Total	**2.9514**	**1.2000e-004**	**0.0135**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**						**0.0308**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3354					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	2.6148					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.2600e-003	1.2000e-004	0.0135	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005						0.0308
Total	**2.9514**	**1.2000e-004**	**0.0135**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**						**0.0308**

La Paz Modified Project

Attachments for Air Quality and Greenhouse Gas Emissions

Attachment B

Greenhouse Gas Worksheets and Modeling Output Files

- Attachment B-1: GHG Modeling Parameters and Summary of Emissions
    - GHG Parameters and Summary
        - Land Use and Site Enhancement
        - Trip Generation
    - EV Charger Calculation
    - Linscott, Law & Greenspan Project Trip Generation Table
- Appendix B-2: CalEEMod Outputs
    - Construction Annual
    - Modified Project No Project Design Features
    - Modified Project With Project Design Features

La Paz Modified Project

Attachments for Air Quality and Greenhouse Gas Emissions

Attachment B-1

Greenhouse Gas Worksheets and Modeling Output Files

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La Paz Modifie Project
Modeling Parameters

GHG SOURCE CALCULATIONS:

Trip Generation Rates (ADT):

			Weekday			Saturday			Daily Trip Generation Rates		CalEEMod Default		Adjustment Factor for Sunday	
	Quantity	Units	Daily	Internal Capture	Total	Daily	Internal Capture	Total	Weekday	Saturday	Saturday	Sunday		Sunday
Modified Project														
Shopping Center	69.502	KSF	2624	265	2359	3205	77	3128	33.94	45.01	49.97	25.24	0.90	22.73
General Office	62.556	KSF	609		609	138		138	9.74	2.21	2.46	1.05	0.90	0.94
Subtotal	132.058				2968			3266						
Shopping Center Passby					262			801						
Total					**2706**			**2465**						

APPLICABLE VMT REDUCTION MEASURES Included within CalEEMod

Applicable VMT Reduction Measures selected in CalEEMod based on CAPCOA's Quantifying Greenhouse Gas Mitigation Measures, August, 2010.

LUT-1: Increase Density LUT-1 (jobs per acre) .

	Buildout	
Office Employees: Max 1 per 100 sf (90% occupancy)	563	Source: Table V.I-7 (Wastewater Design Flows) , Revised Final EIR.
Shopping Center Employees: 0.271 per 100 sf	188	Source: 2016 LAUSD Generation Rates
Total:	751	
Acreage:	15.2	
Employees per Acre:	49	

LUT-3 Increase Diversity of Urban and Suburban Developments (Mixed Use) (Internally calculated in CalEEMod based on mix of land uses)

Note: Although not quantified, additional trips and VMT reductions would be anticpated with the synergy between the Modified Project and the proposed Whole Foods to the east, Santa Monica College Malibu Campus to the east.

SDT-1 Provide pedestrian Network Improvements **Buildout**

Project Site Only

Total VMT Reduction for Buildout:

Buildout with CAPCOA Measures:	7,036,296	miles
Buildout without CAPCOA Measures:	5,878,914	miles
Percent Reduction:	-16%	

Energy Reduction Measures Included in CalEEMod Run:

High Efficiency Lighting (25%)
14% reduction from 2016 Title 24 standards
Energy Star

Water Reduction Measures Included in CalEEMod Run:

high-efficiency fixtures and appliances, weather-based irrigation systems, drought-tolerant landscaping
30% below baseline requirements (Outdoor)

Waste Diversion Rate Reduction Measures Included in CalEEMod Run:

Consistency with LA County Diversion Rate of 75%

Additional Measures:

6% Parking Stalls Equipped with Charging Station/Plugin (See calculations below)

Summary of GHG Emissions

	Buildout-No PDFs	Buildout-PDFs	EV Charger Reduction	Buildout-PDFs	% Reduction	% Project
Area	0	0		0.0	0%	0%
Energy	572	487		487.4	-15%	17%
Mobile	3,143	2,649	(341)	2,307.6	-27%	79%
Waste	66	16		16.5	-75%	1%
Water	125	78		78.2	-38%	3%
Construction	13	13		13.3	0%	0%
Total	**3,920**	**3,244**		**2,903**	-26%	100%

GHG Emissions Reductions for Commercial Uses Associated with PDF GHG-2 (Electric Vehicle Charging Stations/Plugins)

Step 1: Estimating GHG Emisisons Reduction to Replace Gasoline/Diesel Vehicle with Electric Vehicle

LADWP Electricity Emission Factor (MTCO2E/MWh)[1]	0.32
Fuel Economy of Electric Vehicle (kWh/mile)[2]	0.25
Gasoline/Diesel CO2 Emissions While Running (grams/mile)[3]	313.8
Annual VMT Reduction per Parking Spot (miles/charging station/year)[4]	45,625
Number of On-Site Chargers	32
Annual VMT Reduction All Stations/Plugins (Based on Charge)	1,460,000

Step 2: Estimating GHG Emissions Reduction from Installing Electric Vehicle Charging Stations/Plugins

GHG Emisisons of Gasoline/Diesel Vehicle (MTCO2E/MWh)	458
GHG Emissions of Electric Vehicle (MTCO2E/MWh)	117
GHG Emisisons Reduction (MTCO2E/MWh)	**341**

Notes:
1) CO2 intensity factor reflects a 2021 RPS for SCE (702.44 lbs of CO2E/MWh).
2) US Department of Energy, 2013. Benefits and Considerations of Electricity as a Vehicle Fuel (kWh/mile). Available at: http://afdc.energy.gov/fuels/electricity_benefits.html.
3) CARB, 2017. EMFAC2017, running exhaust emission rate for CO2 and CH4 for light duty gasoline- and diesel-powered vehicles in Los Angeles, aggregated for all models and speeds, averaged over all seasons for 2021.
4) Annual VMT reduction estimated based on an estimate of 10 hours of charge time for a Level 2 charging station that charges at a rate of 25 driving range per hour. It is conservatively assumed that 50% of the miles charged would be driven by the charged vehicles.

Table 1
PROJECT TRIP GENERATION [1]

10-Jan-19

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2] IN	AM PEAK HOUR VOLUMES [2] OUT	AM PEAK HOUR VOLUMES [2] TOTAL	PM PEAK HOUR VOLUMES [2] IN	PM PEAK HOUR VOLUMES [2] OUT	PM PEAK HOUR VOLUMES [2] TOTAL	SAT DAILY TRIP ENDS [2] VOLUMES	SAT PEAK HOUR VOLUMES [2] IN	SAT PEAK HOUR VOLUMES [2] OUT	SAT PEAK HOUR VOLUMES [2] TOTAL
Proposed Modified Project												
Office [3]	62,556 GSF	609	63	10	73	12	60	72	138	28	5	33
Shopping Center [4]	69,502 GSF	2,624	40	25	65	127	138	265	3,205	163	150	313
Subtotal		3,233	103	35	138	139	198	337	3,343	191	155	346
Internal Capture [5], [6]		(265)	(6)	(6)	(12)	(13)	(13)	(26)	(77)	(4)	(4)	(8)
SUBTOTAL DRIVEWAY TRIPS		**2,968**	**97**	**29**	**126**	**126**	**185**	**311**	**3,266**	**187**	**151**	**338**
Pass-By Adjustment [7], [8]												
Shopping Center		(262)	0	0	0	(25)	(28)	(53)	(801)	(41)	(37)	(78)
NET INCREASE "OFF-SITE" TRIPS		**2,706**	**97**	**29**	**126**	**101**	**157**	**258**	**2,465**	**146**	**114**	**260**

[1] Source: ITE "Trip Generation," 10th Edition, 2017.
[2] Trips are one-way traffic movements, entering or leaving.
[3] ITE Land Use Code 710 (General Office Building) trip generation average rates.
- Daily Trip Rate: 9.74 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.16 trips/1,000 SF of floor area; 86% inbound/14% outbound
- PM Peak Hour Trip Rate: 1.15 trips/1,000 SF of floor area; 16% inbound/84% outbound
- Saturday Trip Rate: 2.21 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 0.53 trips/1,000 SF of floor area; 54% inbound/46% outbound

[4] ITE Land Use Code 820 (Shopping Center) trip generation average rates.
- Daily Trip Rate: 37.75 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF of floor area; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF of floor area; 48% inbound/52% outbound
- Saturday Trip Rate: 46.12 trips/1,000 SF of floor area; 50% inbound/50% outbound
- Saturday Peak Hour Trip Rate: 4.50 trips/1,000 SF of floor area; 52% inbound/48% outbound

[5] Peak hour internal capture reduction based on synergy between the shopping center and office uses calculated using NCHRP 684 internal trip capture estimation tool (see attached worksheets). PM peak hour calculation used to determine Saturday MD peak hour internal capture.
[6] Weekday daily internal capture assumed to be average of calculated AM peak hour and PM peak hour internal capture (i.e., 8.2%). Saturday daily internal capture assumed to be equivalent to the calculated MD peak hour internal capture (i.e., 2.3%).
[7] Weekday PM peak hour and Saturday MD peak hour pass-by trip adjustment per City direction (20% for weekday PM peak hour and 25% for Saturday MD peak hour).
[8] Weekday daily pass-by assumed to be average of applied AM peak hour pass-by and PM peak hour pass-by (i.e., 10%). Saturday daily pass-by assumed to be average of applied MD peak hour pass-by (i.e., 25%).

La Paz Modified Project

Attachments for Air Quality and Greenhouse Gas Emissions

Attachment B-2

Greenhouse Gas Worksheets and Modeling Output Files

- Appendix B-2: CalEEMod Outputs
    - Construction Annual
    - Modified Project No Project Design Features
    - Modified Project With Project Design Features

La Paz Ranch Construction

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Site Specific

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Off-road Equipment - Site Specifc Consistent with Approved Project EIR

Trips and VMT - Export to Calabasas Landfill (10.8 mile one-way distance)

Grading -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	8.00	70.00
tblConstructionPhase	NumDays	5.00	100.00
tblConstructionPhase	NumDays	230.00	114.00
tblConstructionPhase	NumDays	18.00	109.00
tblConstructionPhase	NumDays	18.00	22.00
tblGrading	MaterialExported	0.00	24,843.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	21.60
tblTripsAndVMT	HaulingTripNumber	3,105.00	1,775.00
tblTripsAndVMT	HaulingTripNumber	0.00	809.00
tblTripsAndVMT	WorkerTripNumber	8.00	34.00
tblTripsAndVMT	WorkerTripNumber	5.00	34.00
tblTripsAndVMT	WorkerTripNumber	43.00	54.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1789	1.8164	1.0413	2.9500e-003	0.4878	0.0721	0.5599	0.2494	0.0678	0.3172	0.0000	270.5995	270.5995	0.0383	0.0000	271.5561
2020	0.6993	0.7237	0.6555	1.4300e-003	0.0378	0.0359	0.0738	0.0102	0.0344	0.0445	0.0000	125.9222	125.9222	0.0177	0.0000	126.3656
Maximum	**0.6993**	**1.8164**	**1.0413**	**2.9500e-003**	**0.4878**	**0.0721**	**0.5599**	**0.2494**	**0.0678**	**0.3172**	**0.0000**	**270.5995**	**270.5995**	**0.0383**	**0.0000**	**271.5561**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1789	1.8164	1.0413	2.9500e-003	0.2298	0.0721	0.3019	0.1079	0.0678	0.1758	0.0000	270.5993	270.5993	0.0383	0.0000	271.5560
2020	0.6993	0.7237	0.6555	1.4300e-003	0.0378	0.0359	0.0738	0.0102	0.0344	0.0445	0.0000	125.9222	125.9222	0.0177	0.0000	126.3655
Maximum	**0.6993**	**1.8164**	**1.0413**	**2.9500e-003**	**0.2298**	**0.0721**	**0.3019**	**0.1079**	**0.0678**	**0.1758**	**0.0000**	**270.5993**	**270.5993**	**0.0383**	**0.0000**	**271.5560**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**49.08**	**0.00**	**40.72**	**54.50**	**0.00**	**39.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-18-2019	4-17-2019	0.2313	0.2313
2	4-18-2019	7-17-2019	1.1141	1.1141
3	7-18-2019	10-17-2019	0.3014	0.3014
4	10-18-2019	1-17-2020	0.3897	0.3897
5	1-18-2020	4-17-2020	0.4123	0.4123
6	4-18-2020	7-17-2020	0.4782	0.4782
7	7-18-2020	9-30-2020	0.4511	0.4511
		Highest	1.1141	1.1141

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2019	7/5/2019	5	70	
2	Foundation	Site Preparation	7/6/2019	11/22/2019	5	100	
3	Building Construction	Building Construction	11/23/2019	4/30/2020	5	114	
4	Architectural Coating	Architectural Coating	5/1/2020	9/30/2020	5	109	
5	Paving	Paving	9/1/2020	9/30/2020	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 196,410; Non-Residential Outdoor: 65,470; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	0	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation	Pumps	1	8.00	84	0.74
Foundation	Rubber Tired Dozers	0	8.00	247	0.40
Foundation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Foundation	Welders	1	8.00	46	0.45
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	2	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	2	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	1	6.00	132	0.36
Paving	Rollers	0	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	3	34.00	0.00	1,775.00	14.70	6.90	21.60	LD_Mix	HDT_Mix	HHDT
Foundation	2	34.00	0.00	809.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	9.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4230	0.0000	0.4230	0.2319	0.0000	0.2319	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0886	0.9391	0.4141	7.8000e-004		0.0457	0.0457		0.0421	0.0421	0.0000	69.9162	69.9162	0.0221	0.0000	70.4692
Total	**0.0886**	**0.9391**	**0.4141**	**7.8000e-004**	**0.4230**	**0.0457**	**0.4687**	**0.2319**	**0.0421**	**0.2740**	**0.0000**	**69.9162**	**69.9162**	**0.0221**	**0.0000**	**70.4692**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.9600e-003	0.2964	0.0634	7.5000e-004	0.0165	1.0800e-003	0.0176	4.5200e-003	1.0300e-003	5.5600e-003	0.0000	73.9352	73.9352	5.1400e-003	0.0000	74.0637
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9600e-003	4.9700e-003	0.0540	1.4000e-004	0.0130	1.1000e-004	0.0132	3.4600e-003	1.1000e-004	3.5700e-003	0.0000	12.5350	12.5350	4.3000e-004	0.0000	12.5457
Total	**0.0149**	**0.3014**	**0.1174**	**8.9000e-004**	**0.0295**	**1.1900e-003**	**0.0307**	**7.9800e-003**	**1.1400e-003**	**9.1300e-003**	**0.0000**	**86.4701**	**86.4701**	**5.5700e-003**	**0.0000**	**86.6095**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1650	0.0000	0.1650	0.0905	0.0000	0.0905	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0886	0.9391	0.4141	7.8000e-004		0.0457	0.0457		0.0421	0.0421	0.0000	69.9161	69.9161	0.0221	0.0000	70.4691
Total	**0.0886**	**0.9391**	**0.4141**	**7.8000e-004**	**0.1650**	**0.0457**	**0.2107**	**0.0905**	**0.0421**	**0.1325**	**0.0000**	**69.9161**	**69.9161**	**0.0221**	**0.0000**	**70.4691**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.9600e-003	0.2964	0.0634	7.5000e-004	0.0165	1.0800e-003	0.0176	4.5200e-003	1.0300e-003	5.5600e-003	0.0000	73.9352	73.9352	5.1400e-003	0.0000	74.0637
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9600e-003	4.9700e-003	0.0540	1.4000e-004	0.0130	1.1000e-004	0.0132	3.4600e-003	1.1000e-004	3.5700e-003	0.0000	12.5350	12.5350	4.3000e-004	0.0000	12.5457
Total	**0.0149**	**0.3014**	**0.1174**	**8.9000e-004**	**0.0295**	**1.1900e-003**	**0.0307**	**7.9800e-003**	**1.1400e-003**	**9.1300e-003**	**0.0000**	**86.4701**	**86.4701**	**5.5700e-003**	**0.0000**	**86.6095**

3.3 Foundation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.2729	0.2794	4.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	37.6714	37.6714	3.4600e-003	0.0000	37.7580
Total	**0.0428**	**0.2729**	**0.2794**	**4.6000e-004**	**0.0000**	**0.0169**	**0.0169**	**0.0000**	**0.0169**	**0.0169**	**0.0000**	**37.6714**	**37.6714**	**3.4600e-003**	**0.0000**	**37.7580**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8400e-003	0.1280	0.0272	3.2000e-004	6.9500e-003	4.6000e-004	7.4100e-003	1.9100e-003	4.4000e-004	2.3500e-003	0.0000	31.4978	31.4978	2.2200e-003	0.0000	31.5534
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5200e-003	7.1000e-003	0.0772	2.0000e-004	0.0186	1.6000e-004	0.0188	4.9500e-003	1.5000e-004	5.1000e-003	0.0000	17.9071	17.9071	6.2000e-004	0.0000	17.9225
Total	**0.0124**	**0.1351**	**0.1044**	**5.2000e-004**	**0.0256**	**6.2000e-004**	**0.0262**	**6.8600e-003**	**5.9000e-004**	**7.4500e-003**	**0.0000**	**49.4049**	**49.4049**	**2.8400e-003**	**0.0000**	**49.4758**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0428	0.2729	0.2794	4.6000e-004		0.0169	0.0169		0.0169	0.0169	0.0000	37.6714	37.6714	3.4600e-003	0.0000	37.7579
Total	**0.0428**	**0.2729**	**0.2794**	**4.6000e-004**	**0.0000**	**0.0169**	**0.0169**	**0.0000**	**0.0169**	**0.0169**	**0.0000**	**37.6714**	**37.6714**	**3.4600e-003**	**0.0000**	**37.7579**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8400e-003	0.1280	0.0272	3.2000e-004	6.9500e-003	4.6000e-004	7.4100e-003	1.9100e-003	4.4000e-004	2.3500e-003	0.0000	31.4978	31.4978	2.2200e-003	0.0000	31.5534
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.5200e-003	7.1000e-003	0.0772	2.0000e-004	0.0186	1.6000e-004	0.0188	4.9500e-003	1.5000e-004	5.1000e-003	0.0000	17.9071	17.9071	6.2000e-004	0.0000	17.9225
Total	**0.0124**	**0.1351**	**0.1044**	**5.2000e-004**	**0.0256**	**6.2000e-004**	**0.0262**	**6.8600e-003**	**5.9000e-004**	**7.4500e-003**	**0.0000**	**49.4049**	**49.4049**	**2.8400e-003**	**0.0000**	**49.4758**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1315	0.0837	1.4000e-004		7.3400e-003	7.3400e-003		6.8600e-003	6.8600e-003	0.0000	12.3686	12.3686	3.5300e-003	0.0000	12.4569
Total	**0.0155**	**0.1315**	**0.0837**	**1.4000e-004**		**7.3400e-003**	**7.3400e-003**		**6.8600e-003**	**6.8600e-003**	**0.0000**	**12.3686**	**12.3686**	**3.5300e-003**	**0.0000**	**12.4569**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-003	0.0335	9.1600e-003	7.0000e-005	1.7900e-003	2.1000e-004	2.0000e-003	5.2000e-004	2.0000e-004	7.2000e-004	0.0000	7.0893	7.0893	4.7000e-004	0.0000	7.1012
Worker	3.6500e-003	3.0400e-003	0.0331	9.0000e-005	7.9900e-003	7.0000e-005	8.0600e-003	2.1200e-003	6.0000e-005	2.1900e-003	0.0000	7.6790	7.6790	2.6000e-004	0.0000	7.6856
Total	**4.8500e-003**	**0.0365**	**0.0423**	**1.6000e-004**	**9.7800e-003**	**2.8000e-004**	**0.0101**	**2.6400e-003**	**2.6000e-004**	**2.9100e-003**	**0.0000**	**14.7683**	**14.7683**	**7.3000e-004**	**0.0000**	**14.7867**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0155	0.1315	0.0837	1.4000e-004		7.3400e-003	7.3400e-003		6.8600e-003	6.8600e-003	0.0000	12.3686	12.3686	3.5300e-003	0.0000	12.4569
Total	**0.0155**	**0.1315**	**0.0837**	**1.4000e-004**		**7.3400e-003**	**7.3400e-003**		**6.8600e-003**	**6.8600e-003**	**0.0000**	**12.3686**	**12.3686**	**3.5300e-003**	**0.0000**	**12.4569**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2000e-003	0.0335	9.1600e-003	7.0000e-005	1.7900e-003	2.1000e-004	2.0000e-003	5.2000e-004	2.0000e-004	7.2000e-004	0.0000	7.0893	7.0893	4.7000e-004	0.0000	7.1012
Worker	3.6500e-003	3.0400e-003	0.0331	9.0000e-005	7.9900e-003	7.0000e-005	8.0600e-003	2.1200e-003	6.0000e-005	2.1900e-003	0.0000	7.6790	7.6790	2.6000e-004	0.0000	7.6856
Total	**4.8500e-003**	**0.0365**	**0.0423**	**1.6000e-004**	**9.7800e-003**	**2.8000e-004**	**0.0101**	**2.6400e-003**	**2.6000e-004**	**2.9100e-003**	**0.0000**	**14.7683**	**14.7683**	**7.3000e-004**	**0.0000**	**14.7867**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0447	0.3865	0.2601	4.6000e-004		0.0207	0.0207		0.0193	0.0193	0.0000	39.1658	39.1658	0.0112	0.0000	39.4465
Total	**0.0447**	**0.3865**	**0.2601**	**4.6000e-004**		**0.0207**	**0.0207**		**0.0193**	**0.0193**	**0.0000**	**39.1658**	**39.1658**	**0.0112**	**0.0000**	**39.4465**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0990	0.0268	2.3000e-004	5.7500e-003	4.6000e-004	6.2100e-003	1.6600e-003	4.4000e-004	2.1000e-003	0.0000	22.6937	22.6937	1.4400e-003	0.0000	22.7298
Worker	0.0108	8.7400e-003	0.0967	2.7000e-004	0.0257	2.2000e-004	0.0260	6.8400e-003	2.0000e-004	7.0400e-003	0.0000	23.9915	23.9915	7.6000e-004	0.0000	24.0104
Total	**0.0142**	**0.1077**	**0.1235**	**5.0000e-004**	**0.0315**	**6.8000e-004**	**0.0322**	**8.5000e-003**	**6.4000e-004**	**9.1400e-003**	**0.0000**	**46.6853**	**46.6853**	**2.2000e-003**	**0.0000**	**46.7402**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0447	0.3865	0.2601	4.6000e-004		0.0207	0.0207		0.0193	0.0193	0.0000	39.1657	39.1657	0.0112	0.0000	39.4465
Total	**0.0447**	**0.3865**	**0.2601**	**4.6000e-004**		**0.0207**	**0.0207**		**0.0193**	**0.0193**	**0.0000**	**39.1657**	**39.1657**	**0.0112**	**0.0000**	**39.4465**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3100e-003	0.0990	0.0268	2.3000e-004	5.7500e-003	4.6000e-004	6.2100e-003	1.6600e-003	4.4000e-004	2.1000e-003	0.0000	22.6937	22.6937	1.4400e-003	0.0000	22.7298
Worker	0.0108	8.7400e-003	0.0967	2.7000e-004	0.0257	2.2000e-004	0.0260	6.8400e-003	2.0000e-004	7.0400e-003	0.0000	23.9915	23.9915	7.6000e-004	0.0000	24.0104
Total	**0.0142**	**0.1077**	**0.1235**	**5.0000e-004**	**0.0315**	**6.8000e-004**	**0.0322**	**8.5000e-003**	**6.4000e-004**	**9.1400e-003**	**0.0000**	**46.6853**	**46.6853**	**2.2000e-003**	**0.0000**	**46.7402**

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.1835	0.1996	3.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	27.8305	27.8305	2.1500e-003	0.0000	27.8843
Total	**0.6333**	**0.1835**	**0.1996**	**3.2000e-004**		**0.0121**	**0.0121**		**0.0121**	**0.0121**	**0.0000**	**27.8305**	**27.8305**	**2.1500e-003**	**0.0000**	**27.8843**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2600e-003	1.8300e-003	0.0202	6.0000e-005	5.3700e-003	5.0000e-005	5.4200e-003	1.4300e-003	4.0000e-005	1.4700e-003	0.0000	5.0097	5.0097	1.6000e-004	0.0000	5.0137
Total	**2.2600e-003**	**1.8300e-003**	**0.0202**	**6.0000e-005**	**5.3700e-003**	**5.0000e-005**	**5.4200e-003**	**1.4300e-003**	**4.0000e-005**	**1.4700e-003**	**0.0000**	**5.0097**	**5.0097**	**1.6000e-004**	**0.0000**	**5.0137**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6069					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.1835	0.1996	3.2000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	27.8304	27.8304	2.1500e-003	0.0000	27.8843
Total	**0.6333**	**0.1835**	**0.1996**	**3.2000e-004**		**0.0121**	**0.0121**		**0.0121**	**0.0121**	**0.0000**	**27.8304**	**27.8304**	**2.1500e-003**	**0.0000**	**27.8843**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2600e-003	1.8300e-003	0.0202	6.0000e-005	5.3700e-003	5.0000e-005	5.4200e-003	1.4300e-003	4.0000e-005	1.4700e-003	0.0000	5.0097	5.0097	1.6000e-004	0.0000	5.0137
Total	**2.2600e-003**	**1.8300e-003**	**0.0202**	**6.0000e-005**	**5.3700e-003**	**5.0000e-005**	**5.4200e-003**	**1.4300e-003**	**4.0000e-005**	**1.4700e-003**	**0.0000**	**5.0097**	**5.0097**	**1.6000e-004**	**0.0000**	**5.0137**

3.6 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5000e-003	0.0439	0.0485	7.0000e-005		2.4700e-003	2.4700e-003		2.2800e-003	2.2800e-003	0.0000	6.3322	6.3322	1.9600e-003	0.0000	6.3813
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5000e-003**	**0.0439**	**0.0485**	**7.0000e-005**		**2.4700e-003**	**2.4700e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.3322**	**6.3322**	**1.9600e-003**	**0.0000**	**6.3813**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.3000e-004	3.6200e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8988	0.8988	3.0000e-005	0.0000	0.8995
Total	**4.1000e-004**	**3.3000e-004**	**3.6200e-003**	**1.0000e-005**	**9.6000e-004**	**1.0000e-005**	**9.7000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8988**	**0.8988**	**3.0000e-005**	**0.0000**	**0.8995**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5000e-003	0.0439	0.0485	7.0000e-005		2.4700e-003	2.4700e-003		2.2800e-003	2.2800e-003	0.0000	6.3322	6.3322	1.9600e-003	0.0000	6.3813
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.5000e-003**	**0.0439**	**0.0485**	**7.0000e-005**		**2.4700e-003**	**2.4700e-003**		**2.2800e-003**	**2.2800e-003**	**0.0000**	**6.3322**	**6.3322**	**1.9600e-003**	**0.0000**	**6.3813**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1000e-004	3.3000e-004	3.6200e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8988	0.8988	3.0000e-005	0.0000	0.8995
Total	**4.1000e-004**	**3.3000e-004**	**3.6200e-003**	**1.0000e-005**	**9.6000e-004**	**1.0000e-005**	**9.7000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8988**	**0.8988**	**3.0000e-005**	**0.0000**	**0.8995**

La Paz Ranch (Modified Project No PDFs)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Specific Acreage

Construction Phase -

Vehicle Trips - ITE 10th Edition

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,560.00	62,556.00
tblLandUse	LandUseSquareFeet	69,500.00	69,502.00
tblLandUse	LotAcreage	1.44	15.20
tblLandUse	LotAcreage	1.60	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	49.97	46.11
tblVehicleTrips	SU_TR	1.05	0.94
tblVehicleTrips	SU_TR	25.24	23.29
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	42.70	37.75

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003
Energy	3.8300e-003	0.0348	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003						572.2395
Mobile	0.8618	4.2110	10.3682	0.0340	2.6705	0.0295	2.7000	0.7159	0.0275	0.7434						3,143.2841
Waste						0.0000	0.0000		0.0000	0.0000						65.9606
Water						0.0000	0.0000		0.0000	0.0000						125.2912
Total	**1.4041**	**4.2458**	**10.3991**	**0.0342**	**2.6705**	**0.0321**	**2.7027**	**0.7159**	**0.0302**	**0.7460**						**3,906.7789**

4.0 Operational Detail - Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.8618	4.2110	10.3682	0.0340	2.6705	0.0295	2.7000	0.7159	0.0275	0.7434						3,143.2841

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	
Land Use	Weekday	Saturday	Sunday	Annual VMT	
General Office Building	609.33	138.26	58.81	1,492,796	
Regional Shopping Center	2,623.63	3,204.65	1618.66	5,543,500	
Total	3,232.96	3,342.90	1,677.46	7,036,296	

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						534.0849
NaturalGas Unmitigated	3.8300e-003	0.0348	0.0293	2.1000e-004		2.6500e-003	2.6500e-003		2.6500e-003	2.6500e-003						38.1546

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	571762	3.0800e-003	0.0280	0.0235	1.7000e-004		2.1300e-003	2.1300e-003		2.1300e-003	2.1300e-003						30.6927
Regional Shopping Center	139004	7.5000e-004	6.8100e-003	5.7200e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004						7.4619
Total		**3.8300e-003**	**0.0348**	**0.0293**	**2.1000e-004**		**2.6500e-003**	**2.6500e-003**		**2.6500e-003**	**2.6500e-003**						**38.1546**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	875158				279.8418
Regional Shopping Center	795103				254.2431
Total					**534.0849**

6.0 Area Detail

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Unmitigated	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0612					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.4772					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.6000e-004	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003
Total	**0.5386**	**2.0000e-005**	**1.6900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**						**3.4900e-003**

7.0 Water Detail

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated				125.2912

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			

General Office Building	11.119 / 6.81489			85.6403
Regional Shopping Center	5.14804 / 3.15525			39.6509
Total				**125.2912**

8.0 Waste Detail

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated				65.9606

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	58.18				29.2588
Regional Shopping Center	72.98				36.7018
Total					**65.9606**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

La Paz Ranch (Modified Project)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	62.56	1000sqft	15.20	62,556.00	0
Regional Shopping Center	69.50	1000sqft	0.00	69,502.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	8			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project Specific Acreage

Construction Phase -

Vehicle Trips - ITE 10th Edition

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	62,560.00	62,556.00
tblLandUse	LandUseSquareFeet	69,500.00	69,502.00
tblLandUse	LotAcreage	1.44	15.20
tblLandUse	LotAcreage	1.60	0.00
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	ST_TR	49.97	45.01
tblVehicleTrips	SU_TR	1.05	0.94
tblVehicleTrips	SU_TR	25.24	22.73
tblVehicleTrips	WD_TR	11.03	9.74
tblVehicleTrips	WD_TR	42.70	33.94

2.0 Emissions Summary

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Area	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003
Energy	3.3800e-003	0.0307	0.0258	1.8000e-004		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003						487.4301
Mobile	0.7717	3.7090	8.8923	0.0287	2.2313	0.0250	2.2562	0.5981	0.0233	0.6214						2,649.0127
Waste						0.0000	0.0000		0.0000	0.0000						16.4901
Water						0.0000	0.0000		0.0000	0.0000						78.1840
Total	**1.3137**	**3.7397**	**8.9197**	**0.0288**	**2.2313**	**0.0273**	**2.2586**	**0.5981**	**0.0256**	**0.6238**						**3,231.1205**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.49**	**5.81**	**8.35**	**10.05**	**10.81**	**9.79**	**10.80**	**10.81**	**9.79**	**10.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**12.84**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7717	3.7090	8.8923	0.0287	2.2313	0.0250	2.2562	0.5981	0.0233	0.6214						2,649.0127

4.2 Trip Summary Information

	Average Daily Trip Rate				Mitigated
Land Use	Weekday	Saturday	Sunday		Annual VMT
General Office Building	609.33	138.26	58.81		1,331,400
Regional Shopping Center	2,358.83	3,128.20	1579.74		4,547,514
Total	2,968.16	3,266.45	1,638.54		5,878,914

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Regional Shopping Center	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000						453.8101
NaturalGas Mitigated	3.3800e-003	0.0307	0.0258	1.8000e-004		2.3300e-003	2.3300e-003		2.3300e-003	2.3300e-003						33.6199

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	496532	2.6800e-003	0.0243	0.0205	1.5000e-004		1.8500e-003	1.8500e-003		1.8500e-003	1.8500e-003						26.6543
Regional Shopping Center	129760	7.0000e-004	6.3600e-003	5.3400e-003	4.0000e-005		4.8000e-004	4.8000e-004		4.8000e-004	4.8000e-004						6.9657
Total		**3.3800e-003**	**0.0307**	**0.0258**	**1.9000e-004**		**2.3300e-003**	**2.3300e-003**		**2.3300e-003**	**2.3300e-003**						**33.6200**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	762470				243.8084
Regional Shopping Center	656745				210.0017
Total					**453.8101**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5386	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0612					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	0.4772					0.0000	0.0000		0.0000	0.0000						0.0000
Landscaping	1.6000e-004	2.0000e-005	1.6900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005						3.4900e-003
Total	**0.5386**	**2.0000e-005**	**1.6900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**						**3.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Use Reclaimed Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				78.1840

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	8.89522 / 1.20957				53.4411
Regional Shopping Center	4.11843 / 0.560021				24.7429
Total					**78.1840**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				16.4901

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	14.545				7.3147
Regional Shopping Center	18.245				9.1754
Total					**16.4901**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D

Water Quality Mitigation Plan

WATER QUALITY MITIGATION PLAN (WQMP)

For

La Paz Ranch
23465 Civic Center Way
Malibu, CA 90265

Psomas Project No.: 1MAR590100
September 19, 2017

Prepared for:

Mr. Chris Shanley
Marmol Radziner
12210 Nebraska Avenue
Los Angeles, CA 90025

Prepared by:

PSOMAS
555 S. Flower Street, Suite 4300
Los Angeles, California 90071
Telephone: (213) 223-1400
Fax: (213) 223-1444

Ion Cretu, P.E. R.C.E. No. C71513 Date **09-21-17**

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Operations and Maintenance Plan

1.0 Purpose and Scope

The purpose of this study is to demonstrate that the proposed project site can be designed to meet the requirements of the City of Malibu current Municipal Stormwater Sewer System (MS4) permit.

Psomas has been retained by Marmol Radziner to prepare a water quality report for the proposed La Paz Ranch Project. The project site is a 15.27 acres site located in the Malibu area of Los Angeles. The study area is bordered by La Paz Lane to the north, Malibu Road to the south, and Civic Center Way to the west.

2.0 Site Characterization

Current Property Use: Vacant rough graded lot.

Proposed Property Use: 7 one story buildings on Parcel A, and 3 two story buildings on Parcel B. 2 of the one story buildings on Parcel A are on grade. The remaining 5 one story buildings are over the garage.

Availability of Soils Report: The soil of the watershed is classified as Type 029, as shown in the Malibu Beach quadrant of Hydrologic Map figure LACDPW 1-H1.15, found in *Appendix 1*. The project area site is 15.27 acres in size. The disturbed area totals 12.7 acres. Therefore, the total area to be studied is 12.7 acres in size.

Receiving Waters: Runoff from the project site is conveyed to the Pacific Ocean via the Los Angeles County storm drain and Cross Creek. The outlet is located at Malibu Lagoon.

As shown in Table 1, Amarillo Beach is listed on the 2002 CWA Section 303(d) list (approved by USEPA July 2003) as having fish consumption advisories for DDT and PCBs. Currently, the beneficial uses listed for this waterway are navigation, water contact and non-water contact recreation, commercial and sport fishing, marine and wildlife habitat, and shellfish harvesting.

Table 1: Receiving Waters for Urban Runoff from Site[1]

Receiving Waters	303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Uses
Amarillo Beach	DDT, PCBs	Existing: NAV, REC1, REC2, COMM, MAR, WILD, SHELL	Not applicable

1 California Regional Water Quality Control Board, Los Angeles Region. Water Quality Control Plan Los Angeles Region. June 13, 1994.

3.0 Pollutants of Concern

Site development will consist of 10 two-story retail buildings. Associated site improvements will also include a paved driveway, curb and gutter, walkways, landscaping, grading, and on-site BMPs to achieve applicable water quality-based effluent limitations and/or receiving water limitations established pursuant to TMDLs. Pollutants in storm water discharges will be reduced to the maximum extent practicable.

Table 2 lists the pollutants anticipated to be generated by a proposed land use. Because the project is considered a comercial development with restaurants and parking areas, the following pollutants are anticipated[2]: heavy metals, trash and debris, oxygen demanding substances, oil and grease.

Table 2: Typical Pollutants of Concern by Land Use (1)

Table 2. Anticipated and Potential Pollutants Generated by Land Use Type

	General Pollutant Categories								
Priority Project Categories	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P(1)	P(2)	P	X
Commercial Development >100,000 ft^2	P(1)	P(1)		P(2)	X	P(5)	X	P(3)	P(5)
Automotive service facilities			X	X(4)(5)	X		X		
Retail Gasoline Outlets			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	
Hillside development	X	X			X	X	X		X
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X		

X = anticipated
P = potential
(1) A potential pollutant if landscaping exists on-site
(2) A potential pollutant if the project includes uncovered parking areas
(3) A potential pollutant if land use involves food or animal waste products
(4) Including petroleum hydrocarbons
(5) Including solvents

2 Source: County of Los Angeles Low Impact Development Standards Manual, February 2014

Stormwater best management practices (BMPs) proposed for the project will be designed to address this pollutants of concern produced by the development.

The BMPs will be designed to collect, treat, detain, and release runoff. Any additional stormwater runoff beyond what is required to meet MS4 Permit requirements will be treated and discharged into the public storm drain system. To the maximum extent practical, storm water quality treatment will be provided with biofiltration basins.

Catch basin inserts are designed to remove sediment and debris and floating oils and grease. Once the run-off has been treated through the catch basin insert it will be detained on-site and then reused for landscape irrigation.

4.0 Hydrology

4.1 General Approach

The hydrology study includes an analysis of required storm water quality volume, and pre and post storm water quantity flow rates.

Storm water quality design volume is defined as runoff from the 0.75-inch, 24-hour rain event, or the 85th percentile, 24-hour storm event, whichever is greater, per Regional Water Quality Control Board criteria.

4.2 Data Sources

The primary sources of data were the *LACDPW Low Impact Development Manual (Feb 2014)*.

4.3 Watershed Characteristics

The La Paz Ranch project is located within the County of Los Angeles and in the Malibu Beach quadrant of Isohyetal Map figure LACDPW 1-H1.15, in Appendix 1. The 50-year (24-hour) rainfall Isohyet nearest the project area is 7.00. The project site is tributary to the LACDPW storm drain, which discharges to the Pacific Ocean through Malibu Lagoon.

The *LACDPW HydroCalc* program was used to calculate the time of concentration and peak runoff flow rate for existing and proposed conditions. In accordance with LACDPW requirements, the 100-year storm event was used as the main design storm in this analysis.

4.4 Existing Condition Results

The existing site is made up of a vacant lot and there are no paved surfaces. The whole project site is 15.27 acres. This study will analyze the portions of the site that are to be disturbed by the proposed development, totaling 12.7 acres. Currently, the existing site drains by sheet flow towards the southern end of the property. Storm runoff from the site is currently collected into a storm drain system that is off site on Civic Center Way. The storm drain system drains into an existing Los Angeles County storm drain system that ultimately discharges into the Malibu Lagoon. Water from the undisturbed portion of the site will continue to drain as it does in the existing condition before being collected and routed to the storm drain in Civic Center Way mentioned above.

4.5 Storm Water Quality Design Volume

Storm water quality design volume is defined as runoff from the 0.75-inch, 24-hour storm event, or from the 85th percentile (0.7-inch for project area), 24-hour storm event, whichever is greater, per Regional Water Quality Control Board criteria. In this case the 0.75-inch is the greater volume. The peak mitigation flows and volumes for La Paz Ranch are summarized in Table 3 below.

Table 3: Peak Mitigation Flow and Volume Summary

Area ID	Area [acre]	85th Percentile 24-Hour Storm Event [cu-ft]	0.75-Inch, 24-Hour Storm Event [cu-ft]	Proposed Treatment Volume [cu-ft]
1	1.8	3,902	4,182	
2	0.8	1,703	1,825	
3	3.1	4,407	4,721	8,732
4	0.4	564	606	
5	0.8	1,283	1,378	
6	4.0	4,557	4,882	16,396
7	1.8	1,615	1,731	11,692
Total:	12.7	18,031	19,325	36,820

The 0.75-inch, 24-hour rainfall event provides the greater peak mitigation flows and volumes between the two storm events, and therefore will be used for sizing the biofiltration area. However, since the biofiltration areas will also be used to detain the city of Malibu requirements of 1” over impervious and 0.5” over pervious surfaces, the biofiltration areas exceed the treatment needs of the 0.75-inch, 24-hour storm event. The biofiltration areas are sized to treat 36,820 cu-ft volume. All overflows will be released into the storm drain. The water from areas 1, 2, 4, and 5 will be pumped to the biofiltration areas in areas 6 and 7, while the water generated in areas 3, 6, and 7 will be conveyed to their corresponding biofiltration basins by gravity.

5.0 Best Management Practices

Source and Treatment Control Best Management Practices (BMPs) are required for this project.

5.1 Site Design BMPs

5.1.1 Minimize Stormwater Pollutants of Concern

The project site will minimize pollutants of concern by maximizing the reduction of pollutant loadings to the Maximum Extent Practicable. Pollutants of concern are addressed through filter inserts and biofiltration basins as shown on the La Paz Ranch WQMP Exhibit in *Appendix 4.*

5.1.2 Conserve Natural Areas

The total impervious area for the project site developed as part of these improvements is 7.28 acres (48%) and the total pervious area is 7.99 acres (52%). A significant portion of the project site will remain pervious since natural open space areas will be conserved around the perimeter of the site.

5.2 Source Control BMPs

5.2.1 Protect Slopes and Channels

The existing project site consists of a vacant lot. The natural slopes on the north end of the site will remain undisturbed. Disturbed slopes will be stabilized using retaining walls. Flows will be collected into swales and directed through the on-site storm drain to the storm drain system in Civic Center Way.

5.2.2 Provide Storm Drain System Stenciling and Signage

As a Source Control BMP, Stenciling and Signage will be required for areas with catch basins. Sample stencils are also included in *Appendix 5*. All catch basins draining to the storm drain system will be stenciled with “No Dumping, Drains to Ocean” or equivalent wording approved by the City of Malibu. The owner or the owner’s representative will be responsible for maintaining the legibility of “No Dumping, This Drains to Ocean” stenciling and the inspection of which will be done annually.

5.2.4. Properly Design Trash Storage Areas

Trash enclosures will be walled. Drainage from adjoining roofs and pavement will not enter the trash storage area. The trash bin areas will utilize fox drain diversion, with connections to the storm drain and sewer. The trash bins will be leak proof and have attached covers or lids.

5.3 Treatment Control BMPs

5.3.1 Kristar FloGard Plus Catch Basin Insert

Kristar FloGard Plus catch basin inserts are designed to capture sediment, debris, trash, and oils and grease from low flows. The inserts allow for high flows to bypass through the device while retaining sediment, debris and trash. Filter inserts are used for pre-treatment of the storm water before the treatment in the biofiltration area.

5.3.2 Biofiltration area

The biofiltration areas are sized to treat 36,820 cu-ft volume storm water. The biofiltration areas are designed to detain the volume required by the City of Malibu (1" over impervious area and ½" over pervious area disturbed) for Storm water management plan. The storm water collected in the biofiltration areas will slowly infiltrate through the soil and gravel before being collected by the subdrain and drained into the storm drain system.

The biofiltration area will treat the required volume in less than 4hrs. See calculations on Appendix 3.

BMP design details are shown on the WQMP Site Plan in *Appendix 4*. Operation and Maintenance guidelines and sample storm drain stencils are provided in *Appendix 5*.

6.0 Master Covenant and Agreement (C&A)

6.1 Proof of Ongoing BMP Maintenance

The Operations and Maintenance of the Treatment Control BMPs will be the responsibility of the owner. The current contact information for the responsible party is:

Contact: Tierney Wandler, Malibu Development LLC

Address: 1317 Fifth Street, Suite 200
Santa Monica, CA 90401
Phone: (310) 255-0050

It will be the responsibility of the property owner to provide maintenance, inspection and repair of the Treatment Control BMPs.

The developer accepts responsibility for all structural and treatment control BMP maintenance until the time the property is transferred. The transfer of property to a private entity (owner) will requires the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. Printed educational materials are required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, signs that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information is also required with any subsequent sale of the property.

7.0 Limitations

7.0 Limitations

This report was prepared to comply with the guidelines established by the County of Los Angeles and their representatives. Evaluation of the appropriateness of these guidelines and the accuracy of the County data were beyond the scope of this work.

Usage of this report is limited to address the purpose and scope previously defined by the project owner. Psomas shall not be held responsible for any unauthorized application of this report and the contents therein.

The opinions represented in this report have been derived in accordance with current standards of civil engineering practice. No other warranty is expressed or implied.

8.0 References

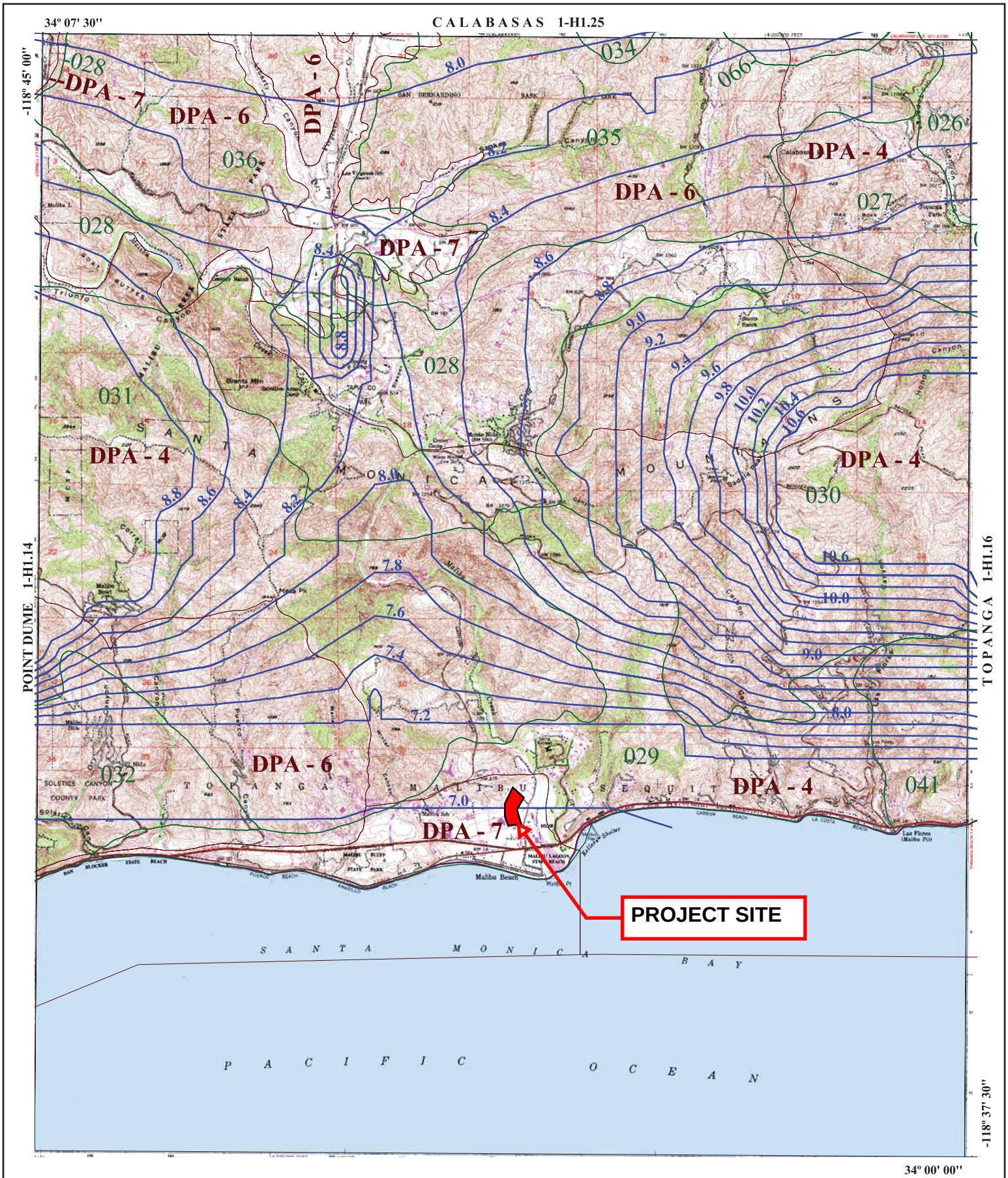
Los Angeles County Department of Public Works, *LACDPW Hydrology/ Sedimentation Manual and Appendices* (1991, 1992, 1993, 2002)

Los Angeles County Department of Public Works, *LACDPW TC v1.0 Manual, TC_calc_depth.xls* (December 1991, June 2002, July 13, 2004)

Los Angeles Regional Water Quality Control Board, *Standard Urban Stormwater Mitigation Plan for Los Angeles County and Cities in Los Angeles County* (March 2000)

Appendix 1 LACDPW Hydrology Data

Isohyet and Hydrologic Soil Classification Map



N
W E
S

016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

MALIBU BEACH
50-YEAR 24-HOUR ISOHYET

1-H1.15

LOS ANGELES COUNTY PUBLIC WORKS
Public Service That Works

Department of Public Works
dpw.lacounty.gov

search our site..

Hydrology Map

A GIS viewer application to view the data for the hydrology manual.

LAYERS

- ☐ 50yr Two Tenths (Rainfall)
- ☐ DPA Zones
- ☐ Soils 2004
- ☑ Final 85th Percentile, 24-hr Rainfall
- ☐ Final 95th Percentile, 24-hr Rainfall
- ☐ 1-year, 1-hour Rainfall Intensity

SEARCH

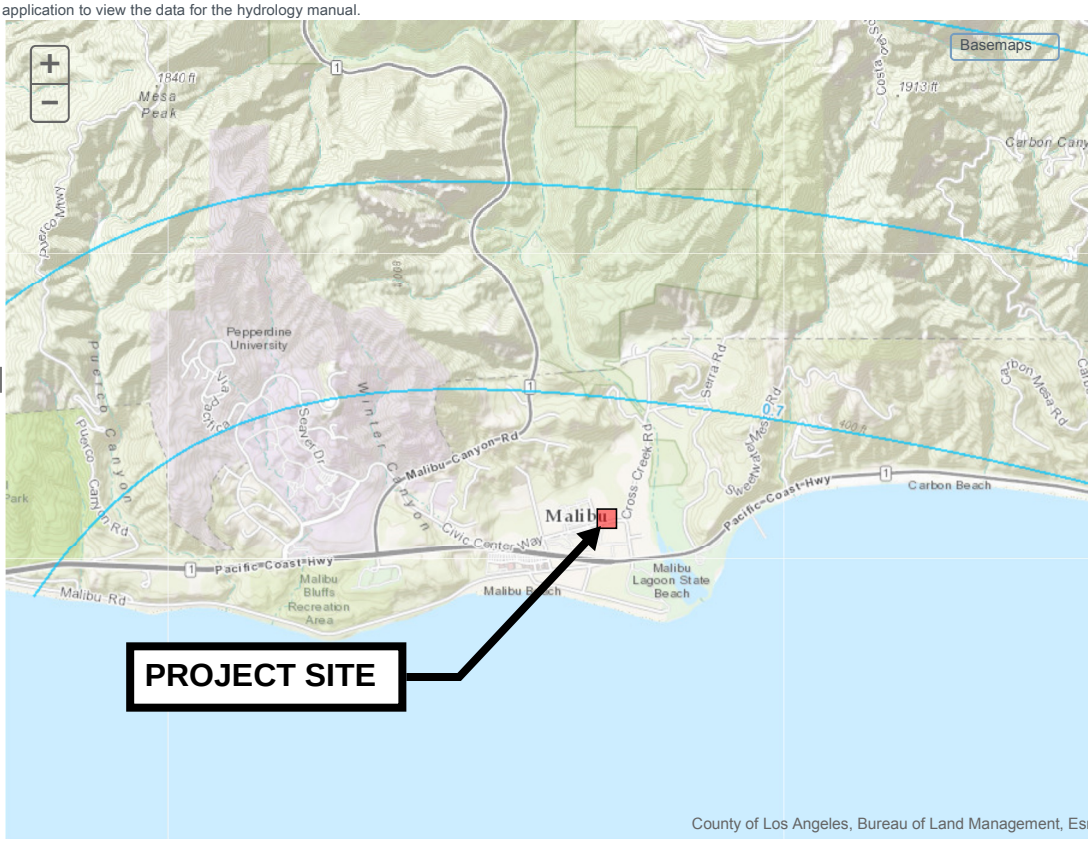
Enter Address, Cross Street, or Parcel No.:
(ex: 900 S. Fremont Ave., Fremont@Valley, 5342005904)

23465 Civic Center Way

Search

Address Search Results:

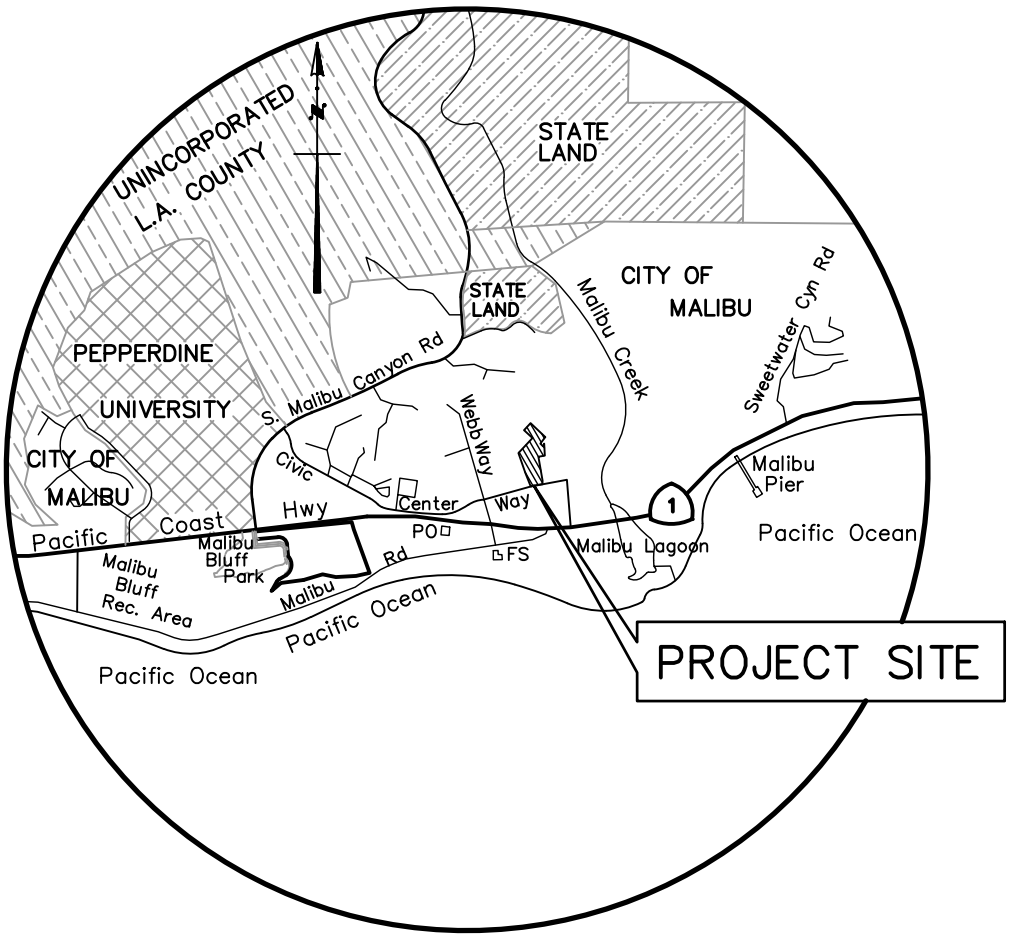
23465 Civic Center Way



Map Tips

Appendix 2 WQMP Project Site

Location and Vicinity Map



VICINITY MAP

NOT TO SCALE

Appendix 3 WQMP Calculations

Peak Flow Hydrologic Analysis

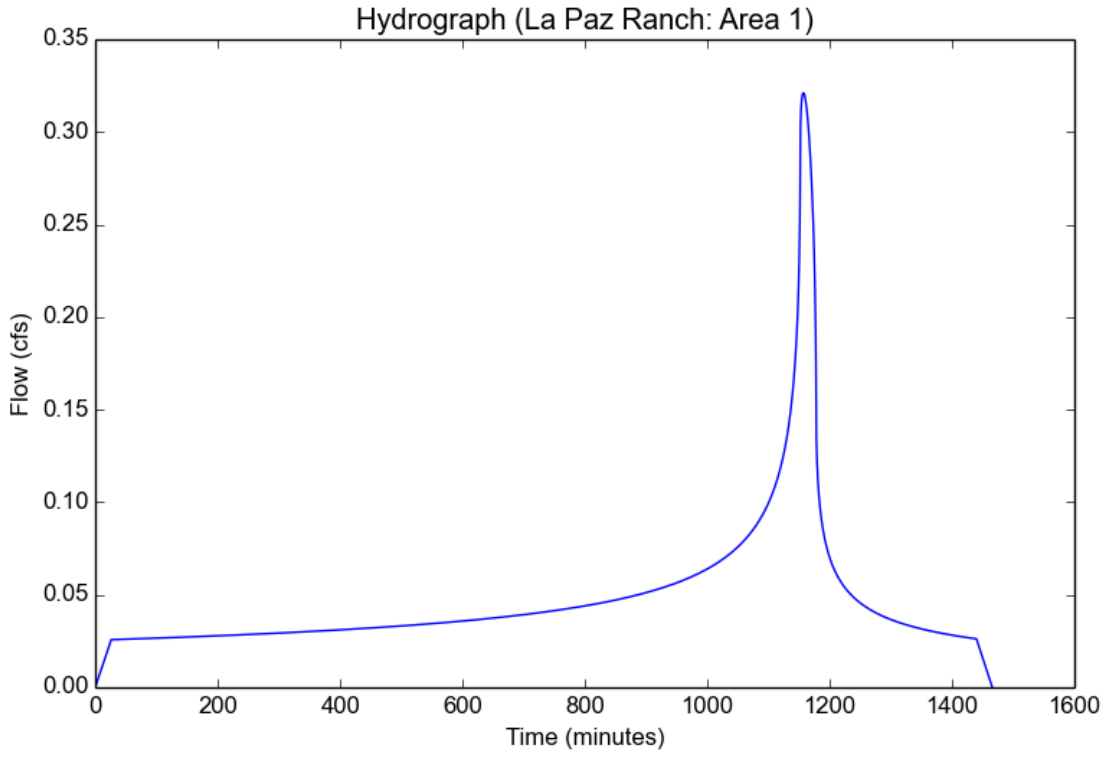
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 1.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 1
Area (ac)	1.8
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.95
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2062
Undeveloped Runoff Coefficient (Cu)	0.2044
Developed Runoff Coefficient (Cd)	0.8652
Time of Concentration (min)	26.0
Clear Peak Flow Rate (cfs)	0.3211
Burned Peak Flow Rate (cfs)	0.3211
24-Hr Clear Runoff Volume (ac-ft)	0.096
24-Hr Clear Runoff Volume (cu-ft)	4181.2228



Peak Flow Hydrologic Analysis

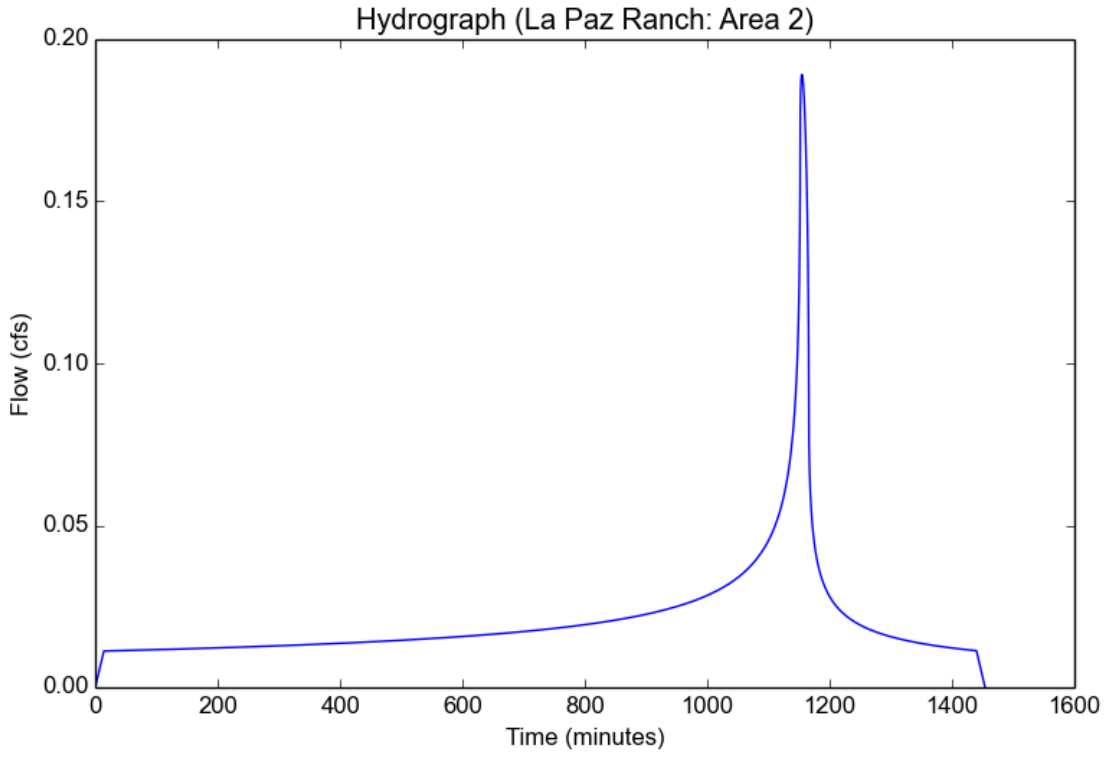
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 2.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 2
Area (ac)	0.8
Flow Path Length (ft)	200.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.93
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2758
Undeveloped Runoff Coefficient (Cu)	0.289
Developed Runoff Coefficient (Cd)	0.8572
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	0.1891
Burned Peak Flow Rate (cfs)	0.1891
24-Hr Clear Runoff Volume (ac-ft)	0.0419
24-Hr Clear Runoff Volume (cu-ft)	1824.953



Peak Flow Hydrologic Analysis

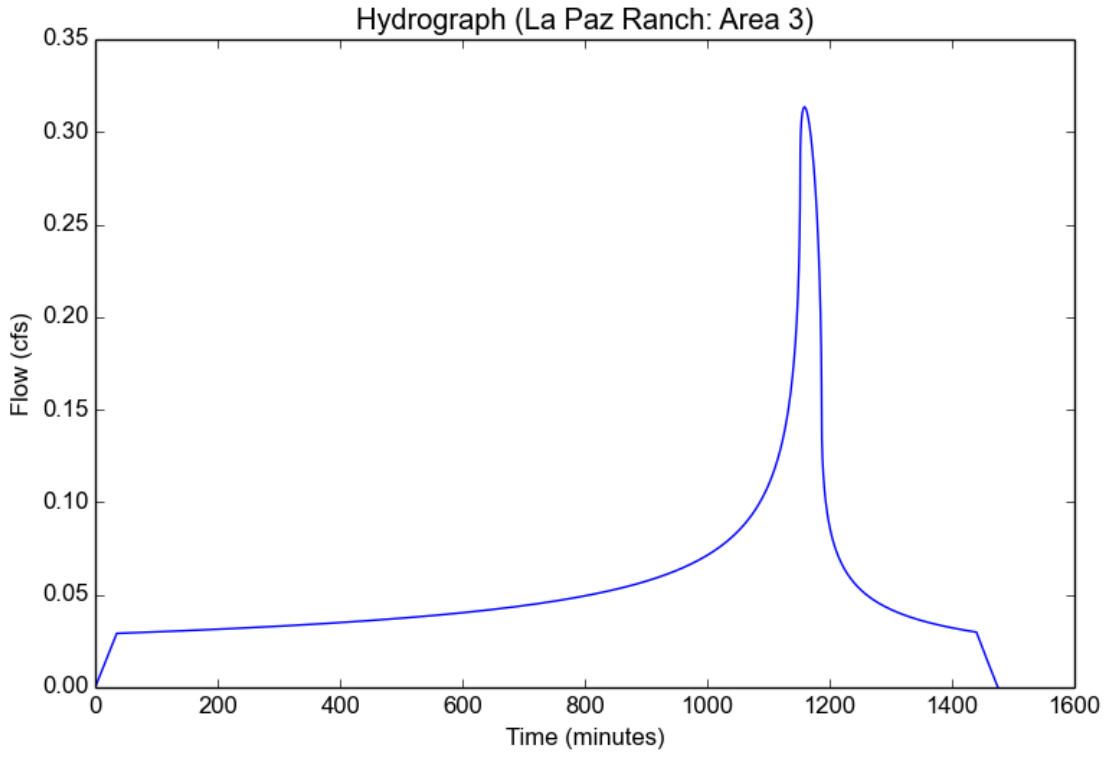
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 3.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 3
Area (ac)	3.1
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.58
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.1793
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.564
Time of Concentration (min)	35.0
Clear Peak Flow Rate (cfs)	0.3135
Burned Peak Flow Rate (cfs)	0.3135
24-Hr Clear Runoff Volume (ac-ft)	0.1084
24-Hr Clear Runoff Volume (cu-ft)	4720.754



Peak Flow Hydrologic Analysis

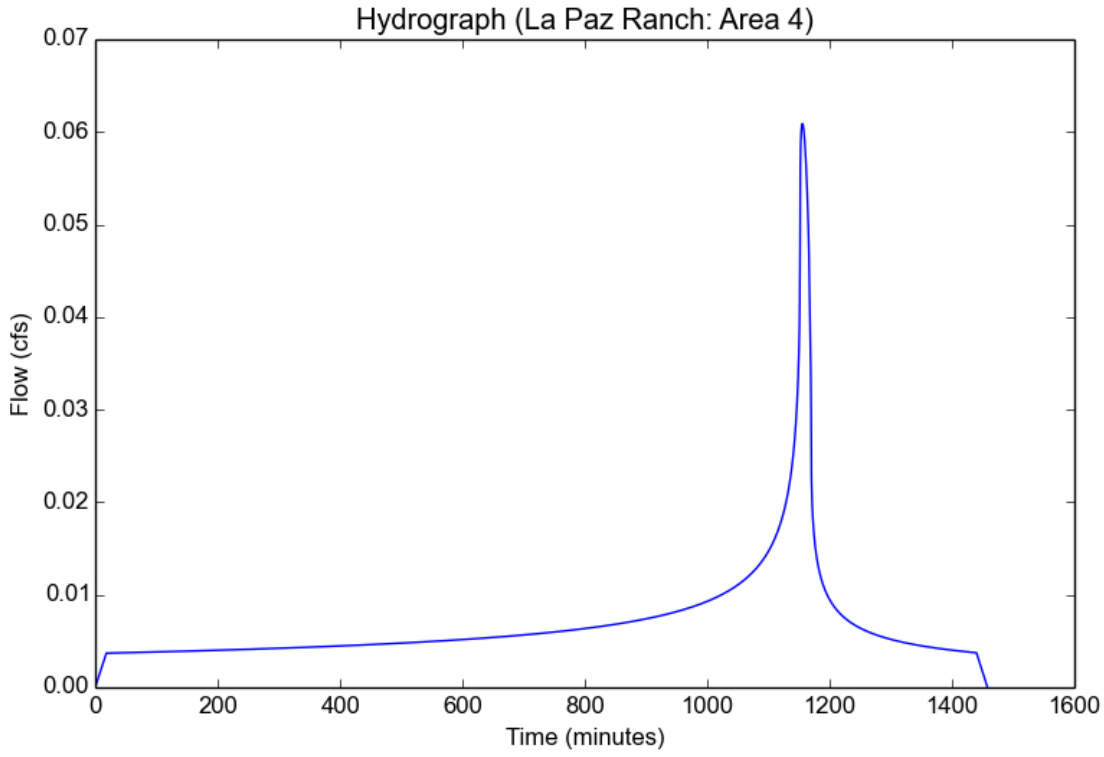
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 4.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 4
Area (ac)	0.4
Flow Path Length (ft)	200.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.57
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2451
Undeveloped Runoff Coefficient (Cu)	0.2517
Developed Runoff Coefficient (Cd)	0.6212
Time of Concentration (min)	18.0
Clear Peak Flow Rate (cfs)	0.0609
Burned Peak Flow Rate (cfs)	0.0609
24-Hr Clear Runoff Volume (ac-ft)	0.0139
24-Hr Clear Runoff Volume (cu-ft)	605.4026



Peak Flow Hydrologic Analysis

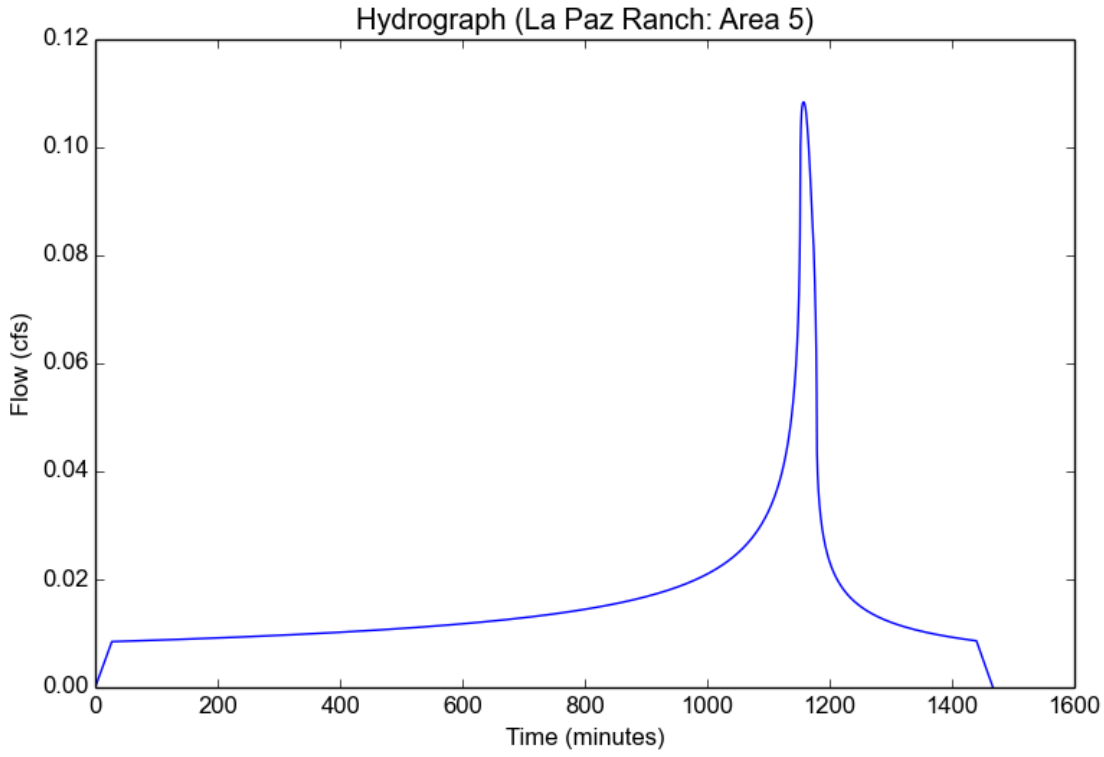
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 5.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 5
Area (ac)	0.8
Flow Path Length (ft)	400.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.67
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.2026
Undeveloped Runoff Coefficient (Cu)	0.2
Developed Runoff Coefficient (Cd)	0.669
Time of Concentration (min)	27.0
Clear Peak Flow Rate (cfs)	0.1084
Burned Peak Flow Rate (cfs)	0.1084
24-Hr Clear Runoff Volume (ac-ft)	0.0316
24-Hr Clear Runoff Volume (cu-ft)	1377.9274



Peak Flow Hydrologic Analysis

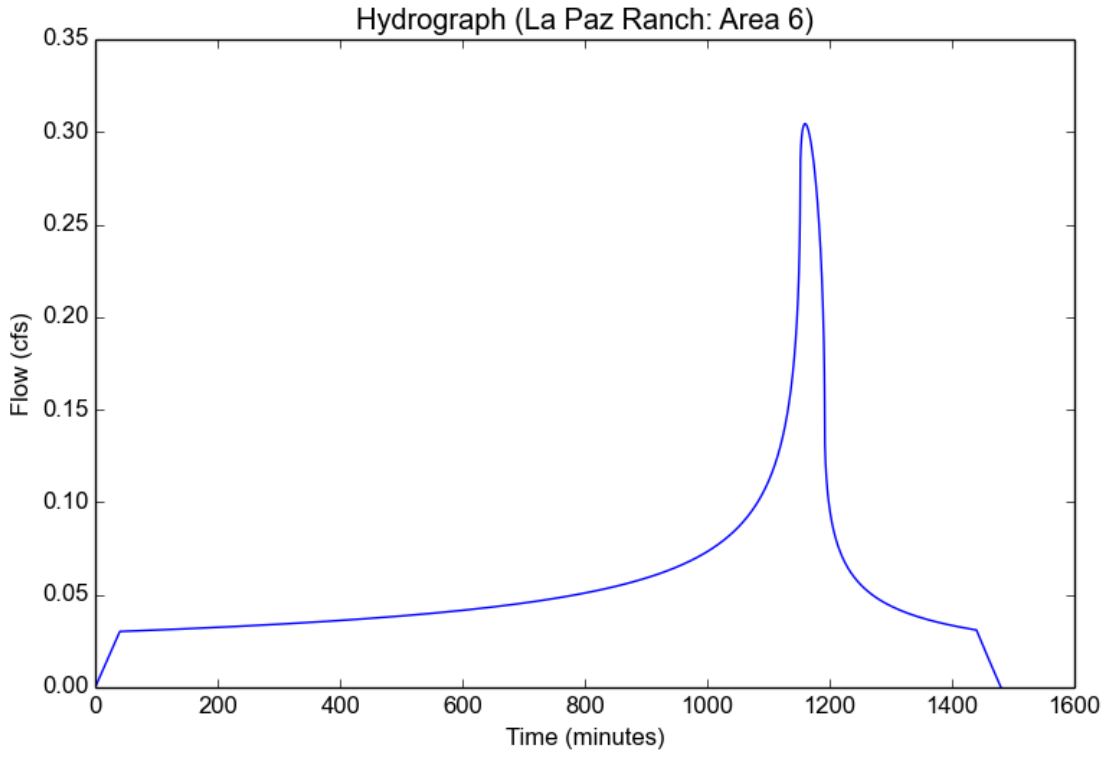
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 6.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 6
Area (ac)	4.0
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.44
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.1684
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.452
Time of Concentration (min)	40.0
Clear Peak Flow Rate (cfs)	0.3044
Burned Peak Flow Rate (cfs)	0.3044
24-Hr Clear Runoff Volume (ac-ft)	0.1121
24-Hr Clear Runoff Volume (cu-ft)	4881.7003



Peak Flow Hydrologic Analysis

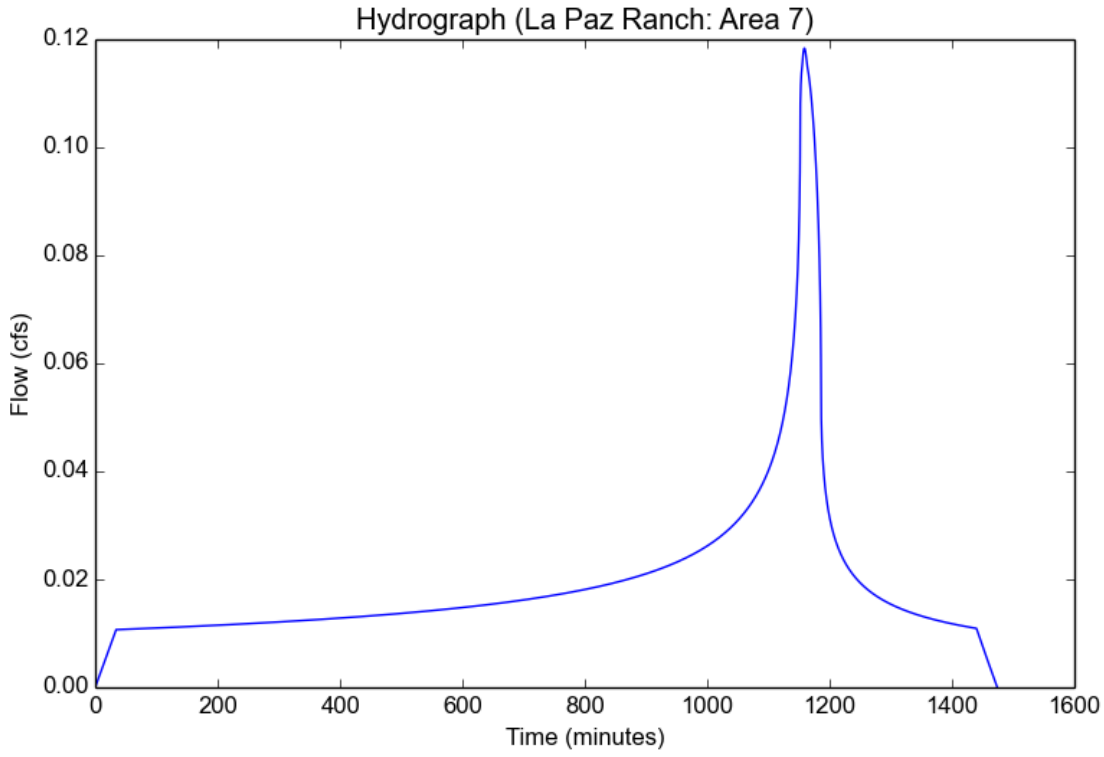
File location: W:/1MAR590100/ENGR/DOCS/LID/0.75 Inch/La Paz Ranch - Area 7.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 7
Area (ac)	1.8
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.02
0.75-inch Rainfall Depth (in)	0.75
Percent Impervious	0.32
Soil Type	29
Design Storm Frequency	0.75 inch storm
Fire Factor	0
LID	True

Output Results

Modeled (0.75 inch storm) Rainfall Depth (in)	0.75
Peak Intensity (in/hr)	0.1818
Undeveloped Runoff Coefficient (Cu)	0.1085
Developed Runoff Coefficient (Cd)	0.3618
Time of Concentration (min)	34.0
Clear Peak Flow Rate (cfs)	0.1184
Burned Peak Flow Rate (cfs)	0.1184
24-Hr Clear Runoff Volume (ac-ft)	0.0397
24-Hr Clear Runoff Volume (cu-ft)	1730.7531



Peak Flow Hydrologic Analysis

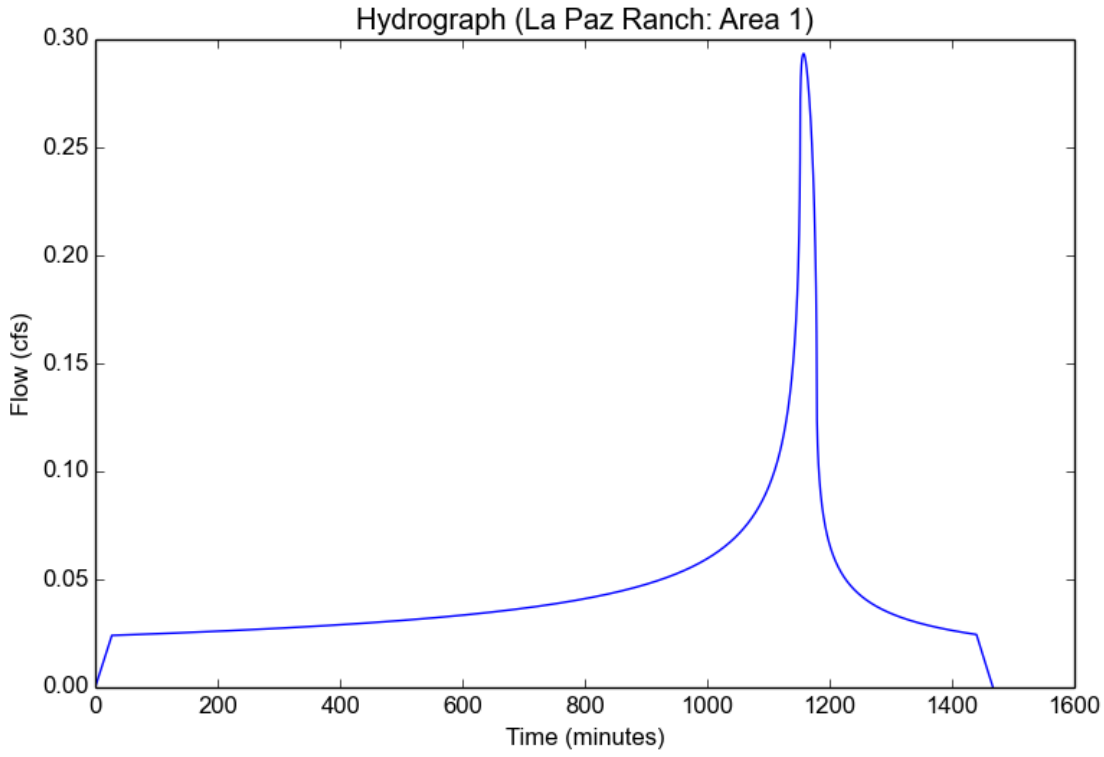
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 1.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 1
Area (ac)	1.8
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.95
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.189
Undeveloped Runoff Coefficient (Cu)	0.1438
Developed Runoff Coefficient (Cd)	0.8622
Time of Concentration (min)	27.0
Clear Peak Flow Rate (cfs)	0.2934
Burned Peak Flow Rate (cfs)	0.2934
24-Hr Clear Runoff Volume (ac-ft)	0.0896
24-Hr Clear Runoff Volume (cu-ft)	3901.3778



Peak Flow Hydrologic Analysis

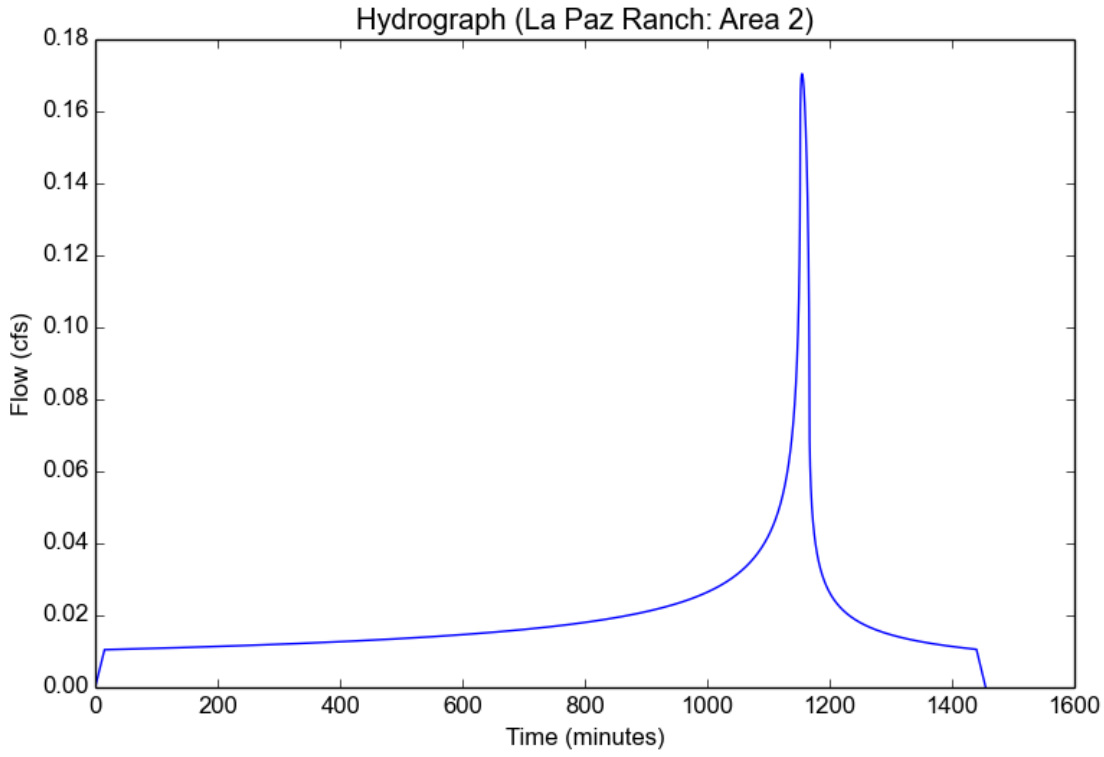
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 2.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 2
Area (ac)	0.8
Flow Path Length (ft)	200.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.93
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.2492
Undeveloped Runoff Coefficient (Cu)	0.2567
Developed Runoff Coefficient (Cd)	0.855
Time of Concentration (min)	15.0
Clear Peak Flow Rate (cfs)	0.1704
Burned Peak Flow Rate (cfs)	0.1704
24-Hr Clear Runoff Volume (ac-ft)	0.0391
24-Hr Clear Runoff Volume (cu-ft)	1702.9322



Peak Flow Hydrologic Analysis

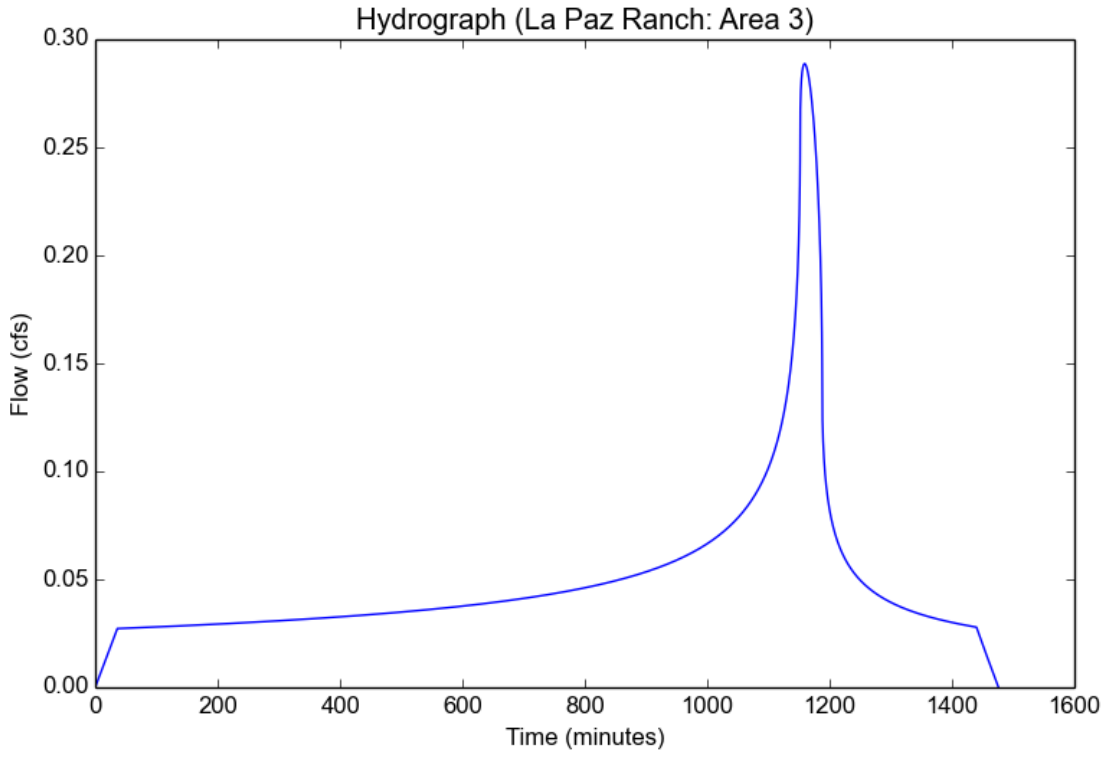
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 3.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 3
Area (ac)	3.1
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.58
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.1651
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.564
Time of Concentration (min)	36.0
Clear Peak Flow Rate (cfs)	0.2887
Burned Peak Flow Rate (cfs)	0.2887
24-Hr Clear Runoff Volume (ac-ft)	0.1011
24-Hr Clear Runoff Volume (cu-ft)	4406.0411



Peak Flow Hydrologic Analysis

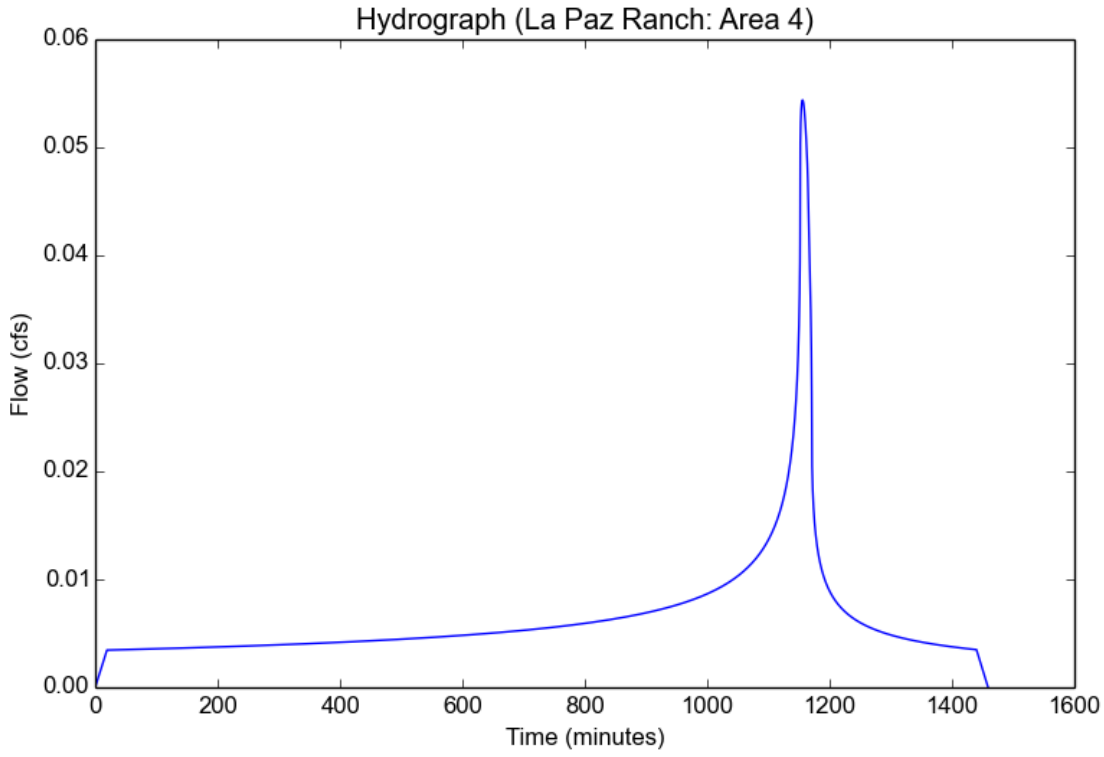
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 4.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 4
Area (ac)	0.4
Flow Path Length (ft)	200.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.57
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.223
Undeveloped Runoff Coefficient (Cu)	0.2248
Developed Runoff Coefficient (Cd)	0.6097
Time of Concentration (min)	19.0
Clear Peak Flow Rate (cfs)	0.0544
Burned Peak Flow Rate (cfs)	0.0544
24-Hr Clear Runoff Volume (ac-ft)	0.0129
24-Hr Clear Runoff Volume (cu-ft)	563.9306



Peak Flow Hydrologic Analysis

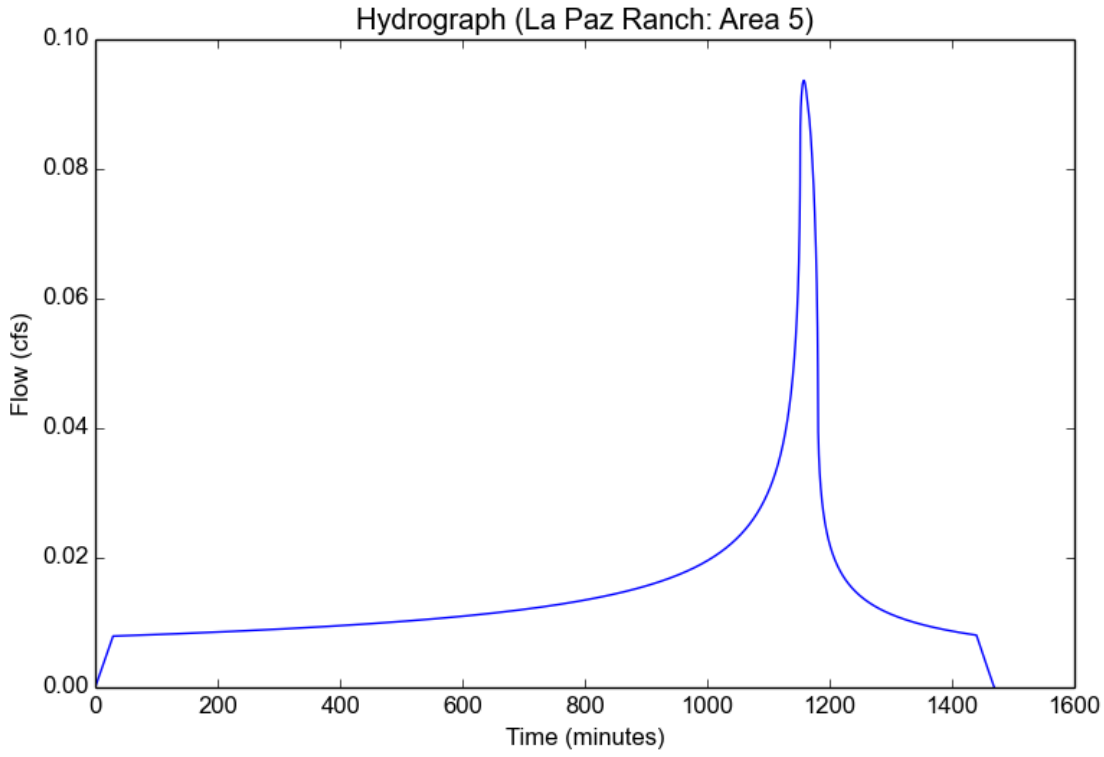
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 5.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 5
Area (ac)	0.8
Flow Path Length (ft)	400.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.67
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.1828
Undeveloped Runoff Coefficient (Cu)	0.1136
Developed Runoff Coefficient (Cd)	0.6405
Time of Concentration (min)	29.0
Clear Peak Flow Rate (cfs)	0.0937
Burned Peak Flow Rate (cfs)	0.0937
24-Hr Clear Runoff Volume (ac-ft)	0.0294
24-Hr Clear Runoff Volume (cu-ft)	1282.4004



Peak Flow Hydrologic Analysis

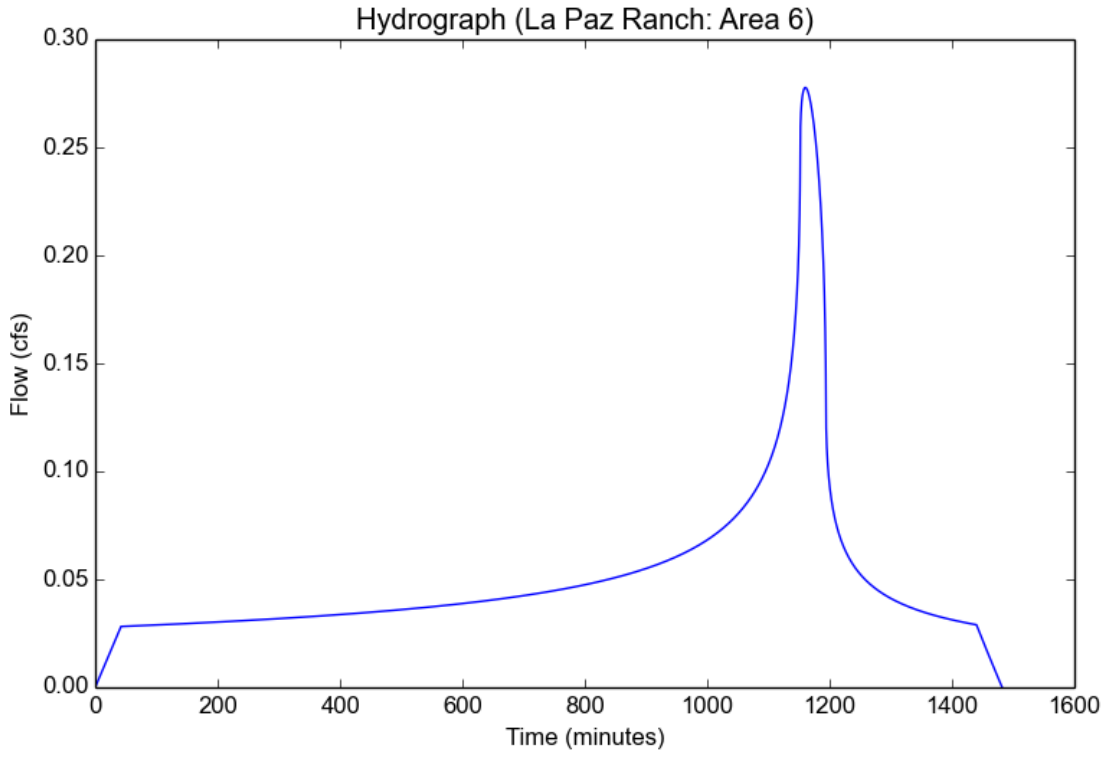
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 6.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 6
Area (ac)	4.0
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.44
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.1536
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.452
Time of Concentration (min)	42.0
Clear Peak Flow Rate (cfs)	0.2777
Burned Peak Flow Rate (cfs)	0.2777
24-Hr Clear Runoff Volume (ac-ft)	0.1046
24-Hr Clear Runoff Volume (cu-ft)	4556.2633



Peak Flow Hydrologic Analysis

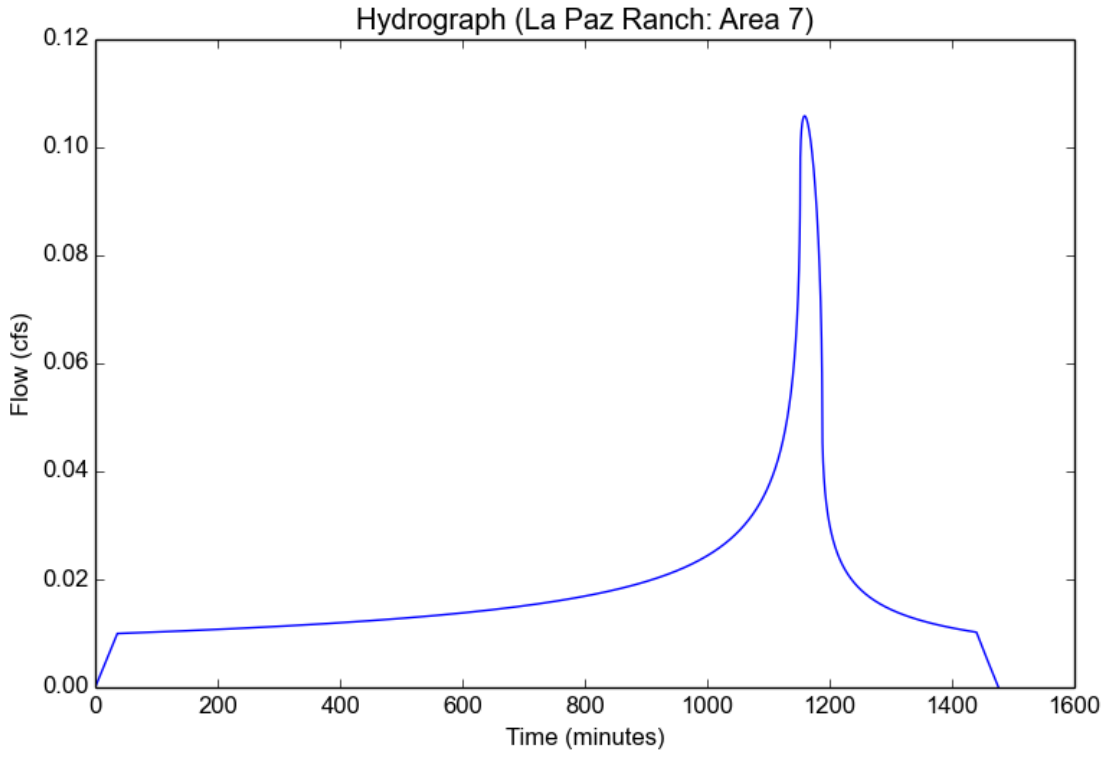
File location: W:/1MAR590100/ENGR/DOCS/LID/85th Percentile/La Paz Ranch - Area 7.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	La Paz Ranch
Subarea ID	Area 7
Area (ac)	1.8
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	0.7
Percent Impervious	0.32
Soil Type	29
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

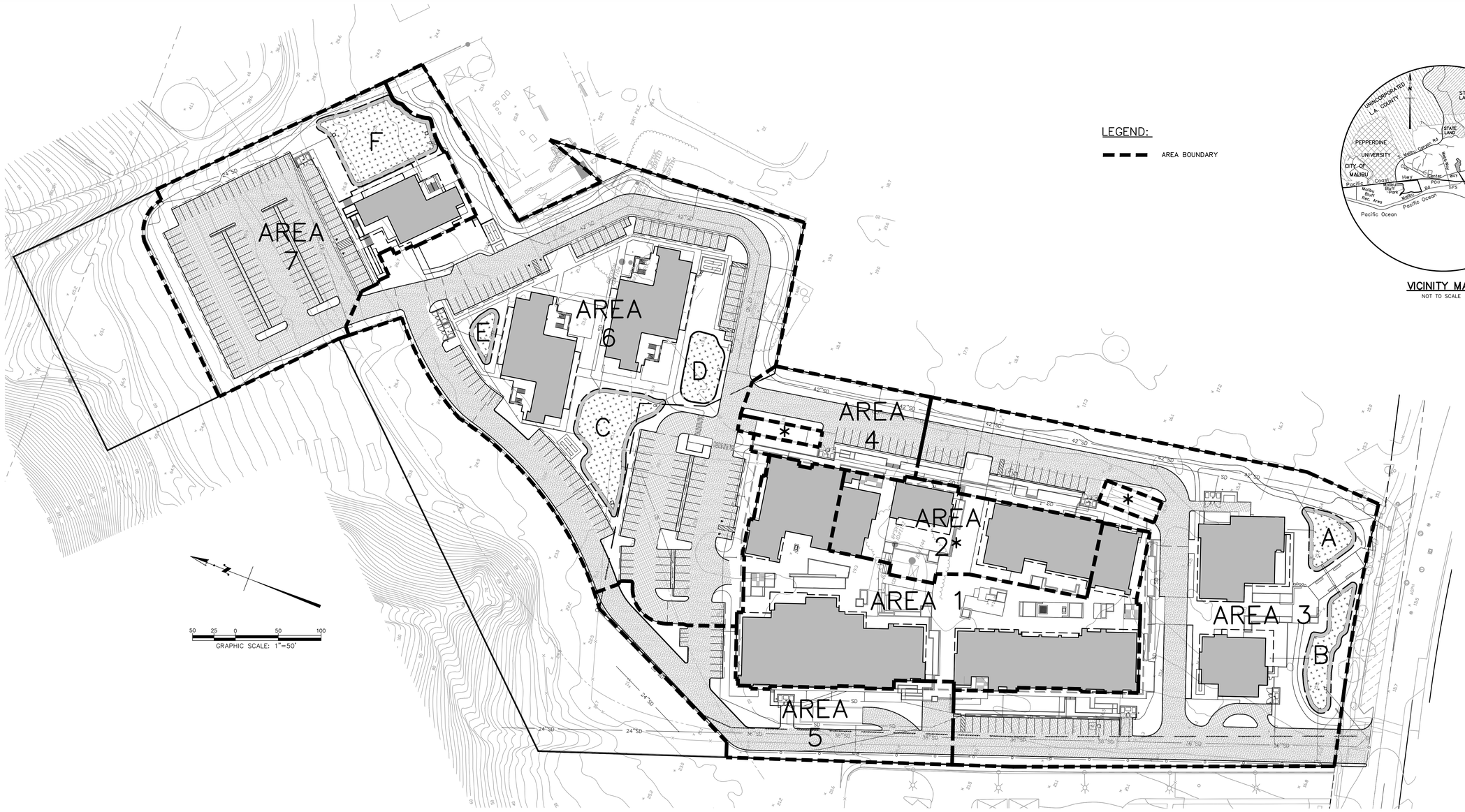
Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	0.7
Peak Intensity (in/hr)	0.1651
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.356
Time of Concentration (min)	36.0
Clear Peak Flow Rate (cfs)	0.1058
Burned Peak Flow Rate (cfs)	0.1058
24-Hr Clear Runoff Volume (ac-ft)	0.0371
24-Hr Clear Runoff Volume (cu-ft)	1614.8428



Appendix 4 Site Plans

Existing Condition
Proposed Condition
WQMP Site Plan – See Binder Pocket



VICINITY MAP
NOT TO SCALE

Area ID	Area [ft^2]	Area [acre]	Impervious Area [ft^2]	Pervious Area [ft^2]	Percent Impervious [%]	Malibu Required Detention [cf]	85th Percentile Storage Volume [cf]	0.75" Storm Event Storage Volume [cf]
1	76,876	1.8	72,983	3,893	95	6,244	3,902	4,182
2	33,379	0.8	30,877	2,502	93	2,678	1,703	1,825
3	132,896	3.1	76,515	56,381	58	8,726	4,407	4,721
4	19,290	0.4	10,996	8,294	57	1,262	564	606
5	35,085	0.8	23,493	11,592	67	2,441	1,283	1,378
6	173,396	4.0	77,068	96,328	44	10,436	4,557	4,882
7	77,975	1.8	25,049	52,926	32	4,293	1,615	1,731
					TOTAL:	36,080	18,031	19,325

Biofiltration	Storage Volume (1.5' ponding) [cf]
A	3,598
B	5,134
C	10,116
D	4,701
E	1,579
F	11,692
TOTAL:	36,820

WQMP EXHIBIT

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SHEET 1 OF 1

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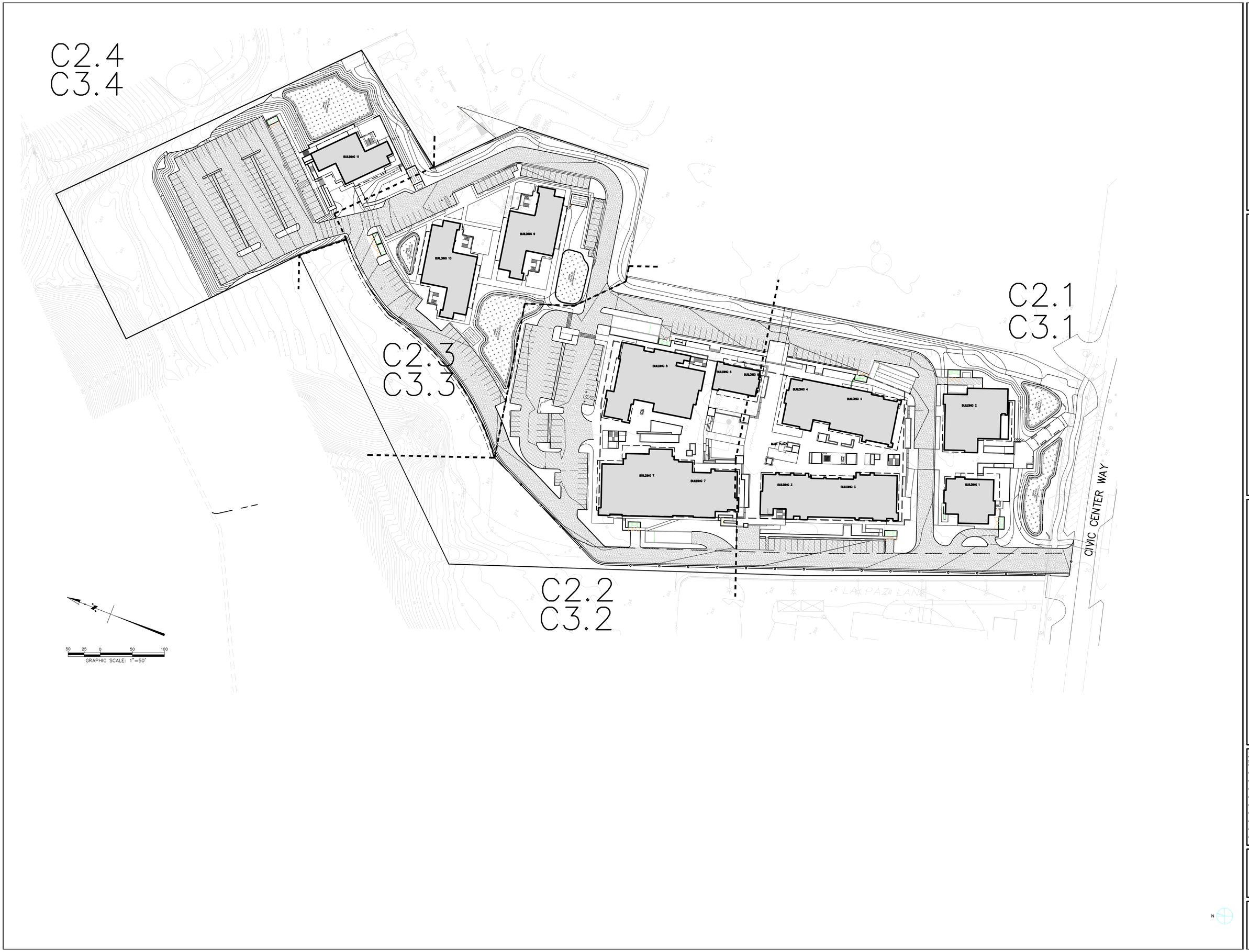

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KEY MAP

12/09/16 100% SD
9/19/17

C2.0

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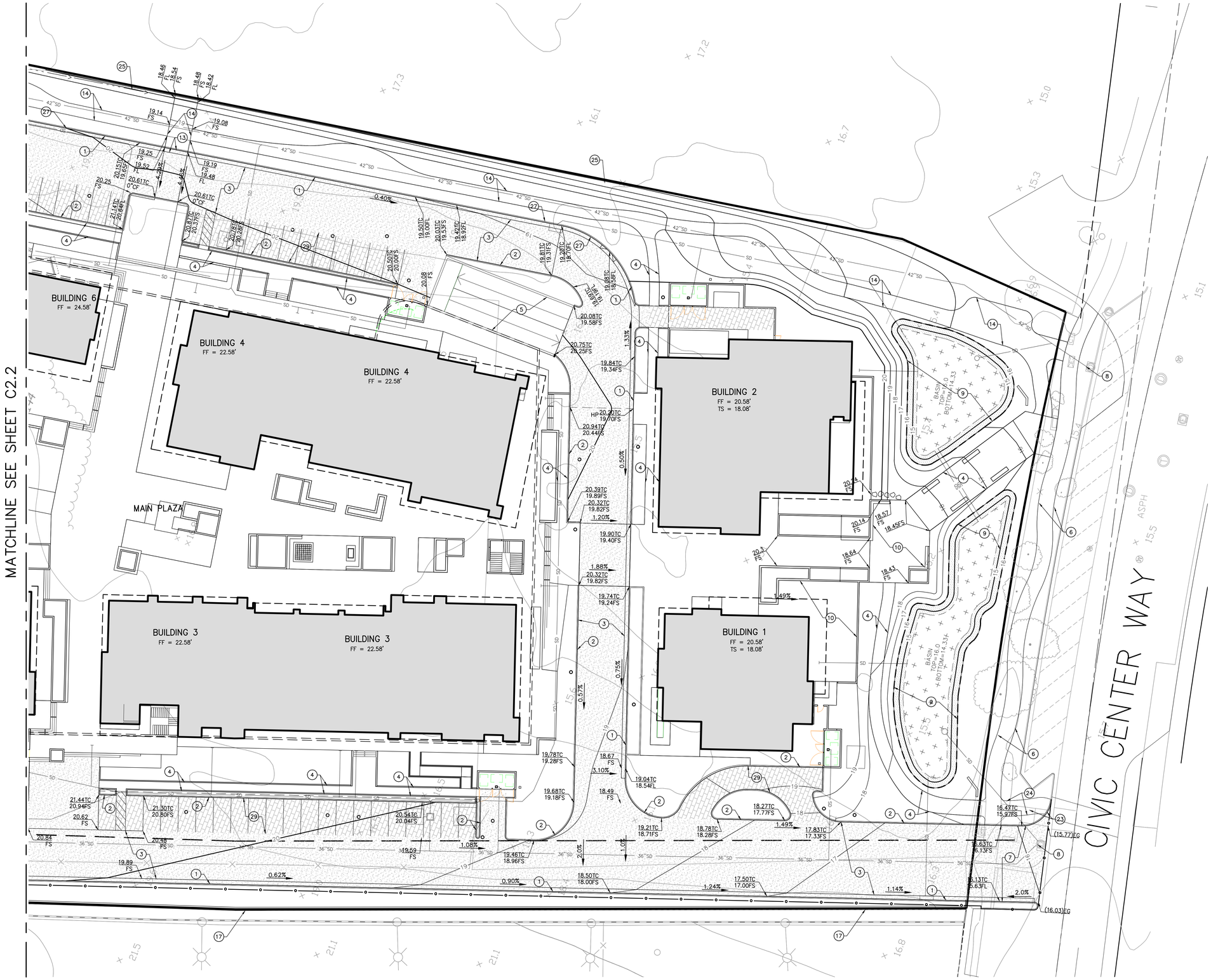

CONSTRUCTION NOTES:

1. CONSTRUCT CONCRETE CURB AND GUTTER.
2. CONSTRUCT CONCRETE CURB.
3. CONSTRUCT ASPHALT CONCRETE PAVEMENT PER DETAIL 6 ON SHEET C2.5.
4. CONSTRUCT WALKWAY.
5. CONSTRUCT RAMP TO UNDERGROUND PARKING.
6. EXISTING PUBLIC WALK.
7. PROPOSED DRIVEWAY PER STREET IMPROVEMENT PLAN.
8. RECONSTRUCT EXISTING CATCH BASIN PER STREET IMPROVEMENT PLAN.
9. BIOLFILTRATION AREA PER DETAIL 1 ON SHEET C2.5..
10. CONSTRUCT CONCRETE PATIO.
11. CONSTRUCT RETAINING WALL.
13. CONSTRUCT CONCRETE LONGITUDINAL GUTTER.
14. CONSTRUCT HORSE TRAIL PER LANDSCAPE PLANS.
17. EXISTING WALL. PROTECT IN PLACE.
18. CONSTRUCT CONCRETE STAIRS.
20. CONSTRUCT CONCRETE SWALE.
22. GRADED BERM FOR DRAINAGE PROTECTION.
23. CONSTRUCT CURB RAMP PER STREET IMPROVEMENT PLAN.
24. CONSTRUCT WALKWAY IMPROVEMENT PLAN.
25. CONSTRUCT DIRT SWALE.
26. CONSTRUCT ADA RAMP WITH RAILING PER ARCHITECTURAL PLANS.
27. CONSTRUCT RETAINING CURB PER DETAIL 5 ON SHEET C2.5.
29. PERMEABLE AC PAVEMENT.

LEGEND:

AC PAVEMENT

PERMEABLE AC PAVEMENT

20 10 0 20 40
GRAPHIC SCALE: 1"=20'

N

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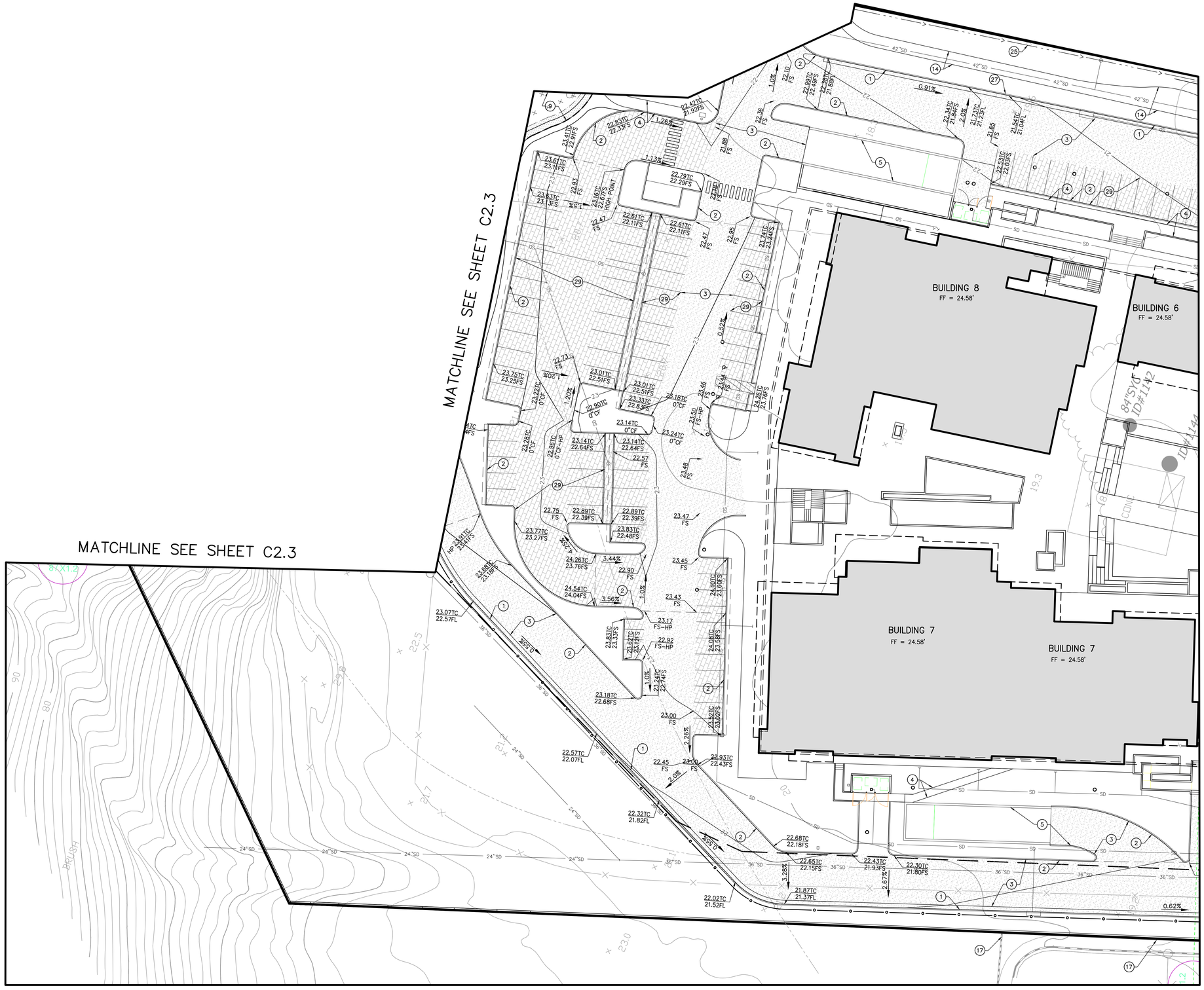
GRADING PLAN

12/09/16 100% SD
9/19/17

C2.1



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25. CONSTRUCT DIRT SWALE.
26. CONSTRUCT ADA RAMP WITH RAILING PER ARCHITECTURAL PLANS.
27. CONSTRUCT RETAINING CURB PER DETAIL 5 ON SHEET C2.5.
28. BIOFILTRATION AREA PER DETAIL 2 ON SHEET C2.5.
29. PERMEABLE AC PAVEMENT.

LEGEND:

AC PAVEMENT

PERMEABLE AC PAVEMENT

20 10 0 20 40
GRAPHIC SCALE: 1"=20'

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GRADING PLAN

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9/19/17

C2.2

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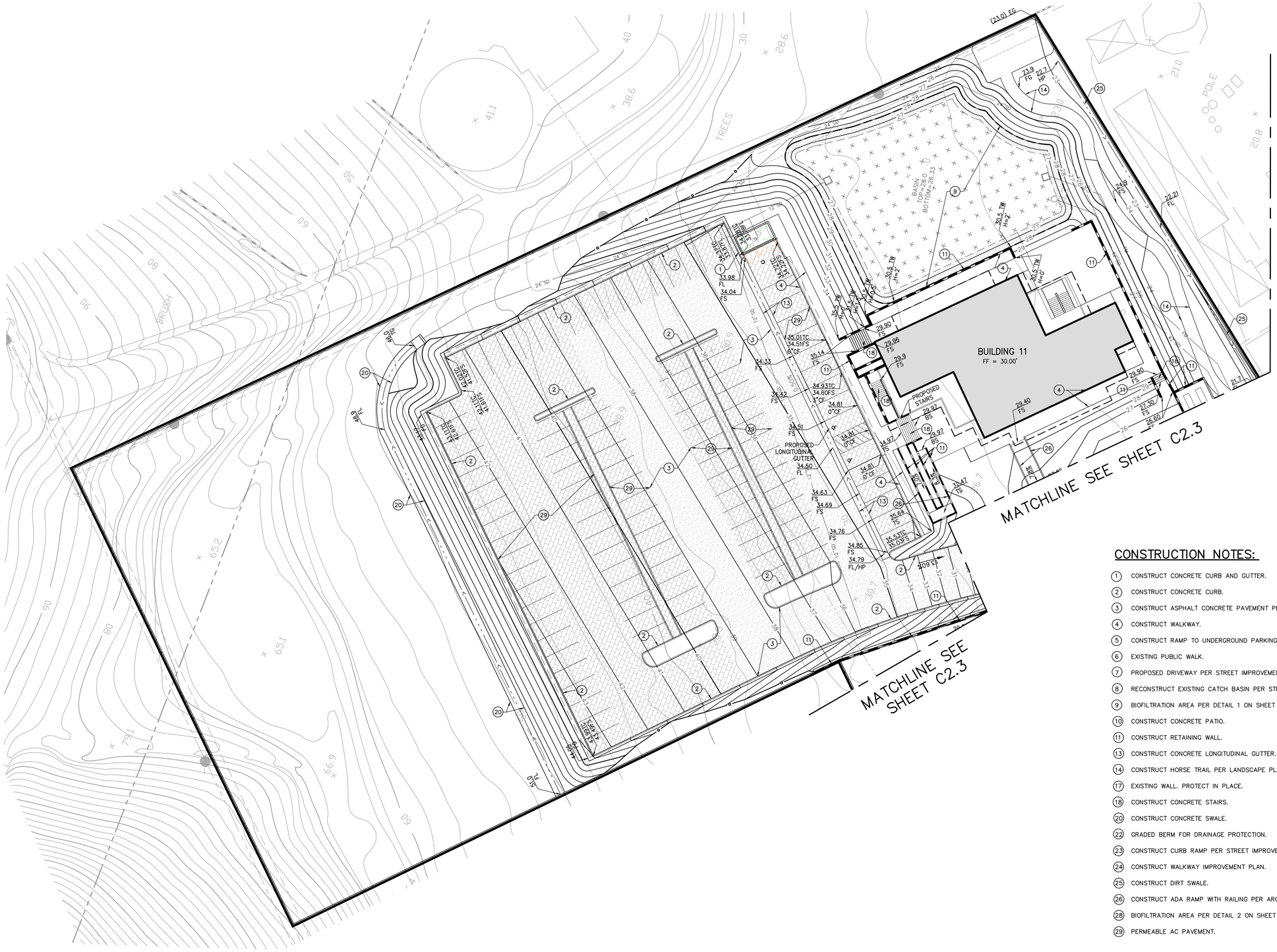
MATCHLINE SEE SHEET 2.4
MATCHLINE SEE SHEET C2.2
BUILDING 9
FF = 23.83'
TS = 23.50'
BUILDING 10
FF = 23.83'
TS = 23.50'
BASIN
TOP=23.55
BOTTOM=21.88
BASIN
TOP=22.0
BOTTOM=20.33
BASIN
TOP=22.0
BOTTOM=18.66
TANK
CIVIC CENTER WAY
3.86%
1.28%
1.20%
1.20%
20'S
30'S
24'S
30'W
30'W
30'W



CONSTRUCTION NOTES:

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2. CONSTRUCT CONCRETE CURB.
3. CONSTRUCT ASPHALT CONCRETE PAVEMENT PER DETAIL 6 ON SHEET C2.5.
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8. RECONSTRUCT EXISTING CATCH BASIN PER STREET IMPROVEMENT PLAN.
9. BIOFILTRATION AREA PER DETAIL 1 ON SHEET C2.5.
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11. CONSTRUCT RETAINING WALL.
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24. CONSTRUCT WALKWAY IMPROVEMENT PLAN.
25. CONSTRUCT DIRT SWALE.
26. CONSTRUCT ADA RAMP WITH RAILING PER ARCHITECTURAL PLANS.
28. BIOFILTRATION AREA PER DETAIL 2 ON SHEET C2.5.
29. PERMEABLE AC PAVEMENT.

LEGEND:

- AC PAVEMENT
- PERMEABLE AC PAVEMENT

20 10 0 20 40
GRAPHIC SCALE: 1"=20'

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GRADING PLAN

12/09/16 100% SD
9/19/17

C2.4

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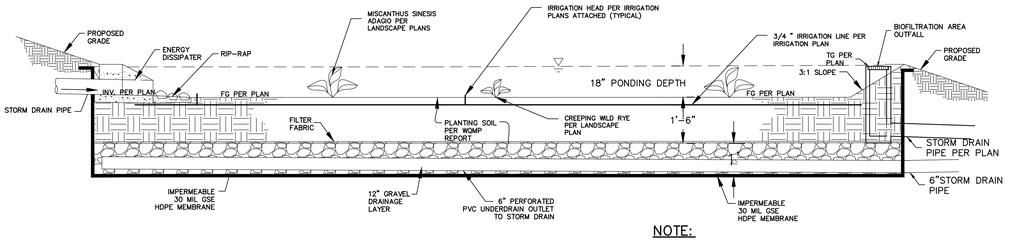
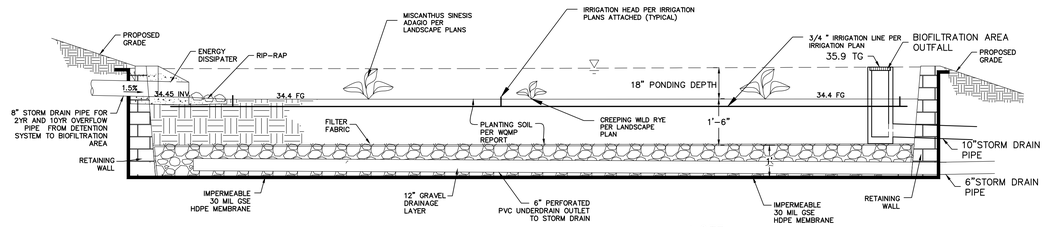


1 BIOFILTRATION AREA DETAIL

NOT TO SCALE

NOTE:

1. BIOLFILTRATION PLANTER SOIL WILL CONSIST OF A MIX OF 60 TO 80% SAND, 20 TO 40% COMPOST, AND 10 TO 20% CLEAN TOPSOIL. THE ORGANIC CONTENT OF THE SOIL MIXTURE SHALL BE 8% TO 12%. BIOLFILTRATION PLANTER SOIL WILL ACHIEVE A LONG-TERM, IN-PLACE INFILTRATION OF AT LEAST 5 INCHES PER HOUR.
2. PLANTING DETAILS PER IRRIGATION PLANS ATTACHED.
3. IRRIGATION DETAILS PER IRRIGATION PLANS ATTACHED.

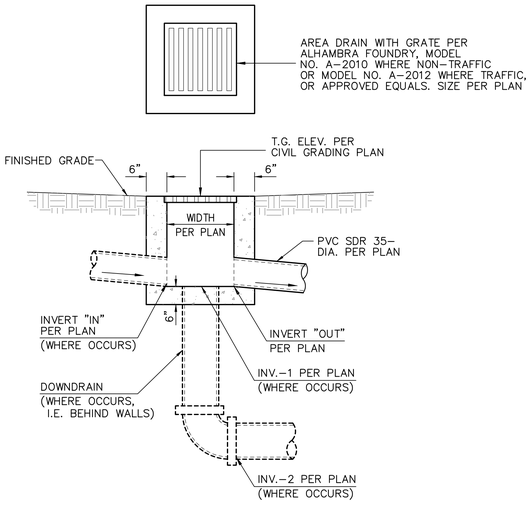


2 BIOFILTRATION AREA DETAIL

NOT TO SCALE

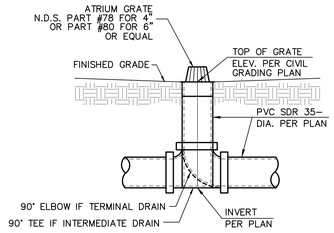
NOTE:

1. BIOLFILTRATION PLANTER SOIL WILL CONSIST OF A MIX OF 60 TO 80% SAND, 20 TO 40% COMPOST, AND 10 TO 20% CLEAN TOPSOIL. THE ORGANIC CONTENT OF THE SOIL MIXTURE SHALL BE 8% TO 12%. BIOLFILTRATION PLANTER SOIL WILL ACHIEVE A LONG-TERM, IN-PLACE INFILTRATION OF AT LEAST 5 INCHES PER HOUR.
2. PLANTING DETAILS PER IRRIGATION PLANS ATTACHED.
3. IRRIGATION DETAILS PER IRRIGATION PLANS ATTACHED.



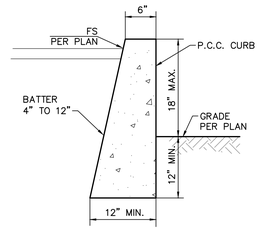
3 AREA DRAIN DETAIL

NOT TO SCALE



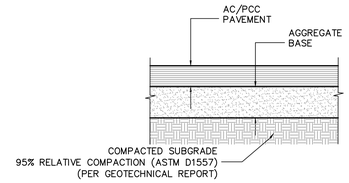
4 ATRIUM PLANTER DRAIN DETAIL

NOT TO SCALE



5 RETAINING CURB DETAIL

NOT TO SCALE



6 ASPHALT CONCRETE PAVEMENT DETAIL

NOT TO SCALE

N

PSOMAS
555 South Flower Street, Suite 4400
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 fax
www.psomas.com

LA PAZ RANCH
23465 CIVIC CENTER WAY
MALIBU, CA 90265

GRADING AND DRAINAGE DETAIL

12/09/16	100% SD
9/19/17	

C2.5

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Appendix 5 Covenant and Agreement (C & A)

Master C&A

WHEN RECORDED, RETURN TO:

City of Malibu
Attention: City Clerk
23825 Stuart Ranch Road
Malibu, California 90265

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT TO IMPLEMENT WATER QUALITY MITIGATION PLAN AND TO MAINTAIN DRAINAGE FACILITIES

Malibu Development Company. LLC (Owner) owns certain real property commonly known as 23465 Civic Center Way, Malibu, California 90265, APN _____ which is legally described in Exhibit A, attached hereto and incorporated herein by this reference (Property).

Owner has applied to the City of Malibu for entitlements necessary to develop agricultural and/or confined animal improvements on the Property.

The City has approved, subject to certain conditions, development permit(s) commercial that require(s) the provision of a Water Quality Mitigation Plan for Agricultural and Confined Animal Facility Development (WQMP-Ag) incorporated herein by this reference (Plan) addressing appropriate best management practices and site design as outlined in the City of Malibu Local Coastal Plan (LCP) Local Implementation Plan (LIP) Section 17.3.5(A) and may include a storm drain retention system and/or drainage treatment facilities on the Property.

As a condition of the above-referenced development permit(s), the Owner has agreed to execute and record a covenant to implement best management practices and site design in order to minimize or prevent polluted runoff and water quality impacts potentially resulting from the development and maintain any applicable storm drain retention system or drain treatment facilities on the Property, as hereinafter defined, in good working order into perpetuity.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, the Owner agrees as follows:

1. Owner hereby accepts full responsibility for implementing the Plan and maintaining any drainage facilities depicted on Exhibit B, attached hereto (Facilities), in good working order, in perpetuity.

2. Owner hereby acknowledges and understands that the failure to property implement the Plan and maintain the Facilities may result in flooding, property damage, unlawful discharge of pollutants to a downstream watershed, and other potentially serious problems.

3. Owner Obligations. Owner covenants and agrees to:

   a. Take all necessary steps to ensure that the Plan is implemented and Facilities are maintained in good working order at all times.

b. Perform routine inspection of and maintenance on the Facilities including, but not limited to, a full site inspection of the property and its points of discharge for runoff to determine effectiveness of the Plan including determination whether amendments need to be made to the Plan, and cleaning and removal of accumulated sediment and annual maintenance during the 90-days prior to the beginning of the rainy season (July 1st to October 1st).
c. Dispose of any accumulated sediment in an approved landfill.
d. Clean and flush the drainage pipes, as necessary, within the Facilities.
e. Have the Facilities inspected annually by a qualified licensed contractor, familiar with water quality issues and the Plan as approved by the City, who shall certify that the Facilities have been inspected and are in good working order, or, if not, list the remedial work recommended to be undertaken to place the Facilities in good working order. In the event any such work is recommended by the licensed contractor, Owner shall notify the City's Public Works Director of the precise nature of the recommended remedial work and Owner shall cause such work to be completed by a qualified licensed contractor within 30 days of the discovery of the need for remedial work or amendments. IF the Public Works Director determines that the condition of the Facilities poses an imminent threat to public health and safety, or to the environment generally, shorter time limits may be imposed. The facility to complete all required amendments and/or remedial work within the allotted time period will constitute an ongoing violation of the Coastal Act and this covenant.
f. Annually submit to the City Engineer, using the Certification Form attached hereto as Exhibit C, such certifications by a qualified licensed contractor prior to October 15th.
g. Provide any transferee of the Property with the plans of the Facilities and records of inspection in escrow upon transfer of the Property.

4. The foregoing covenants and agreements shall run with the land and be binding on the heirs, successors and assigns of Owner and inure the benefit of the City.

5. In the event that Owner fails to timely perform any of the Owner Obligations set forth in this Covenant, City may, at its option, perform or cause to be performed any and all work required to bring the Facilities into compliance with the Owner Obligations, including, but not limited to, any maintenance, upgrades, repairs or inspections. What constitutes "timely" performance by Owner shall be left to the sole discretion of the City's Public Works Director. In the event that City exercises its authority to perform any of Owner's obligations hereunder, Owner agrees to reimburse City in full for all costs incurred in the performance of those obligations within 30 days of receiving a written itemized demand for payment from the City. If not paid in full within the 30-day period, the full amount of the City's demand left outstanding shall constitute a lien on the Property. The City may also cause the amount due to the City together with interest at a maximum legal rate to be charged to the Owner on the next regular tax bill.

6. Owner agrees to indemnify and hold harmless the City from any and all liability arising from Owner's failure to timely perform any of the Owner Obligations identified herein. City shall have its choice of counsel in any such action or proceeding.

7. In addition to any other available remember at law or in equity, this Covenant may be enforced by the City in an action for specific performance. Owner agrees to pay attorney's fees and costs incurred by the City in any action proceeding brought to enforce this Covenant.

OWNER:

Malibu Development Company. LLC
Print Owner's Name

Owner's Signature Date

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
County of _____

On _____, before me, _____
(insert name and title of officer)
personally appeared _____
who provided to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, execute the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (SEAL)

CITY OF MALIBU

By: Rob DuBoux
Assistant Public Works Director

Date

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA
County of Los Angeles

On _____, before me, Heather Glaser, City Clerk for the City of Malibu, personally appeared Rob DuBoux, Assistant Public Works Director, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

HEATHER GLASER, City Clerk
(seal)

EXHIBIT C

CERTIFICATE OF ANNUAL INSPECTION AND MAINTENANCE OF STORM DRAIN DETENTION/TREATMENT FACILITY

Property Address: 23465 Civic Center Way

Name of Property Owner: _____

Type of Development: _____

Type of Drainage Facility: _____

Inspected by: _____

California Contractor's License No.: _____

Date of Inspection: _____

Condition of Facility: _____

_____

Recommended Maintenance: _____

_____

_____

Recommended Date of Completion: _____

Approximate quantity of sediment/debris removed: _____

WQMP-Ag Implementation Findings: _____

WQMP-Ag Proposed Amendments: _____

I hereby certify that the WQMP-Ag and Facility, including any Storm Drain Treatment/Detention Facility was inspected, cleaned (as necessary), and put in good working order.

Signature of Licensed Contractor: _____ Date: _____

Print Name of Contractor: _____

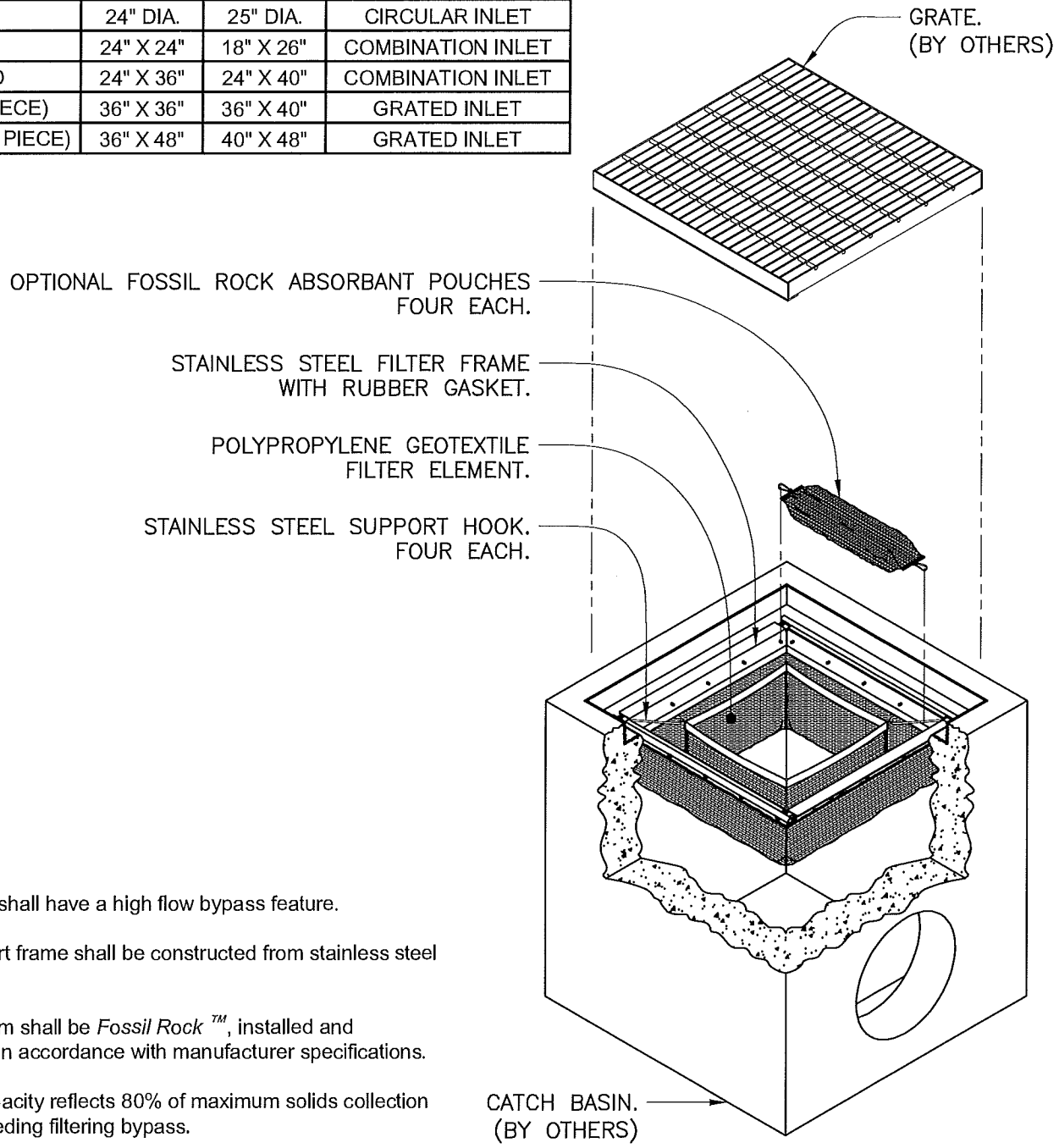
NOTE: SUBMIT THIS FORM TO THE CITY OF MALIBU, Attention City Engineer, prior to October 15th annually.

Appendix 6 Supplemental Information

Operations and Maintenance Plan

FG-0001

SPECIFIER CHART			
MODEL	INLET ID	GRATE OD	COMMENTS
FF-12D	12" X 12"	15" X 15"	GRATED INLET
FF-16D	16" X 16"	18" X 18"	GRATED INLET
FF-18D	18" X 18"	20" X 20"	GRATED INLET
FF-1836SD	18" X 36"	18" X 40"	GRATED INLET
FF-1836DGO	18" X 36"	18" X 40"	COMBINATION INLET
FF-24D	24" X 24"	26" X 26"	GRATED INLET
FF-2436D	24" X 36"	24" X 40"	GRATED INLET
FF-RF24D	24" DIA.	25" DIA.	CIRCULAR INLET
FF-24DGO	24" X 24"	18" X 26"	COMBINATION INLET
FF-2436DGO	24" X 36"	24" X 40"	COMBINATION INLET
FF-36D (2 PIECE)	36" X 36"	36" X 40"	GRATED INLET
FF-3648D (2 PIECE)	36" X 48"	40" X 48"	GRATED INLET



NOTES:

1. Filter insert shall have a high flow bypass feature.
2. Filter support frame shall be constructed from stainless steel Type 304.
3. Filter medium shall be *Fossil Rock* ™, installed and maintained in accordance with manufacturer specifications.
4. Storage capacity reflects 80% of maximum solids collection prior to impeding filtering bypass.

Inlet Filtration

FloGard®

Catch Basin Insert Filter

Grated Inlet Style

Oldcastle®
Stormwater Solutions

7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com

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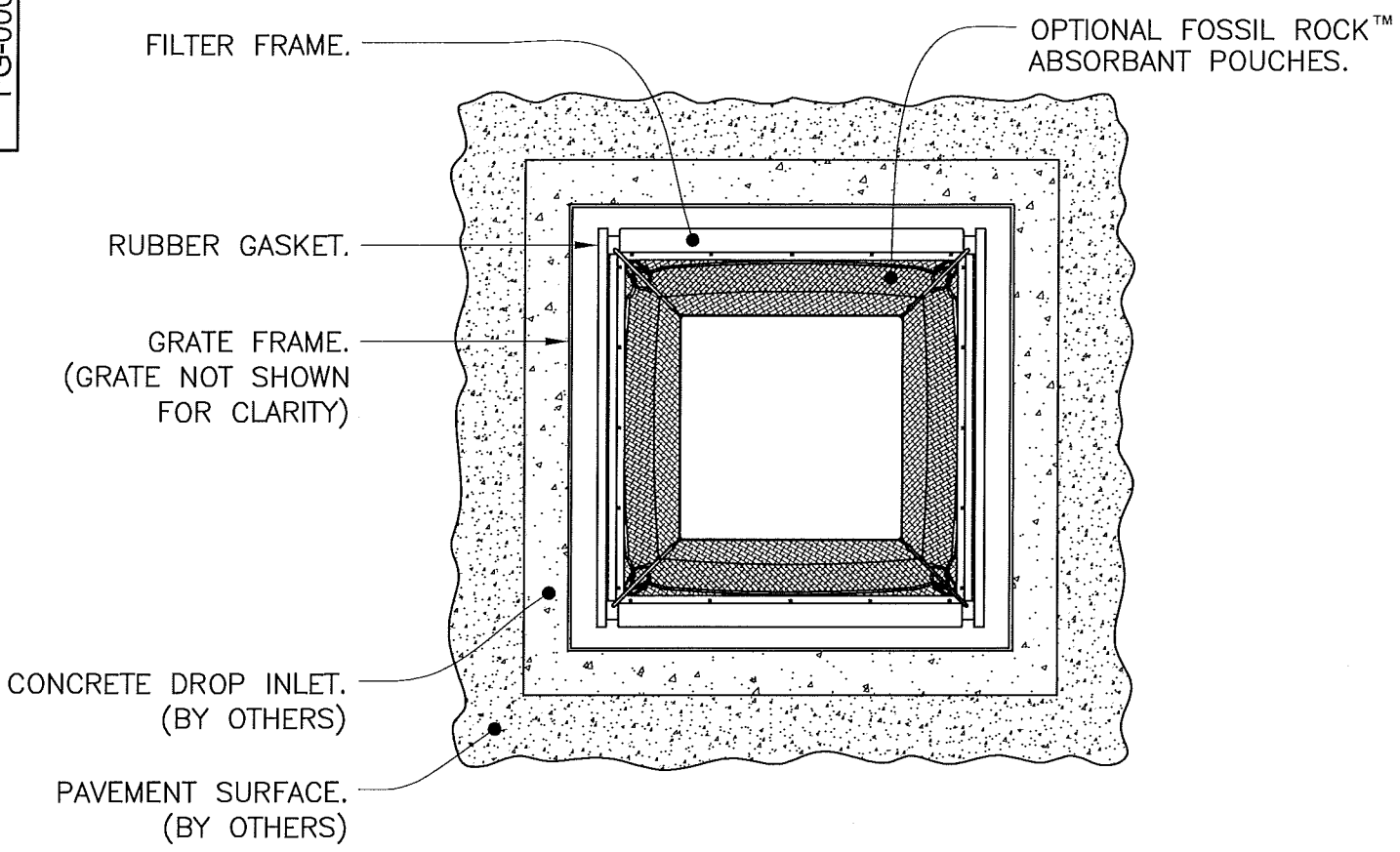
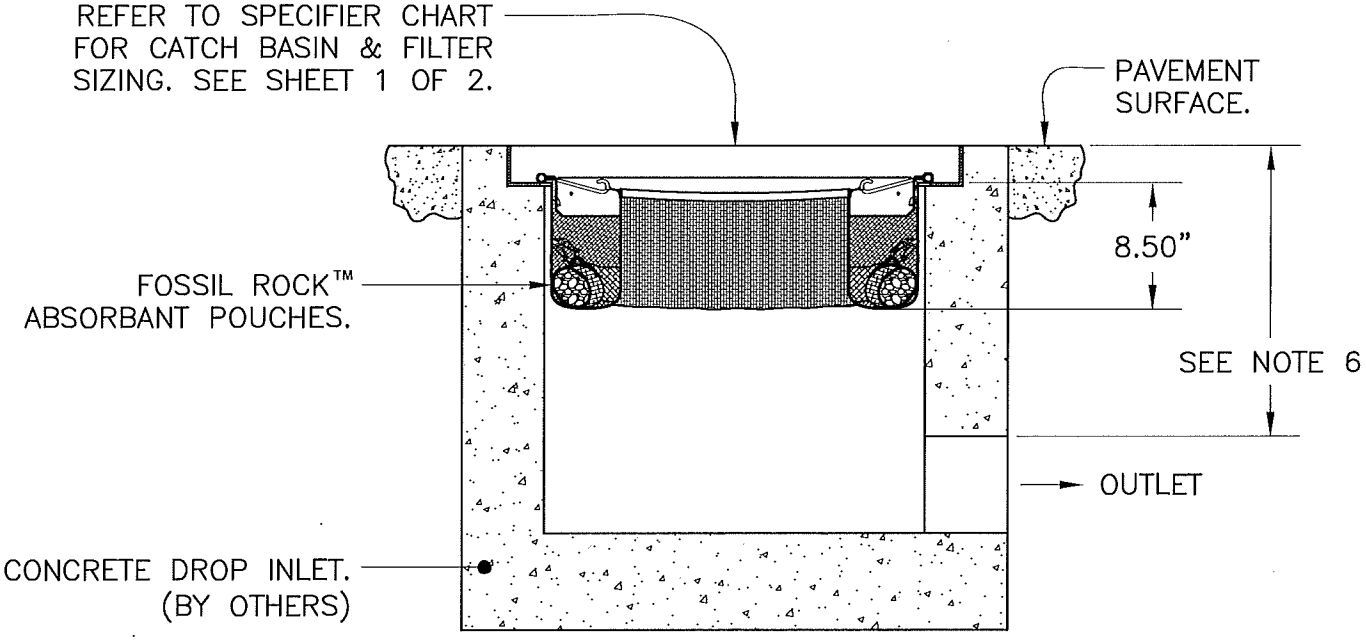
DRAWING NO.	REV	ECO	DATE	
FG-0001	D	ECO-0127 JPR 5/18/15	JPR 12/18/06	SHEET 1 OF 2

FG-0001





SECTION VIEW

Inlet Filtration

FloGard®

Catch Basin Insert Filter

Grated Inlet Style

Oldcastle® Stormwater Solutions

7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com

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DRAWING NO.	REV	ECD	DATE	
FG-0001	D	ECO-0127 JPR 5/18/15	JPR 12/18/06	SHEET 2 OF 2

GENERAL SPECIFICATIONS FOR MAINTENANCE OF *FLO-GARD+PLUS*® CATCH BASIN INSERT FILTERS

SCOPE:

Federal, State and Local Clean Water Act regulations and those of insurance carriers require that stormwater filtration systems be maintained and serviced on a recurring basis. The intent of the regulations is to ensure that the systems, on a continuing basis, efficiently remove pollutants from stormwater runoff thereby preventing pollution of the nation's water resources. These specifications apply to the FloGard+Plus® Catch Basin Insert Filter.

RECOMMENDED FREQUENCY OF SERVICE:

Drainage Protection Systems (DPS) recommends that installed Flo-Gard+Plus® Catch Basin Insert Filters be serviced on a recurring basis. Ultimately, the frequency depends on the amount of runoff, pollutant loading and interference from debris (leaves, vegetation, cans, paper, etc.); however, it is recommended that each installation be serviced a minimum of three times per year, with a change of filter medium once per year. DPS technicians are available to do an on-site evaluation, upon request.

RECOMMENDED TIMING OF SERVICE:

DPS guidelines for the timing of service are as follows:

1. For areas with a definite rainy season: Prior to, during and following the rainy season.
2. For areas subject to year-round rainfall: On a recurring basis (at least three times per year).
3. For areas with winter snow and summer rain: Prior to and just after the snow season and during the summer rain season.
4. For installed devices not subject to the elements (washracks, parking garages, etc.): On a recurring basis (no less than three times per years).

SERVICE PROCEDURES:

1. The catch basin grate shall be removed and set to one side. The catch basin shall be visually inspected for defects and possible illegal dumping. If illegal dumping has occurred, the proper authorities and property owner representative shall be notified as soon as practicable.
2. Using an industrial vacuum, the collected materials shall be removed from the liner. (Note: DPS uses a truck-mounted vacuum for servicing Flo-Gard+Plus® catch basin inserts.)
3. When all of the collected materials have been removed, the filter medium pouches shall be removed by unsnapping the tether from the D-ring and set to one side. The filter liner, gaskets, stainless steel frame and mounting brackets, etc. shall be inspected for continued serviceability. Minor damage or defects found shall be corrected on-the-spot and a notation made on the Maintenance Record. More extensive deficiencies that affect the efficiency of the filter (torn liner, etc.), if approved by the customer representative, will be corrected and an invoice submitted to the representative along with the Maintenance Record.
4. The filter medium pouches shall be inspected for defects and continued serviceability and replaced as necessary and the pouch tethers re-attached to the liner's D-ring. See below.
5. The grate shall be replaced.

REPLACEMENT AND DISPOSAL OF EXPOSED FILTER MEDIUM AND COLLECTED DEBRIS

The frequency of filter medium pouch exchange will be in accordance with the existing DPS-Customer Maintenance Contract. DPS recommends that the medium be changed at least once per year. During the appropriate service, or if so determined by the service technician during a non-scheduled service, the filter medium pouches will be replaced with new pouches. Once the exposed pouches and debris have been removed, DPS has possession and must dispose of it in accordance with local, state and federal agency requirements.

DPS also has the capability of servicing all manner of catch basin inserts and catch basins without inserts, underground oil/water separators, stormwater interceptors and other such devices. All DPS personnel are highly qualified technicians and are confined space trained and certified. Call us at (888) 950-8826 for further information and assistance.

Operations and Maintenance Plan

To allow uniform percolation of stormwater throughout the biofiltration area and ensure that it will continue to function adequately as stormwater treatment BMPs, the following maintenance steps are required:

1. Debris from sheet flow should be removed routinely and upon discovery to allow unimpeded flow to the biofiltration area.

2. Any deficiencies in energy dissipater structure such as cracking, rotting, and failure should be repaired.

3. If clogging occurs in biofiltration area reservoir, sources of clogging should be identified and corrected. Topsoil may need to be amended with sand or replaced.

4. If low infiltration rates occur, the planter should be excavated and cleaned, and gravel or soil should be replaced.

5. Accumulated sediment should be removed by hand with minimum damage to vegetation. Sediment should be removed if it is more than 4 inches or so thick as to damage or kill vegetation. Litter and debris should be removed routinely and upon discovery.

6. Mulch should be replenished at least annually.

7. Vegetation, large shrubs, or trees that interfere with planter operation or access should be pruned or removed.

8. Fallen leaves and debris from deciduous plant foliage should be raked and removed.

9. Dead vegetation should be removed to maintain less than 10% of area coverage or when planter function is impaired.

Biofiltration areas should be inspected annually for standing water, structural deficiencies, and visual contaminants prior to the wet season, and after major storm events (>0.75” in 24 hours) if spot checks of basins indicate maintenance needs. Vegetation and inlet/outlet structures should be inspected monthly (or as dictated by agreement between the owner and the landscape contractor) for weeds, excessive plant growth, dead or dying plants, and trash and debris.