24422 AVENIDA DE LA CARLOTA
TRAFFIC IMPACT STUDY
City of Laguna Hills, California

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1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this traffic impact analysis and report is to evaluate and assess the proposed 24422 Avenida De La Carlota Project (hereinafter referred to as "project") from a traffic and circulation perspective. Furthermore, this analysis will determine whether the proposed project will significantly impact the environment.

This study has been conducted pursuant to the *City of Laguna Hills Vehicle Miles Traveled Analysis Guidelines under the California Environmental Quality Act and General Plan Development Review Traffic Study Guidelines,* dated August 2021. This study evaluates the potential traffic and environmental impacts associated with the proposed project in accordance with the thresholds of significance.

This study is prepared in accordance with the scope of work that has been approved by the City of Laguna Hills staff, which is contained in **Appendix A**.

Regarding the medical office portion of the project, the analysis was initially based on a proposed description of a 121,000 square foot (SF) medical office building. The actual building is approximately 120,354 SF. To maintain a conservative assessment, the analysis continues to use the originally proposed 121,000 SF.

1.2 Site Location & Project Description

The project site, located at 24422 Avenida De La Carlota, is bound between the I-5 Freeway, Los Alisos Boulevard, and Avenida De La Carlota in the City of Laguna Hills. The project is in the Urban Village Specific Plan ("UVSP") area. The project site is occupied by an approximately 121,000 square-foot (SF) general/medical office building. It is currently designated as approximately 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF).

Representatives of the project propose converting the existing general/medical office building into a 100% medical office building and adding 250 dwelling units of senior adult (age-restricted 55+) housing in a separate building. **Table 1-1** summarizes the proposed project:

Table 1-1
24422 Avenida De La Carlota, Laguna Hills
Project Description

	Land Use	Size	Units
Existing Land Uses	General/Medical Office	121,000	Gross Square Feet
Proposed Land Uses	***Medical Office Building***	***121,000***	***Gross Square Feet***
	Senior Adult (Age Restricted 55+) Housing Studio/1-Bedroom	163	Dwelling Units
	Senior Adult (Age Restricted 55+) Housing 2-Bedroom	87	Dwelling Units
	Total Number of Senior Adult Housing Residential Units	***250***	***Dwelling Units***

Access to the project site is currently provided and is proposed to continue to be provided via:

- One (1) unsignalized right-in/right-out driveway (i.e., Project Access No.1) along Avenida De La Carlota; and
- One (1) unsignalized full-access driveway (i.e., Project Access No.2) located along Avenida De La Carlota.

The proposed project is planned to open in 2028 and will be evaluated in one phase.

The project site location map is shown in **Exhibit 1-1**. **Exhibit 1-2** shows the proposed project's site plan.

1.3 Traffic Study Area & Analysis Scenarios

Exhibit 1-1 illustrates the project site's location map and traffic analysis study area.

The study area included in this analysis has been determined based on existing and future transportation facilities within the vicinity of the site where the project may contribute a significant amount of traffic. The

The study area intersections fall under the jurisdiction of several governing bodies including the Orange County Congestion Management Plan (CMP), Caltrans, the City of Lake Forest (LF), and the City of Laguna Hills (LH).

Exhibit 1-1

Location Map

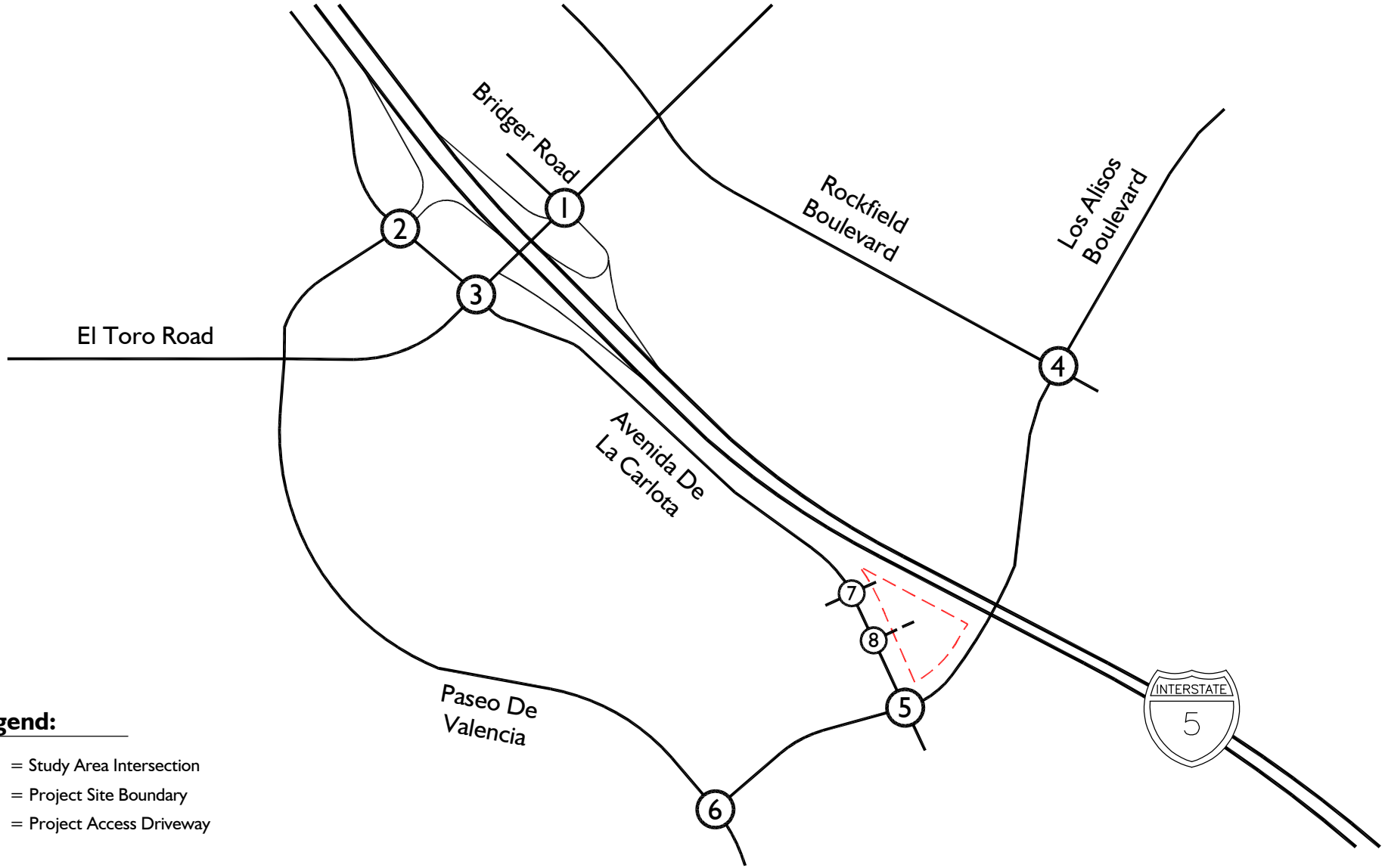
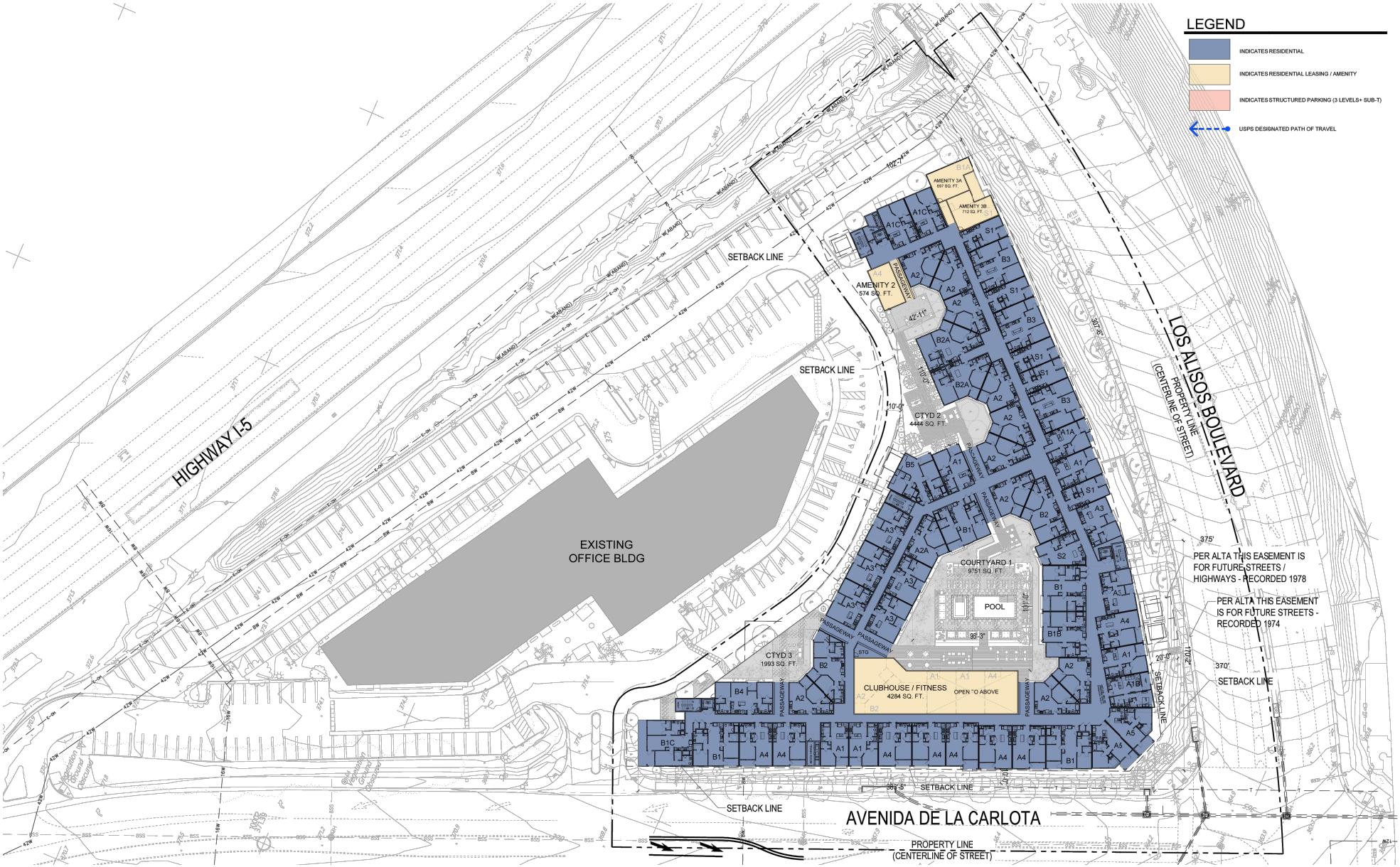


Exhibit 1-2

Site Plan



The study area consists of the following eight (8) intersections listed below. The jurisdiction(s) where each study intersection resides is also identified.

1. Bridger Road / I-5 NB Ramps at El Toro Road (CMP, Caltrans, LF)
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps (Caltrans, LH);
3. Avenida De La Carlota / I-5 SB Ramps at El Toro Road (CMP, Caltrans, LH);
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard (LF);
5. Avenida De La Carlota at Los Alisos Boulevard (LH);
6. Paseo De Valencia at Los Alisos Boulevard (LH);
7. Project Access Driveway 1 at Avenida De La Carlota (LH); and
8. Project Access Driveway 2 at Avenida De La Carlota (LH).

The analysis evaluates traffic conditions of the study area under the following scenarios during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00 PM) peak hour conditions:

- Existing Conditions;
- Existing Plus Project Conditions;
- Project Opening Year (2028) Without Project Conditions; and
- Project Opening Year (2028) With Project Conditions.

2.0 Analysis Methodology

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report in accordance with the City of Laguna Hills requirements. This section also discusses the agency-established applicable performance criteria and thresholds of significance for the study facilities.

2.1 Study Intersection Peak Hour Level of Service Analysis Methodology

In accordance with the *City of Laguna Hills Vehicle Miles Traveled Analysis Guidelines under the California Environmental Quality Act and General Plan Development Review Traffic Study Guidelines*, dated August 2021, the Highway Capacity Manual (HCM 7) and Intersection Capacity Utilization (ICU) methodologies are utilized as the technical guides in the evaluation of traffic operations.

2.1.1 Signalized Study Intersections

The methodology used to assess the operation of signalized study intersections is the Intersection Capacity Utilization (ICU) methodology. To calculate the ICU, the volume of traffic using the intersection is compared with the capacity of the intersection. ICU is usually expressed as a ratio. This ratio represents the portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity.

Table 2-1 shows the level of service criteria based on the ICU methodology.

Table 2-1
ICU Intersection LOS & V/C Ranges

LOS	Signalized Intersection LOS Criteria (V/C)
A	≤ 0.600
B	> 0.600 and ≤ 0.700
C	> 0.700 and ≤ 0.800
D	> 0.800 and ≤ 0.900
E	> 0.900 and ≤ 1.000
F	> 1.000

2.1.2 Unsignalized Study Intersections

The methodology used to assess the operation of unsignalized study area intersections is the Highway Capacity Manual Sixth Edition (HCM 7) methodology. The HCM defines level of service as a qualitative measure that describes operational conditions within a traffic stream, generally in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

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

- **LOS A** (Free Flow / Insignificant Delays) describes traffic operations in which progression is exceptionally favorable or the cycle length is extremely short. Generally, LOS A operations for signalized intersections tend to result in most vehicles arriving during the green phase and traveling through the intersection without stopping.

- **LOS B** (Stable Operation / Minimal Delays) describes traffic operations in which progression slightly diminishes but is still considered highly favorable and the cycle length is short. Vehicles stop more often causing a marginal increase in average delay.

- **LOS C** (Stable Operation / Acceptable Delays) describes traffic operations in which progression is favorable and the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Many vehicles still pass through the intersection, but a significant number of vehicles are stopping. Average delay is fair.

- **LOS D** (Approaching Unstable / Tolerable Delays) describes traffic operations in which progression is ineffective and/or cycle length is long. A considerable amount of vehicles stop and individual cycle failures are noticeable. Average delay is adequate.

- **LOS E** (Unstable Operation / Significant Delays) describes traffic operations in which progression is unfavorable and the cycle length is exceedingly long. Individual cycle failures are frequent. Average delay is high.

- **LOS F** (Forced Flow / Excessive Delays) describe traffic operations in which progression is extremely poor and the cycle length is extremely long. Most cycles fail to clear the queue. Average Delay is vast.

For intersections with stop control on the minor approach only, the calculation of level of service is dependent on the occurrence of gaps occurring in the free-flow traffic movement of the major

street, and the level of service is determined based on the worst individual movement on the stop-controlled minor approach or movements sharing a single lane on the stop-controlled minor approach.

For signalized intersections and all-way stop intersections, average control delay per vehicle is used to determine the level of service.

Table 2-2 shows the level of service criteria based on the HCM methodology.

Table 2-2
HCM Intersection LOS & Delay Ranges

LOS	Average Control Delay Per Vehicle (Seconds)	
	Signalized	**Unsignalized**
A	0.00 - 10.00	0.00 - 10.00
B	10.01 - 20.00	10.01 - 15.00
C	20.01 - 35.00	15.01 - 25.00
D	35.01 - 55.00	25.01 - 35.00
E	55.01 - 80.00	35.01 - 50.00
F	>80.00	>50.00

2.1.3 Caltrans Controlled Intersections

Per the City of Laguna Hills traffic study guidelines, study area intersections under the jurisdiction of Caltrans should be analyzed using both ICU and HCM methodologies.

2.1.4 Study Intersection LOS Applied Methodology

All study intersections in this analysis were evaluated utilizing the appropriate LOS analysis methodology based on the type of traffic control in place. **Table 2-3** below summarizes the LOS analysis method(s) utilized for each study intersection.

Table 2-3

Study Intersection LOS Methodology Utilized

Study Intersection	LOS Analysis Methodology Utilized
1. Bridger Road / I-5 NB Ramps at El Toro Road	HCM / ICU
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps	HCM / ICU
3. Avenida De La Carlota / I-5 SB Ramps at El Toro Road	HCM / ICU
4. Rockfield Boulevard / Fordview Street at Los Alisos Boulevard	ICU
5. Avenida De La Carlota at Los Alisos Boulevard	ICU
6. Paseo De Valencia at Los Alisos Boulevard	ICU
7. Project Access Driveway No. 1 at Avenida De La Carlota	HCM
8. Project Access Driveway No. 2 at Avenida De La Carlota	HCM

* HCM - Highway Capacity Manual 7th Edition Methodology
* ICU - Intersection Capacity Utilization Methodology

2.2 Analysis Parameters

The analysis parameters in this report are in accordance with *Section 12.0 Capacity Analysis* of the City of Laguna Hills traffic study guidelines. The following parameters have been utilized in the evaluation the study intersections LOS:

1. Saturation flow value of 1,700 vehicles per lane per hour for all lanes; no adjustments are used for protected movements with dedicated lanes (including both right and left turns). An adjustment of 0.85 should be used for right turn movements where there is a right turn or "defacto" right turn lane adjacent to the curb lane (lane width equal or greater than 19-feet).
2. A clearance interval factor of 5% (0.05) should be applied to the ICU calculations. The cycle time is 100 seconds for ICU analysis purposes.

2.3 Level of Service Performance Criteria & Thresholds of Significance

The following section describes the performance criteria & thresholds of significance utilized in determining project impacts in accordance with the City of Laguna Hills and the Orange County Congestion Management Program traffic study guidelines.

The minimum acceptable LOS at the eight (8) key study intersections are identified respectively:

1. Bridger Road / I-5 NB Ramps at El Toro Road [LOS E]
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps [LOS D];
3. Avenida De La Carlota / I-5 SB Ramps at El Toro Road [LOS E];
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard [LOS D];
5. Avenida De La Carlota at Los Alisos Boulevard [LOS D];
6. Paseo De Valencia at Los Alisos Boulevard [LOS D];
7. Project Access Driveway 1 at Avenida De La Carlota [LOS D]; and
8. Project Access Driveway 2 at Avenida De La Carlota [LOS D].

Furthermore, a project is deemed to have a significant impact at an intersection if the following criteria are met:

Non-CMP Signalized, Unsignalized, and Freeway Ramp Intersections

- The project causes an intersection at LOS D or better to degrade to LOS E or F, **and** the ICU increase attributable to the Project is 0.01 or greater (or any increase in delay per HCM 7).

Or

- The project causes an ICU increase of 0.01 or greater (or any increase in delay per HCM 7) at an intersection already operating at LOS E or LOS F during "Without Project" conditions.

CMP Signalized, Unsignalized, and Freeway Ramp Intersections

- The project causes an intersection at LOS E or better to degrade to LOS F, **and** the ICU increase attributable to the Project is 0.01 or greater (or any increase in delay per HCM 7).

Or

- The project causes an ICU increase of 0.01 or greater (or any increase in delay per HCM 7) at an intersection already operating at LOS F during "Without Project" conditions.

3.0 Existing Conditions & Circulation System

3.1 Existing Traffic Controls & Intersection Geometrics

During the preparation of this traffic study, RK communicated with City of Laguna Hills staff regarding traffic network considerations stemming from the Interstate 5 (I-5) / El Toro Road interchange improvement project and the ongoing construction along Avenida De La Carlota Street. It is RK's understanding that the improvements from these respective projects will not change the number of travel lanes along these roadways.

The most recent traffic analysis performed within the study area and the USVP area was the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law, & Greenspan (LLG) Engineers. The lane geometrics documented in the LLG report are based on the roadway and intersection physical characteristics that were in place before the current improvement projects were in progress. As a result, the existing lane geometry utilized in this analysis and shown in **Exhibit 3-1** is based on the Existing Roadway and Intersection Physical Characteristics illustrated in Figures 3A – 3D of the LLG Report.

Exhibit 3-1 identifies the roadway conditions, number of through traffic lanes, and intersection controls for the study area. It's worth noting that the type of traffic control and the number of lanes at an intersection are key inputs for the calculation of level of service.

The Village at Laguna Hills Traffic Impact Analysis is included in **Appendix B**.

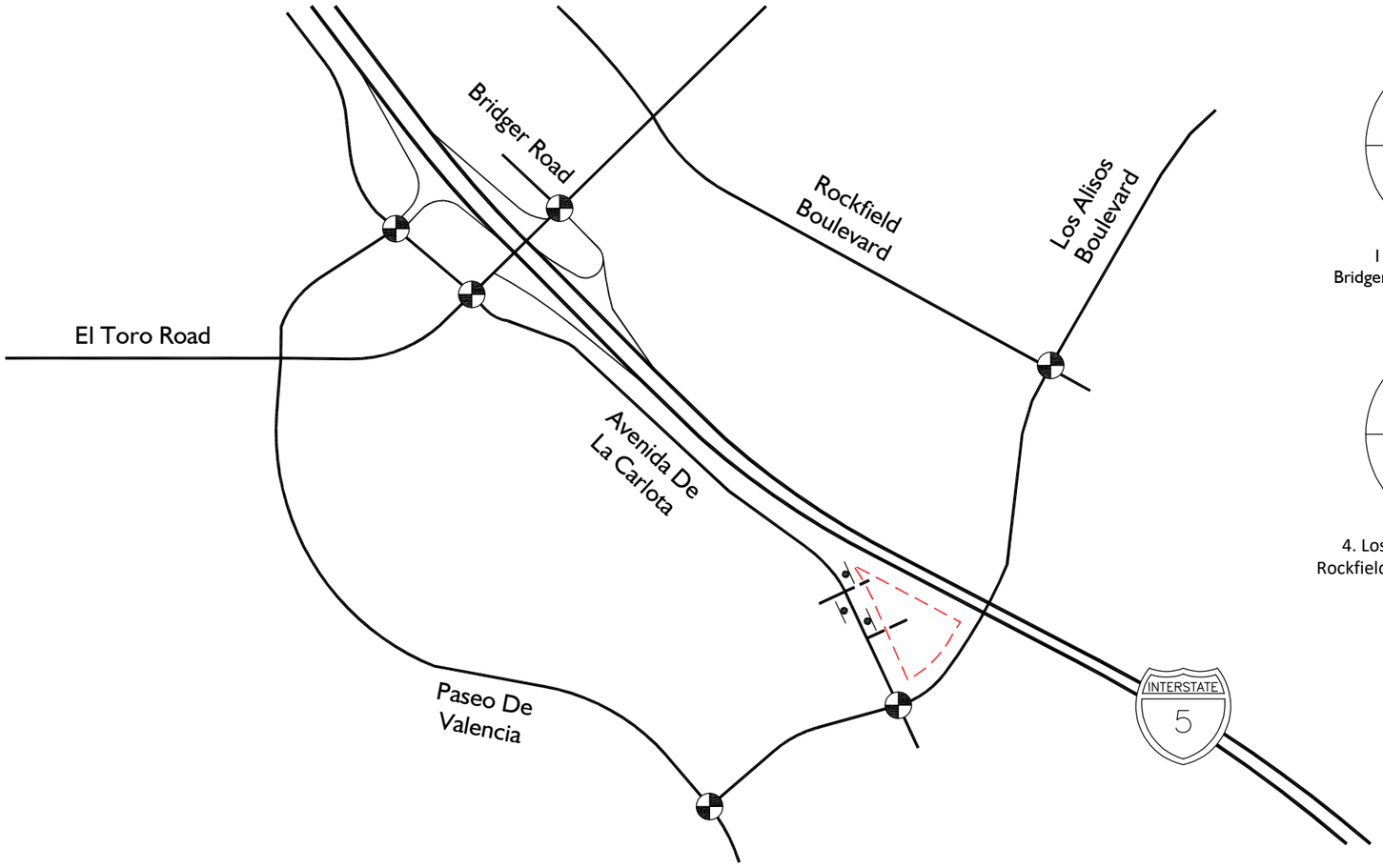
3.2 Existing Conditions Traffic Volumes

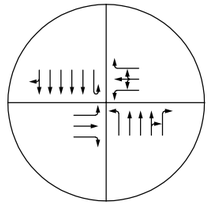
The proposed project is located within the vicinity of the Laguna Hills Mall project analyzed in the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers.

As discussed in the approved scope of work, LLG conducted traffic counts in September 2019 during the weekday AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods while local schools were still in session. LLG explains in their report that approximately 309,000 square feet (SF) of gross leasable area (GLA) was not occupied when the September 2019 traffic counts were conducted. To address this, and to account for trips corresponding with the mall's entitled and historically occupied square footage, LLG estimated trip generation for the 309,000 SF GLA based on the application of ITE trip generation rates/equations, and the resulting trips were then assigned to the street system and subsequently added to the raw traffic counts to establish 2019 traffic volumes.

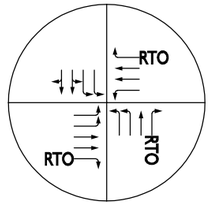
Exhibit 3-1

Existing Traffic Control & Intersection Geometrics

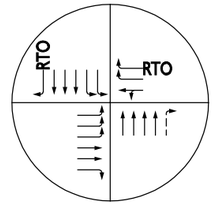




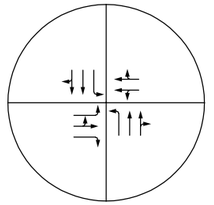
1. El Toro Road (NS) at Bridger Road / I-5 NB Ramps (EW)



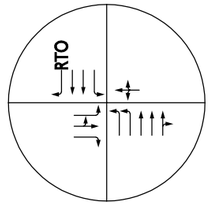
2. Paseo De Valencia / I-5 SB Ramps (NS) at Avenida De La Carlota (EW)



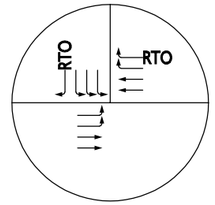
3. El Toro Road (NS) at Avenida De La Carlota (EW)



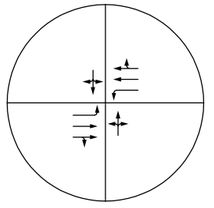
4. Los Alisos Boulevard (NS) at Rockfield Boulevard / Fordview (EW)



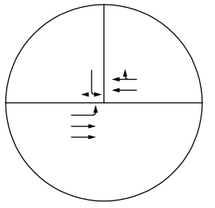
5. Los Alisos Boulevard (NS) at Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at Avenida De La Carlota (EW)

Legend:

- = Traffic Signal
- = Stop Sign
- RTO = Right Turn Overlap
- = Defacto Right Turn
- --- = Project Site Boundary
- --- = Project Access Driveway

N

Figures 4A – 5D from the LLG report illustrate the existing (2019) weekday AM and weekday PM peak hour traffic volumes.

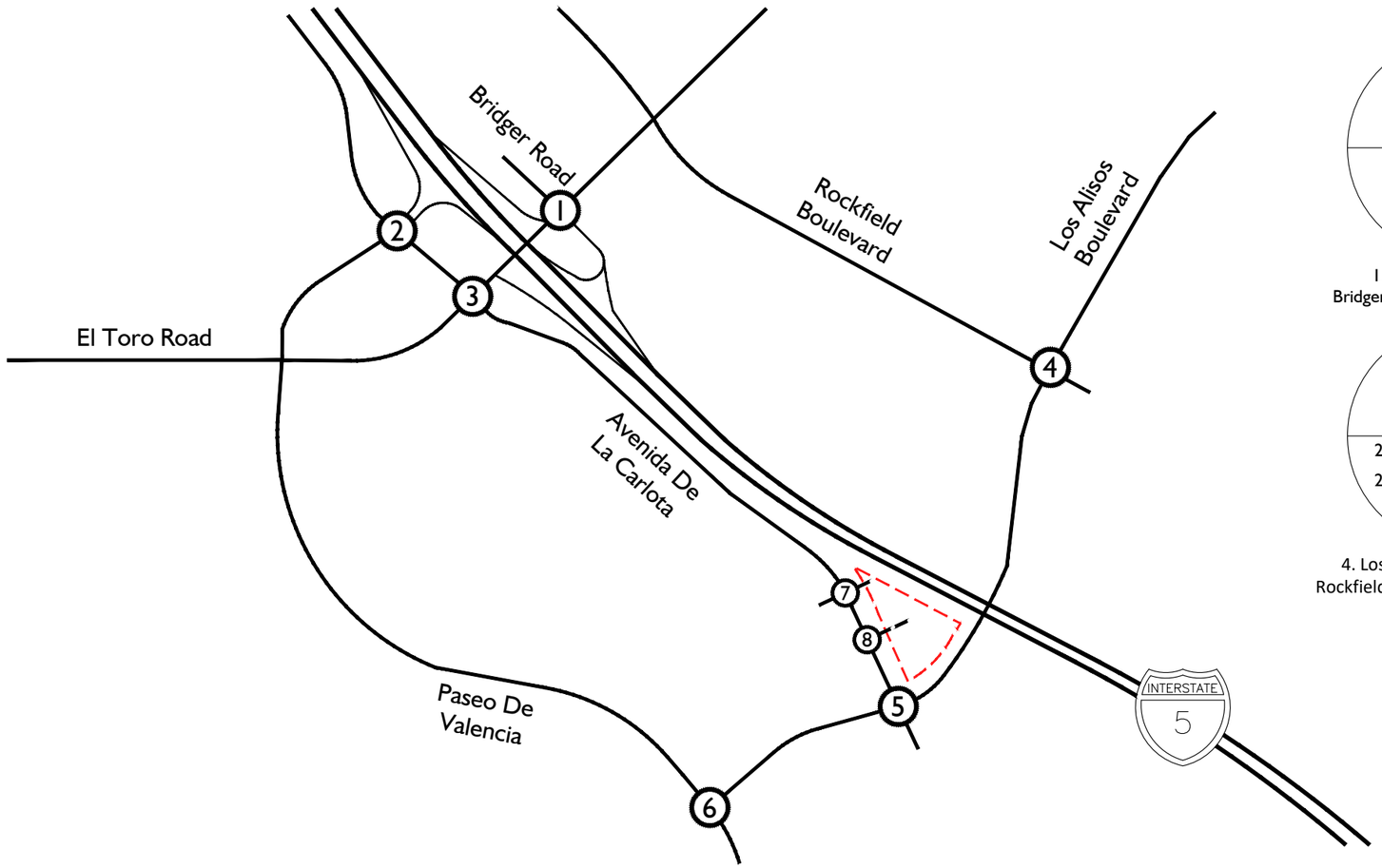
The analysis within this report has been based upon the 2019 traffic volumes identified in the LLG report. To establish baseline existing (2025) traffic conditions traffic volumes, the 2019 traffic volumes from the LLG report have been grown by six percent (6%) to account for one percent (1%) annual growth for a total of six (6) years.

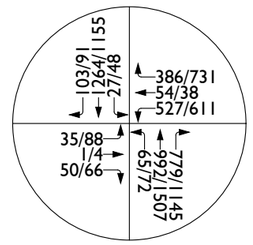
It should be noted that traffic associated with the Village at Laguna Hills project, as well as the other developments identified in the LLG report, has been accounted for in the background cumulative projects under Opening Year Conditions.

Existing (2025) weekday AM and PM peak hour traffic volumes for the key study intersections are shown in **Exhibit 3-2**.

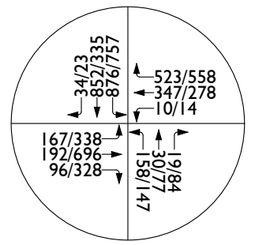
Exhibit 3-2

Existing Conditions Traffic Volumes

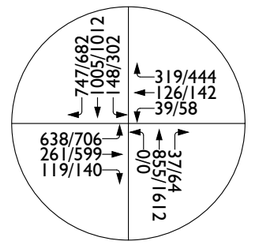




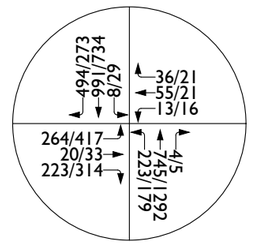
1. El Toro Road (NS) at
Bridger Road / I-5 NB Ramps (EW)



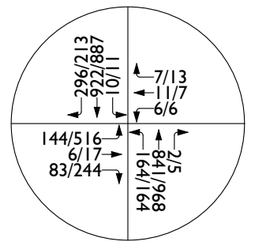
2. Paseo De Valencia / I-5 SB Ramps (NS) at
Avenida De La Carlota (EW)



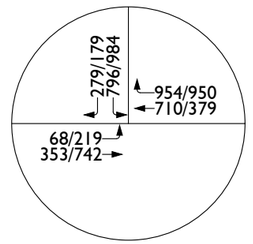
3. El Toro Road (NS) at
Avenida De La Carlota (EW)



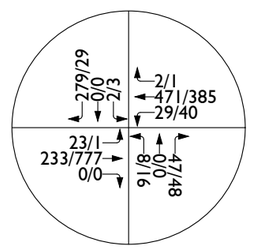
4. Los Alisos Boulevard (NS) at
Rockfield Boulevard / Fordview (EW)



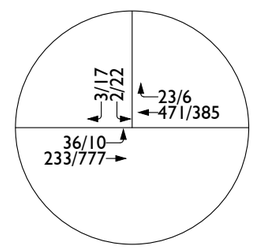
5. Los Alisos Boulevard (NS) at
Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at
Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at
Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at
Avenida De La Carlota (EW)

Legend:

10/20 = AM/PM Peak Hour Volumes
① = Study Area Intersection
--- = Project Site Boundary
--- = Project Access Driveway

N

4.0 Projected & Future Traffic Volumes

This section of the report provides a discussion on methodologies utilized to derive future traffic volumes for the study area.

4.1 Project Traffic Conditions

4.1.1 UVSP Trip Budget Capacity

The proposed project is located within the Urban Village Specific Plan (UVSP) area, which contains development regulations. Development intensity within the UVSP is regulated based on the remaining vehicle trip capacity within the UVSP as opposed to land use type or project size. As such, applicants for any new or expanded project within the plan area must prepare a traffic study to document that their respective project-generated AM and PM peak hour trips will not exceed the capacity of the UVSP's circulation network (i.e., trip budget caps).

This analysis references UVSP trip budget information provided by City of Laguna Hills staff, received on April 2, 2025. The current remaining trip budget for the UVSP area is 181 AM peak hour trips and 2,527 PM peak hour trips.

The April 2, 2025 UVSP trip budget information is included in **Appendix C**.

4.1.2 Project Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. The trip generation for the proposed project is based on the specific land uses that have been planned for the development.

Trip generation rates for the proposed development are shown in **Table 4-1** and are from the *Institute of Transportation Engineers (ITE) Trip Generation Manual* (11th Edition, 2021). This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

An existing trip credit will be applied to the currently unused USVP trip budgets to account for the existing 121,000 SF general/medical office building which is currently designated as 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF). Table 4-1 shows the ITE trip generation rates utilized for the existing general/medical office building.

Consistent with the 24422 Avenida De La Carlota Joint Use Parking Plan, prepared by RK Engineering Group, Inc., dated March 26, 2025, the proposed 121,000 SF medical office building will consist of approximately 80% medical-dental office and 20% "low intensity" medical office land uses. According to City of Laguna Hills Ordinance No. 2023-1, "low intensity" medical offices include

Table 4-1

ITE Trip Generation Rates[1]

Land Use	ITE Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Senior Adult Housing (Multifamily)	252	DU	34%	66%	0.20	56%	44%	0.25	3.24
General Office Building	710	TSF	88%	12%	1.52	17%	83%	1.44	10.84
Medical-Dental Office Building - Stand Alone	720	TSF	79%	21%	3.10	30%	70%	3.93	36.00

[1] Source: *ITE Trip Generation Manual* (11th Edition, 2021).

[2] DU = Dwelling Unit
TSF = Thousand Square Feet

chiropractic, acupuncture, optometry, physical therapy, psychotherapy offices, and similar services. These offices are expected to occupy the proposed project, with a parking requirement of 1 stall per 300 SF-GFA (3.33 parking spaces per 1,000 SF of gross floor area, GFA). The ITE Trip Generation Manual does not distinguish between general medical-dental office and "low intensity" medical office land uses. Therefore, considering that the low-intensity medical office land uses will be parked at 1 stall per 300 SF-GFA (3.33 parking spaces per 1,000 SF of GFA), which is the same requirement as business and professional office land uses per City of Laguna Hills Municipal Code §9-44.050, the project's trip generation analysis utilizes ITE land Use Code 710: General Office trip rates to represent the low intensity medical office land uses. Consequently, the analysis uses ITE Land Use Code 720: Medical-Dental Office and ITE Land Use Code 252: Senior Adult Housing (Multifamily) trip rates for the respective land uses.

Table 4-2 shows the ITE trip generation for the existing general/medical office building and for the proposed project utilizing the trip generation shown in Table 4-1.

As shown in Table 4-2, the existing general/medical office building currently generates approximately 1,920 daily trips, which include approximately 222 AM peak hour trips and approximately 234 PM peak hour trips. When these trips are added to the currently unused USVP trip budgets (i.e., 181 AM peak hour trips and 2,527 PM peak hour trips), the available UVSP trip budgets are increased to 403 AM peak hour trips and 2,761 PM peak hour trips.

As also shown in Table 4-2, the proposed project is forecast to generate approximately 4,557 daily trips which include approximately 387 AM peak hour trips and 478 PM peak hour trips.

When these trips are deducted from the available UVSP trip budget (i.e., 403 AM peak hour trips and 2,761 PM peak hour trips), the remaining available UVSP trip budget is 16 AM peak hour trips and 2,283 PM peak hour trips. **As such, the final development plan does not exceed the available trip budget caps.**

4.1.3 Project Trip Distribution

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses and highways within the study area.

The outbound and inbound trip distributions for the proposed project are shown in **Exhibit 4-1** and **Exhibit 4-2** respectively.

Table 4-2
Project Trip Generation

Land Use (ITE Code)	Units[2]	Quantity	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing Land Use									
Oakbrook Laguna Hills (General Office Portion) (710)	TSF	96.8	129	18	147	24	115	139	1,049
Oakbrook Laguna Hills (Medical Office Portion) (720)	TSF	24.2	59	16	75	29	66	95	871
Existing Land Use Trip Generation [A]			**188**	**34**	**222**	**53**	**181**	**234**	**1,920**
Proposed Land Use									
General Office (20% of Existing Building) (710)[3]	TSF	24.2	32	5	37	6	29	35	262
Medical-Dental Office (80% of Existing Building) (720)	TSF	96.8	237	63	300	114	266	380	3,485
Senior Adult Housing (Multifamily) (252)	DU	250	17	33	50	35	28	63	810
Total Proposed Project Trip Generation [B]			**286**	**101**	**387**	**155**	**323**	**478**	**4,557**
Urban Village Specific Plan (UVSP) Trip Budgets									
Urban Village Specific Plan (UVSP) Trip Budgets[4] [C]			--	--	181	--	--	2,527	--
Unused UVSP Trip Budgets (After Removal of Existing Land Uses) [C] + [A]			**--**	**--**	**403**	**--**	**--**	**2,761**	**--**
Unused UVSP Trip Budgets (After Construction of Proposed Land Uses) [C] + [A] - [B]			**--**	**--**	**16**	**--**	**--**	**2,283**	**--**
Total Net Trip Generation (Proposed Land Uses vs. Existing Land Uses) [B] - [A]			**98**	**67**	**165**	**102**	**142**	**244**	**2,637**

[1] Source: *ITE Trip Generation Manual* (11th Edition, 2021).

[2] DU = Dwelling Unit;
TSF = Thousand Square Feet.

[3] Consistent with the *24422 Avenida De La Carlota Joint Use Parking Plan*, prepared by RK Engineering Group, Inc., dated March 26, 2025, the proposed 121,000 SF medical office building will consist of approximately 80% medical-dental office and 20% "low intensity" medical office land uses. According to City of Laguna Hills Ordinance No. 2023-1, "low intensity" medical offices include chiropractic, acupuncture, optometry, physical therapy, psychotherapy offices, and similar services. These offices are expected to occupy the proposed project, with a parking requirement of 1 stall per 300 SF-GFA (3.33 parking spaces per 1,000 SF of gross floor area, GFA). The ITE Trip Generation Manual does not distinguish between general medical-dental office and "low intensity" medical office land uses. Therefore, considering that the low-intensity medical office land uses will be parked at 1 stall per 300 SF-GFA (3.33 parking spaces per 1,000 SF of GFA), which is the same requirement as business and professional office land uses per City of Laguna Hills Municipal Code §9-44.050, the project's trip generation analysis utilizes ITE land Use Code 710: General Office trip rates to represent the low intensity medical office land uses.

[4] Source: *USVP* trip budgets are based on information provided by City staff received April 2, 2025.

Exhibit 4-1

Outbound Project Trip Distribution

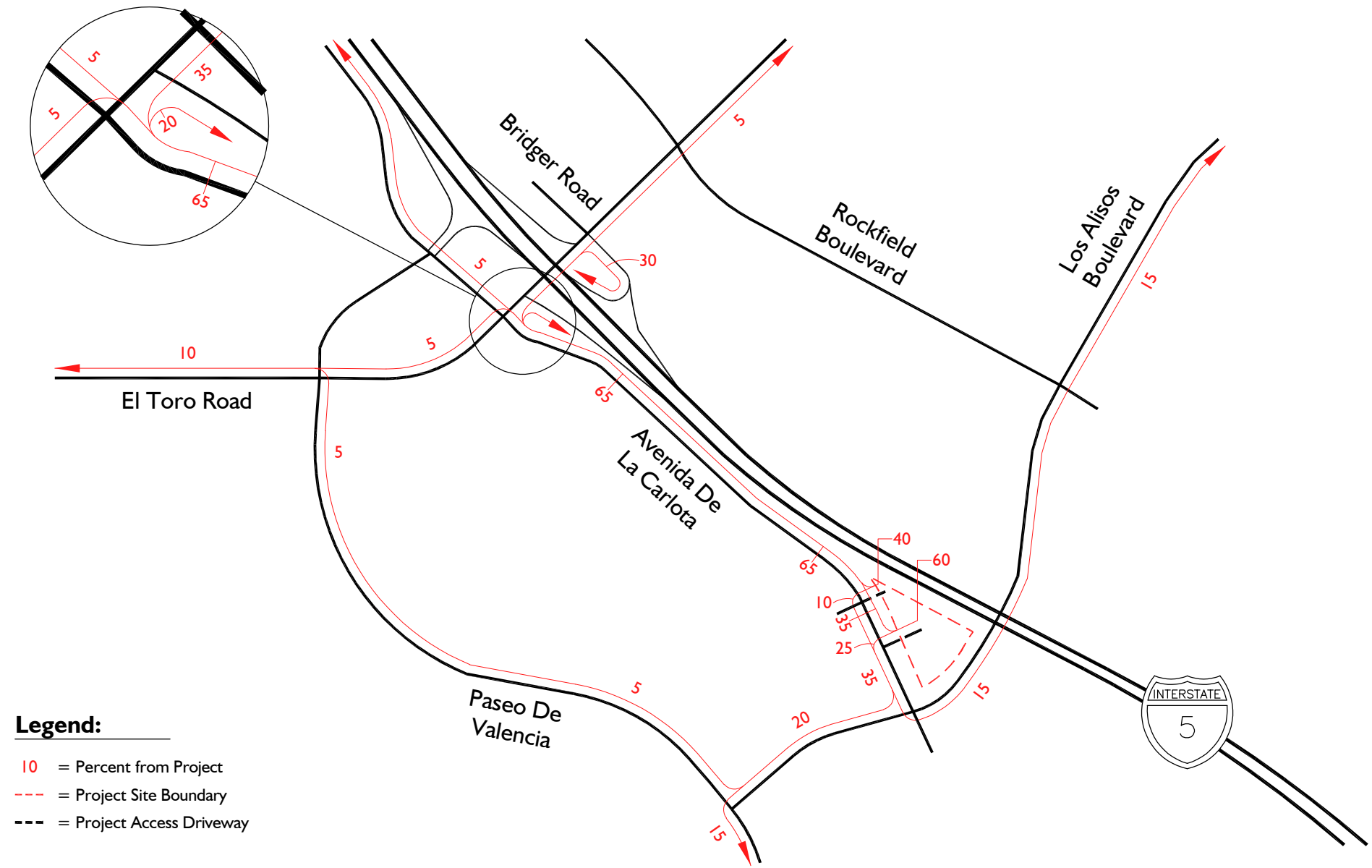
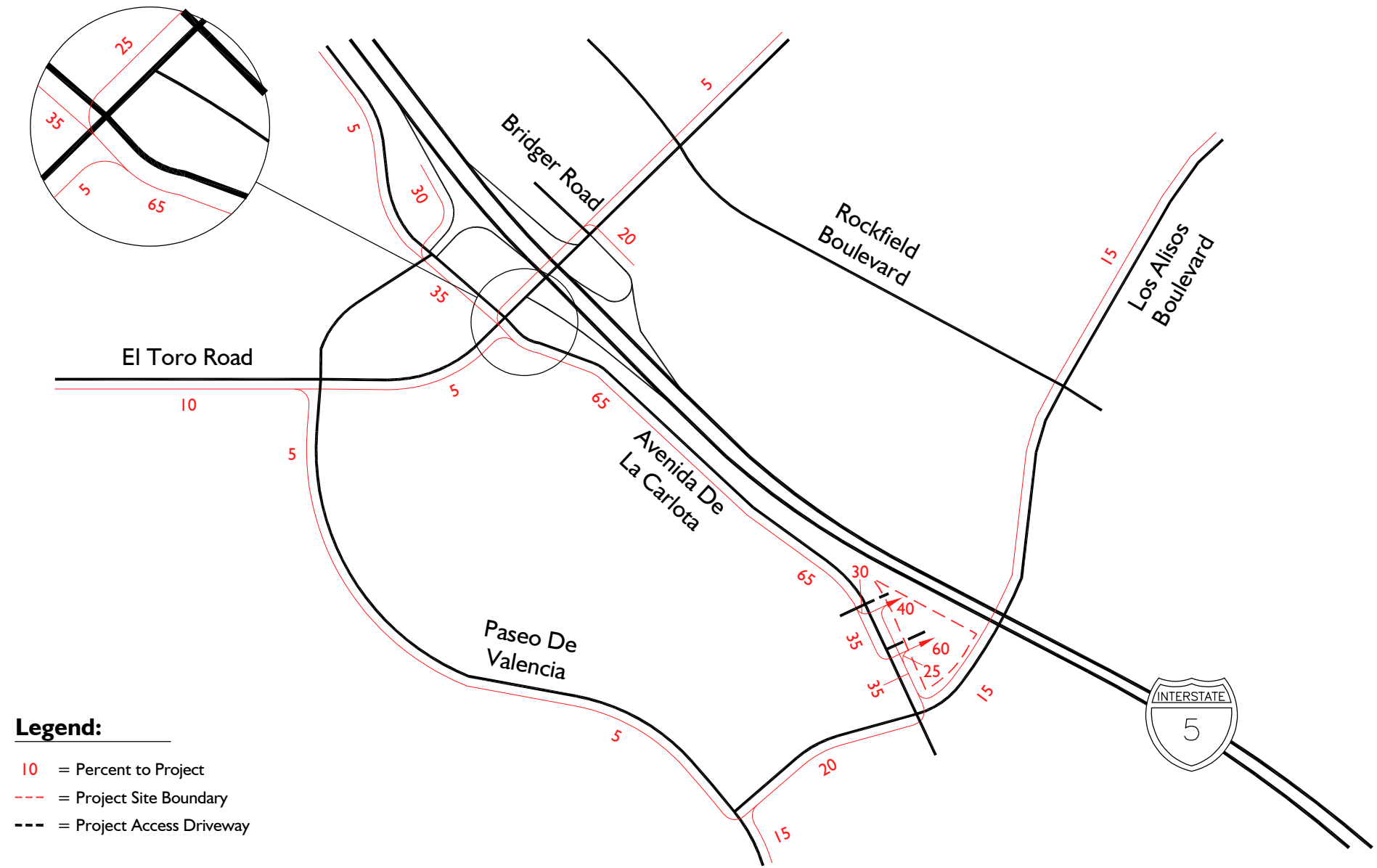


Exhibit 4-2

Inbound Project Trip Distribution



4.1.4 Modal Split

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic-reducing potential of public transit and other modes is significant. However, the traffic projections in this study are conservative as modal split reductions to the traffic volumes via the use of public transit and alternative transportation are not applied to the projections. With the implementation of transit services and the provision of alternative transportation ideas and incentives, the automobile traffic demand can be reduced significantly.

4.1.5 Project Traffic Volumes/Assignment

The assignment of project traffic to the adjoining roadway system is based upon the project's trip generation, trip distribution, and arterial highway and local street systems that would be in place by the time of initial occupancy of the site.

Exhibit 4-3 shows the project traffic volumes generated during the AM and PM peak hours.

4.2 Existing Plus Project Conditions Traffic Volumes

Existing Plus Project Conditions traffic volumes consists of the summation of the existing traffic volumes shown in Exhibit 3-2 and the project volumes shown in Exhibit 4-3.

Existing Plus Project traffic volumes are shown in **Exhibit 4-4**.

4.3 Background Traffic

4.3.1 Method of Projection

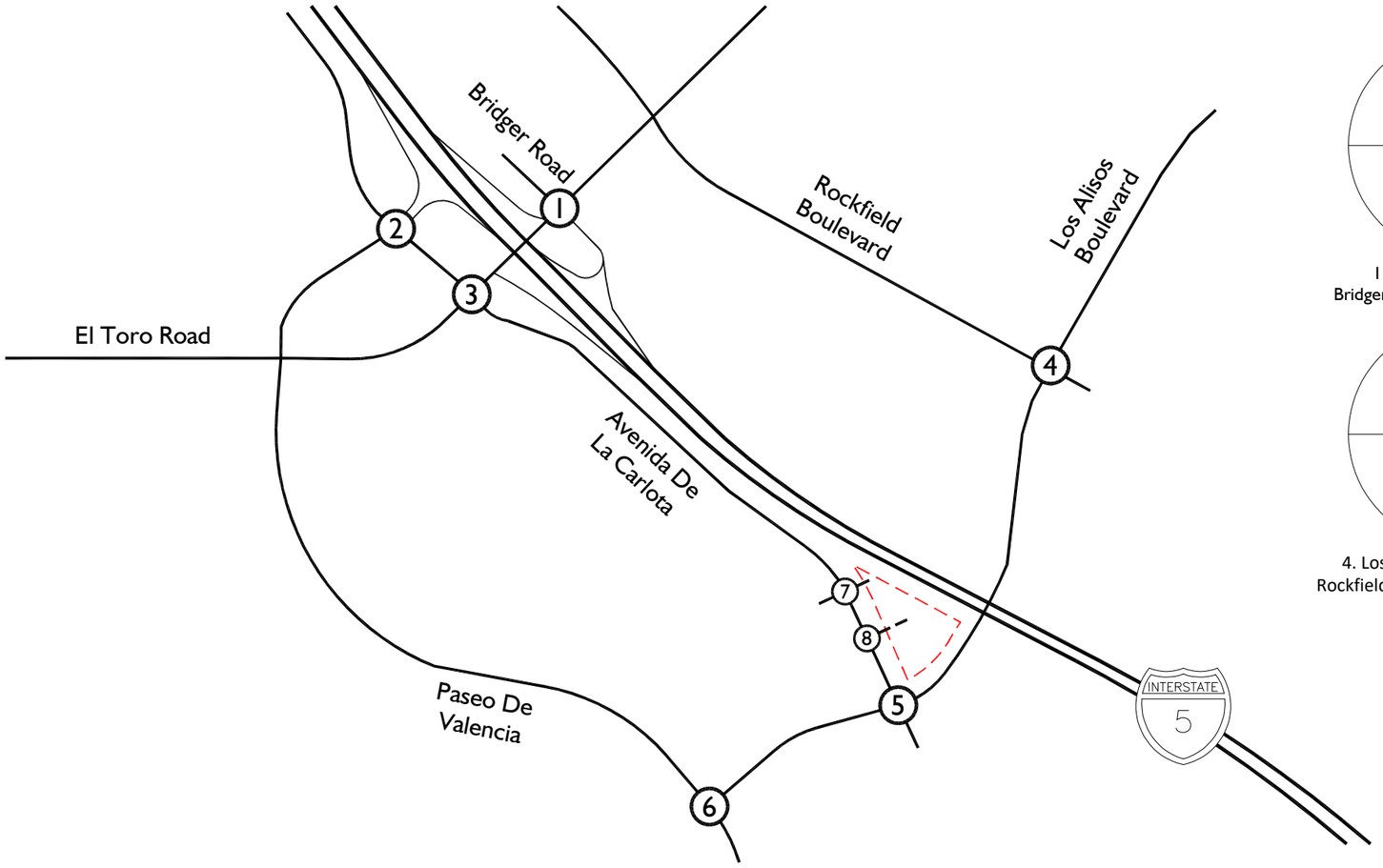
To assess future conditions, project traffic is combined with existing traffic and area-wide growth. As directed by City staff, to account for area-wide/ambient growth in the study area, an annual growth rate of one percent (1%) per year has been applied to the baseline existing (2025) traffic volumes over a 3-year period to opening year 2028 conditions (i.e., 3% total growth).

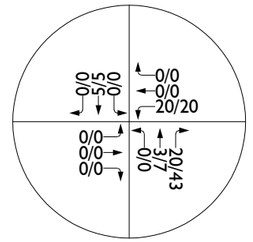
4.3.2 Cumulative Project Traffic

This traffic analysis accounts for traffic generated from future projects in the vicinity of the study area. Cumulative project traffic documented in the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, has been reviewed and incorporated into this study. Additionally, this analysis includes the net increase in

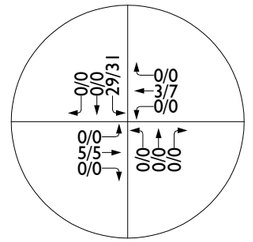
Exhibit 4-3

Project Traffic Volumes

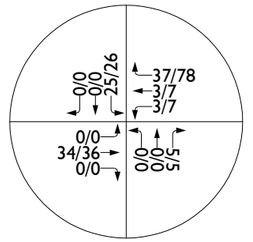




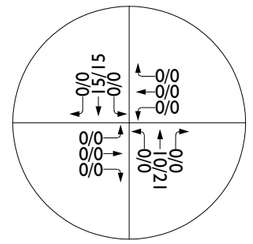
1. El Toro Road (NS) at
Bridger Road / I-5 NB Ramps (EW)



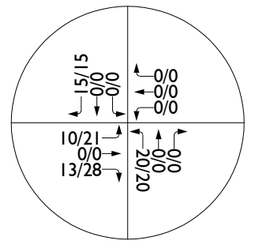
2. Paseo De Valencia / I-5 SB Ramps (NS) at
Avenida De La Carlota (EW)



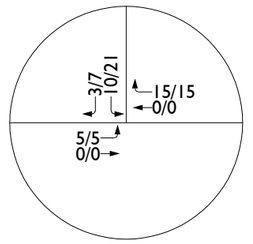
3. El Toro Road (NS) at
Avenida De La Carlota (EW)



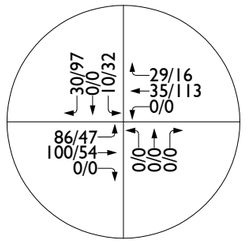
4. Los Alisos Boulevard (NS) at
Rockfield Boulevard / Fordview (EW)



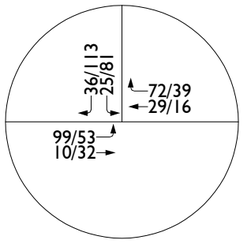
5. Los Alisos Boulevard (NS) at
Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at
Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at
Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at
Avenida De La Carlota (EW)

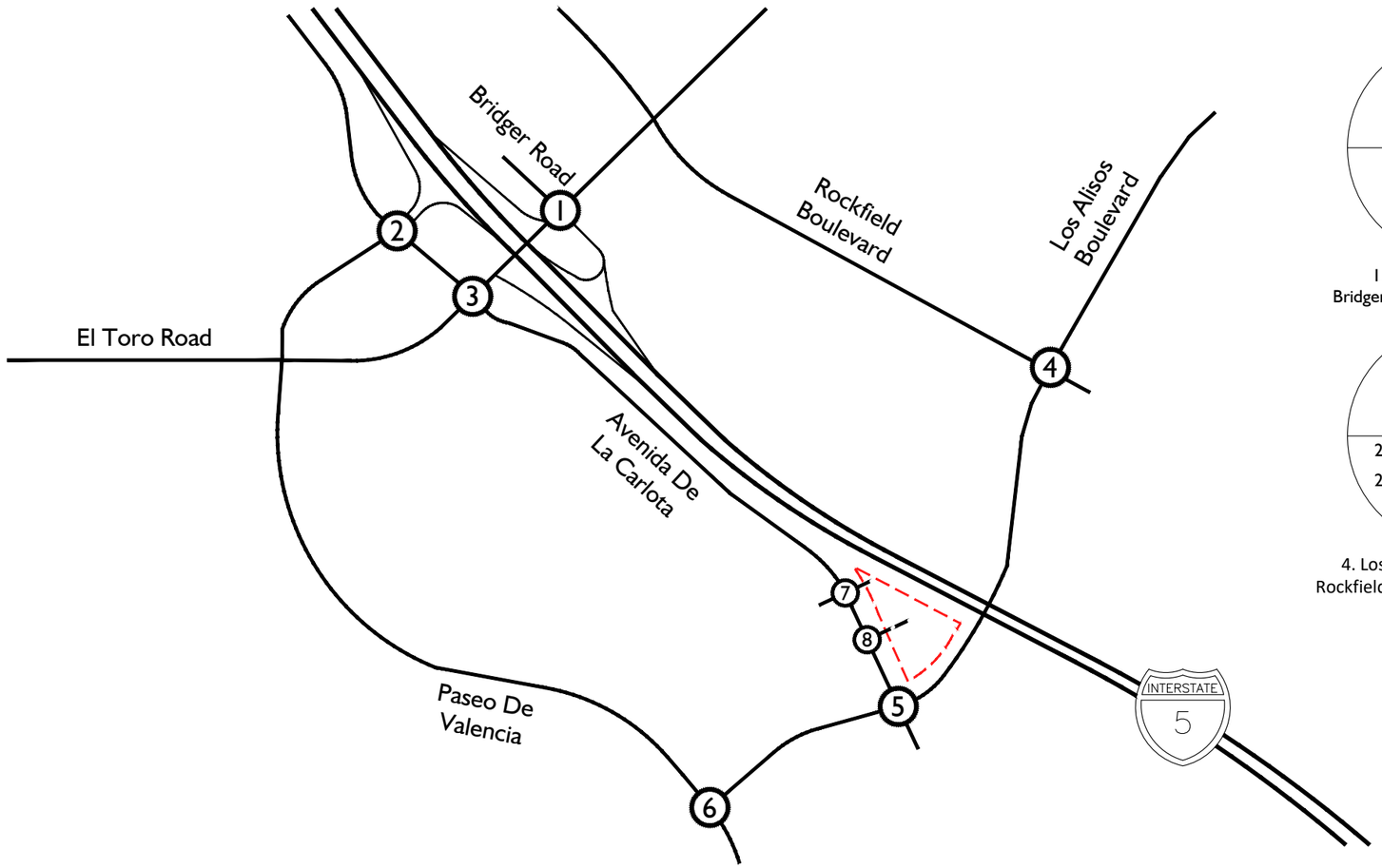
Legend:

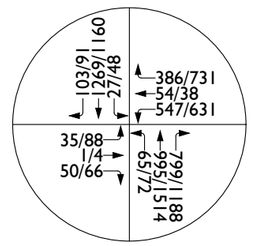
10/20 = AM/PM Peak Hour Volumes
(1) = Study Area Intersection
--- = Project Site Boundary
--- = Project Access Driveway

N

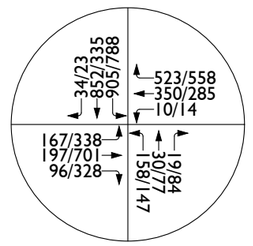
Exhibit 4-4

Existing Plus Project Conditions Traffic Volumes

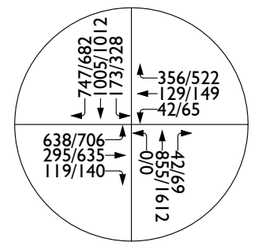




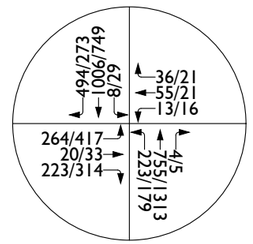
1. El Toro Road (NS) at
Bridger Road / I-5 NB Ramps (EW)



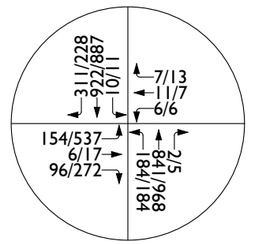
2. Paseo De Valencia / I-5 SB Ramps (NS) at
Avenida De La Carlota (EW)



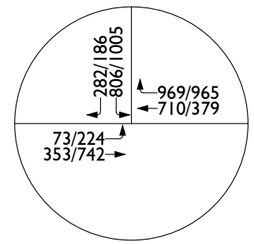
3. El Toro Road (NS) at
Avenida De La Carlota (EW)



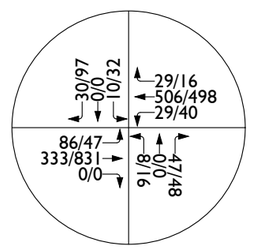
4. Los Alisos Boulevard (NS) at
Rockfield Boulevard / Fordview (EW)



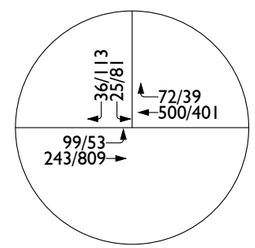
5. Los Alisos Boulevard (NS) at
Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at
Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at
Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at
Avenida De La Carlota (EW)

Legend:

10/20 = AM/PM Peak Hour Volumes
① = Study Area Intersection
--- = Project Site Boundary
--- = Project Access Driveway

N

trips from the Village at Laguna Hills development as a cumulative project under Project Opening Year (2028) conditions (i.e., 119 AM peak hour trips & -910 PM peak hour trips).

Information on new future projects in the vicinity of the study area has also been provided by the Cities of Laguna Hills for inclusion in this analysis. **Table 4-3** organizes the cumulative project information referenced from the Village at Laguna Hills report and the new cumulative project information provided by the City of Laguna Hills.

Furthermore, the new cumulative projects were organized into traffic analysis zones based on their land use types and locations. Table 4-3 shows the land uses and their corresponding weekday daily and peak hour trip generation for the cumulative projects utilized in this analysis.

A location map illustrating the location of new cumulative projects identified by the City of Laguna Hills is shown in **Exhibit 4-5**.

Cumulative projects traffic volumes are shown in **Exhibit 4-6**.

In reality, some of the cumulative projects may be downsized, may have already been partially constructed, or may not be developed by project opening year 2028. In addition, many of the related projects have been or will be subject to a variety of mitigation measures that will reduce the potential environmental impacts associated with those projects. However, those mitigation measures have not been considered in projecting the environmental impact of the related projects.

Therefore, the cumulative analyses set forth below are conservative and could result in greater impacts than anticipated. Additionally, the analysis utilizes a growth rate of one percent (1%) per year for project opening year (2028) conditions, which would already capture and account for most projects in the area. The growth rate methodology is considered conservative since it is applied to all movements in all the study intersections.

4.4 Project Opening Year (2028) Without Project Conditions Traffic Volumes

Project Opening Year (2028) Without Project Conditions traffic volumes consist of three (3) years of annual growth on top of baseline existing (2025) traffic volumes at one percent (1%) per year (i.e., 3% total growth), plus traffic generated by the cumulative projects.

Project Opening Year (2028) Without Project Conditions traffic volumes are shown in **Exhibit 4-7**.

Table 4-3
Cumulative Projects Trip Generation[1]

ID No.	Jurisdiction	Project Name / Case Number	Land Use (ITE Code[2])	Quantity	Units[3]	Weekday						
						AM Peak Hour			PM Peak Hour			Daily
						In	Out	Total	In	Out	Total	
Village at Laguna Hills Cumulative Projects[4]												
1.	**City of Laguna Hills**	Five Lagunas	- -	- -	- -	162	396	558	335	234	569	6,434
2.	**City of Laguna Hills**	Oakbrook Village	- -	- -	- -	22	56	78	62	44	106	1,342
3.	**City of Laguna Hills**	ActivCare	- -	- -	- -	9	5	14	7	12	19	187
4.	**City of Laguna Hills**	MNWD Facilities Expansion	- -	- -	- -	19	7	26	12	24	36	288
5.	**City of Laguna Hills**	24888 Alicia Parkway Commerical Project	- -	- -	- -	102	98	200	77	75	152	3,107
6.	**City of Laguna Hills**	Expansion of County SSA Building	- -	- -	- -	12	2	14	2	12	14	119
7.	**City of Lake Forest**	Kingdom Hall of Jehovah Witness	- -	- -	- -	1	1	2	1	2	3	46
8.	**City of Lake Forest**	U-Haul Storage Facility	- -	- -	- -	8	5	13	9	12	21	190
9.	**City of Lake Forest**	Towneplace Suites by Marriot	- -	- -	- -	31	22	53	34	33	67	936
10.	**City of Lake Forest**	Springhill Suities by Marriot	- -	- -	- -	28	20	48	31	30	61	853
11.	**City of Lake Forest**	Homewood Suites/Hampton Inn	- -	- -	- -	58	40	98	64	61	125	1,739
12.	**City of Aliso Viejo**	Polaris Office Building	- -	- -	- -	42	7	49	8	41	49	413
			Village at Laguna Hills Cumulative Projects Trip Generation Forecast			**494**	**659**	**1,153**	**642**	**580**	**1,222**	**15,654**
Village at Laguna Hills Development Project[5]												
1.	**City of Laguna Hills**	Village at Laguna Hills	- -	- -	- -	181	-62	119	-552	-358	-910	-9,970
			Village at Laguna Hills Project Trip Generation			**181**	**-62**	**119**	**-552**	**-358**	**-910**	**-9,970**
New Cumulative Project Developments												
TAZ 1												
LH 1	**City of Laguna Hills**	Rise Pet Care Luxury Hospital	Animal/Veterinary Hospital/Clinic (640)	20.000	TSF	49	24	73	28	42	70	430
					TAZ 1 Total	**49**	**24**	**73**	**28**	**42**	**70**	**430**
TAZ 2												
LH 2	**City of Laguna Hills**	Laguna Hills Plaza Remodel	- -[6]	- -	- -	139	93	232	124	138	262	3,022
					TAZ 2 Total	**139**	**93**	**232**	**124**	**138**	**262**	**3,022**
TAZ 3												
LH 3	**City of Laguna Hills**	Alicia Town Center Ralph's Fueling Center	Gasoline/Service Station (944)[7]	10	VFP	19	19	38	30	30	60	1,290
					TAZ 3 Total	**19**	**19**	**38**	**30**	**30**	**60**	**1,290**
					Total New Cumulative Project Developments Trip Generation	***207***	***136***	***343***	***182***	***210***	***392***	***4,742***

[1] Cumulative project information provided by City of Laguna Hills staff.

[2] Source: *ITE Trip Generation Manual (11th Edition, 2021).*

[3] TSF = Thousand Square Feet;
VFP = Vehicle Fueling Positions.

[4] Source: Table 8 from the *Village at Laguna Hills Traffic Impact Analysis*, prepared by Linscott, Law,& Greenspan Engineers, dated September 1, 2020.

[5] Source: *Village at Laguna Hills Traffic Impact Analysis*, prepared by Linscott, Law,& Greenspan Engineers, dated September 1, 2020.

[6] Cumulative project trip generation sourced from the *Revised Traffic Impact Analysis for Laguna Hills Plaza*, prepared by Linscott Law & Greenspan Engineers, dated November 2022.

[7] ITE Trip Generation Manual (11th Edition, 2021) pass-by trip reductions for ITE Land Use 944: Gasolline/Service Station have been applied to this project. ITE pass-by trip reductions for ITE Land Use 944: Gasoline/Service Station consists of the following: 63% AM Peak Hour, 57% PM Peak Hour, and 25% Daily (estimated).

Exhibit 4-5

Cumulative Projects Location Map

NOTE: See report for full list of cumulative projects and traffic analysis zones (TAZ).

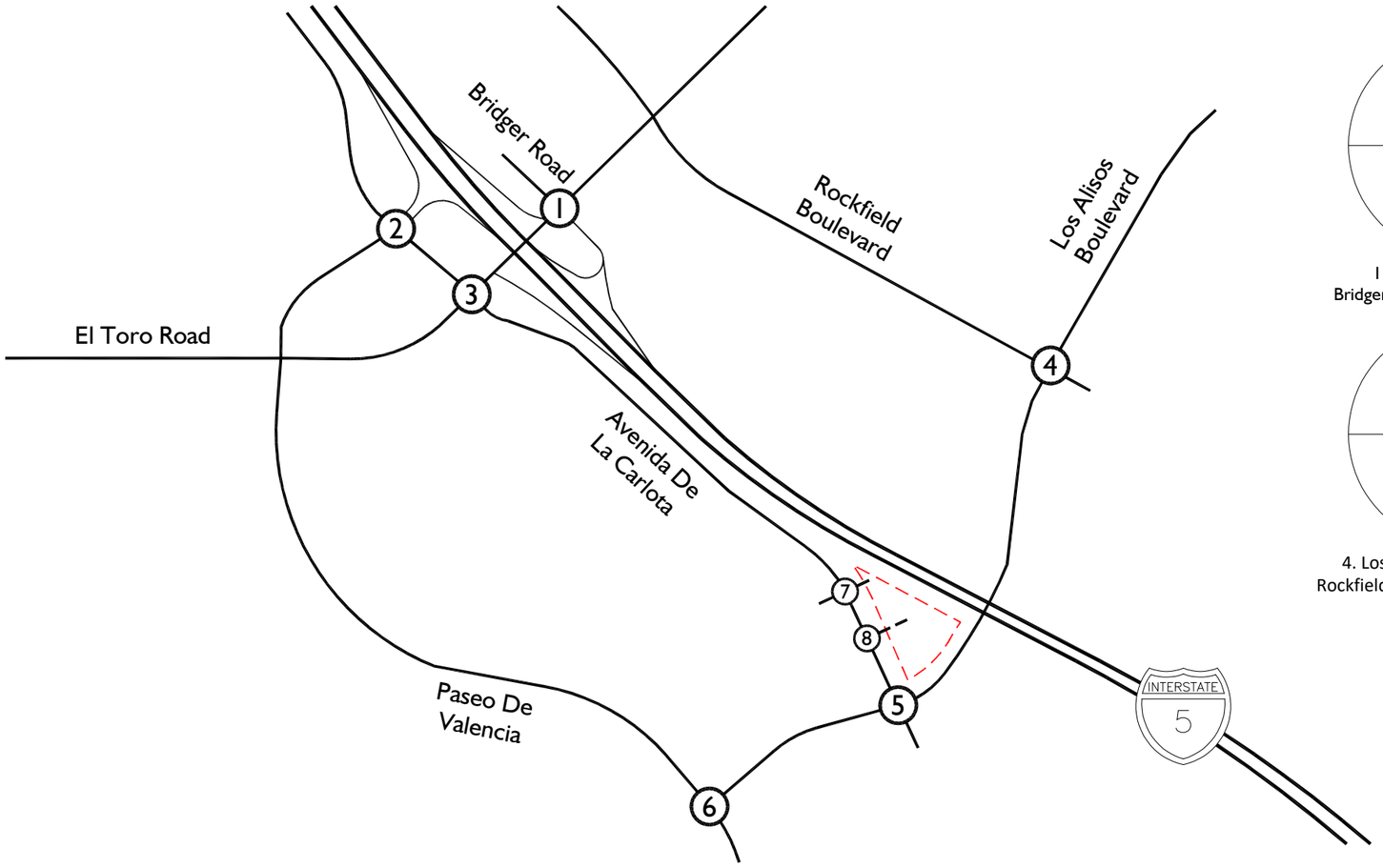
Legend:

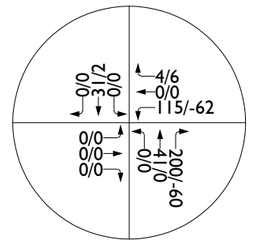
= City of Laguna Hills Cumulative Project

N

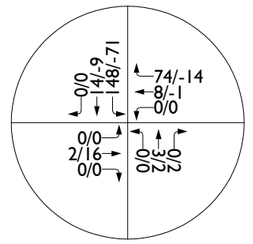
Exhibit 4-6

Cumulative Projects Traffic Volumes

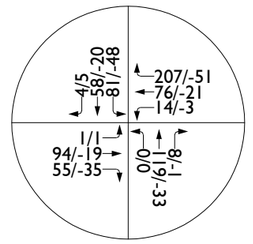




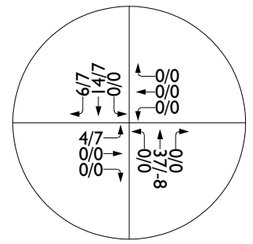
1. El Toro Road (NS) at
Bridger Road / I-5 NB Ramps (EW)



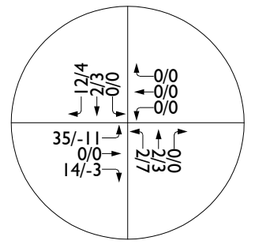
2. Paseo De Valencia / I-5 SB Ramps (NS) at
Avenida De La Carlota (EW)



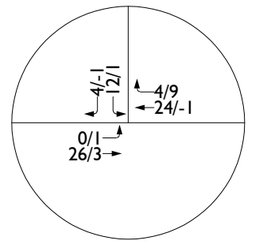
3. El Toro Road (NS) at
Avenida De La Carlota (EW)



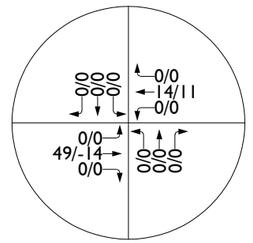
4. Los Alisos Boulevard (NS) at
Rockfield Boulevard / Fordview (EW)



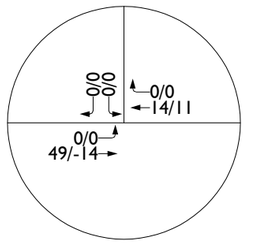
5. Los Alisos Boulevard (NS) at
Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at
Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at
Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at
Avenida De La Carlota (EW)

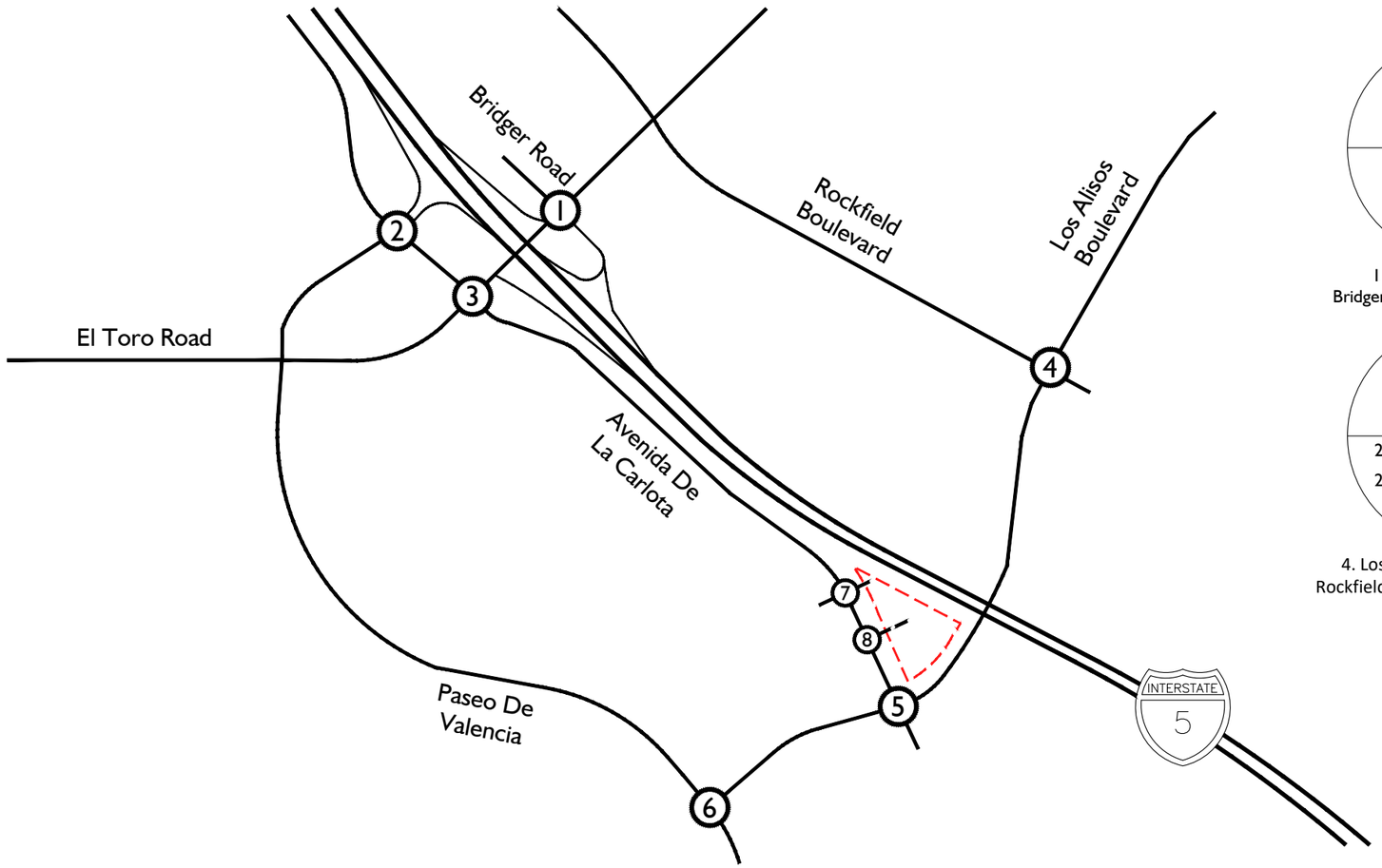
Legend:

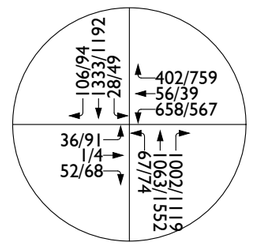
10/20 = AM/PM Peak Hour Volumes
(1) = Study Area Intersection
--- = Project Site Boundary
--- = Project Access Driveway

N

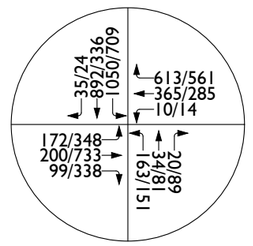
Exhibit 4-7

Project Opening Year (2028) Without Project Conditions Traffic Volumes

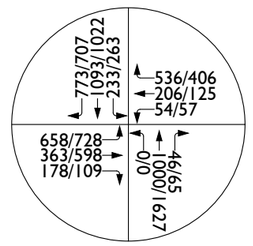




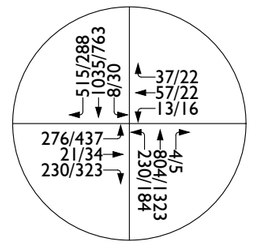
1. El Toro Road (NS) at
Bridger Road / I-5 NB Ramps (EW)



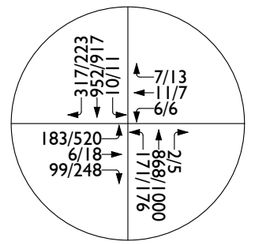
2. Paseo De Valencia / I-5 SB Ramps (NS) at
Avenida De La Carlota (EW)



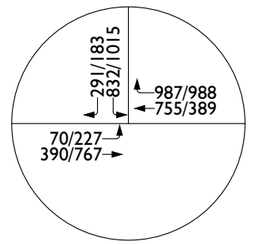
3. El Toro Road (NS) at
Avenida De La Carlota (EW)



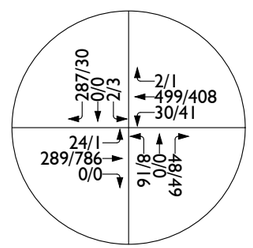
4. Los Alisos Boulevard (NS) at
Rockfield Boulevard / Fordview (EW)



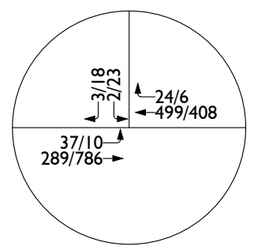
5. Los Alisos Boulevard (NS) at
Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at
Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at
Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at
Avenida De La Carlota (EW)

Legend:

10/20 = AM/PM Peak Hour Volumes
① = Study Area Intersection
--- = Project Site Boundary
--- = Project Access Driveway

N

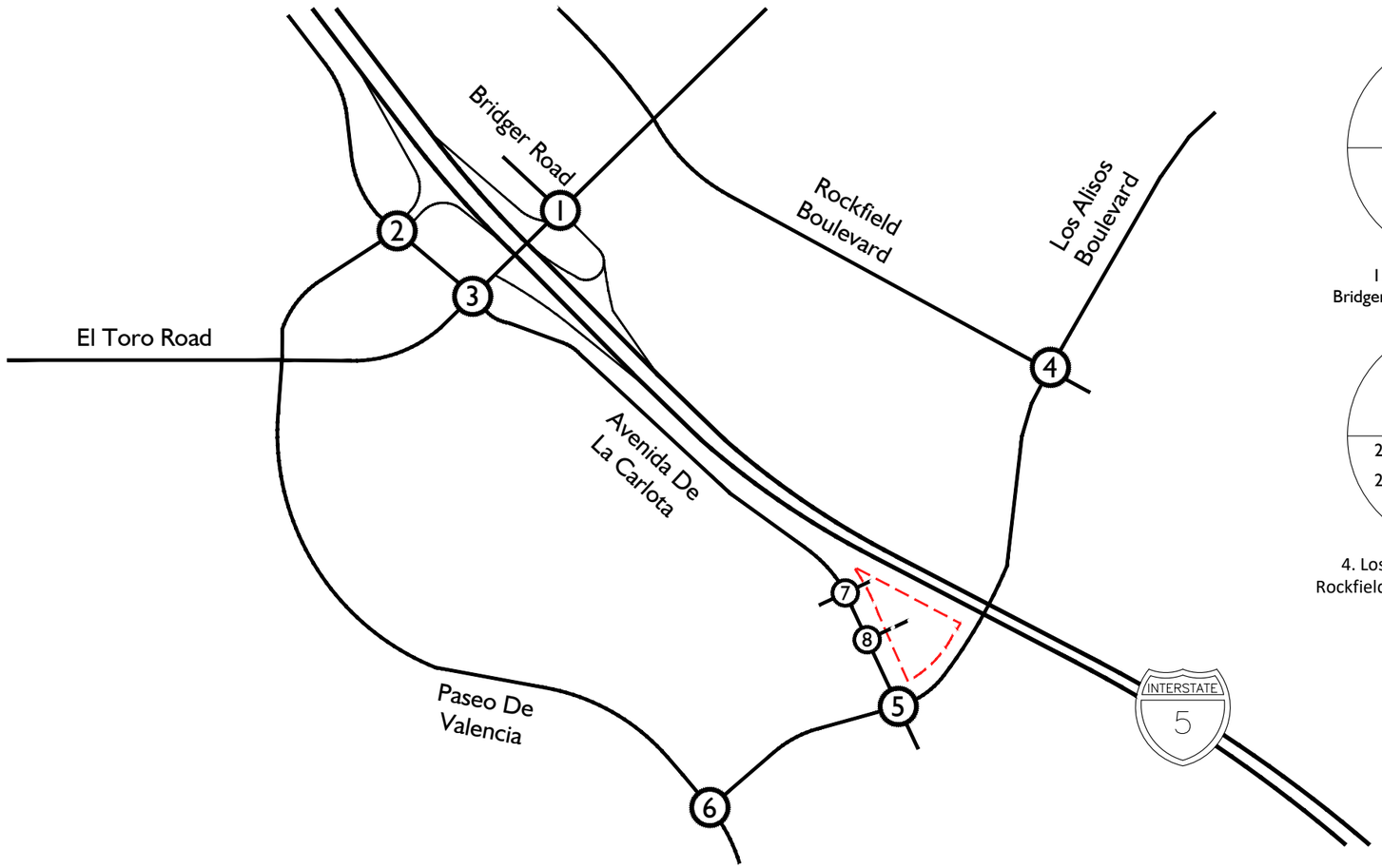
4.5 Project Opening Year (2028) With Project Conditions Traffic Volumes

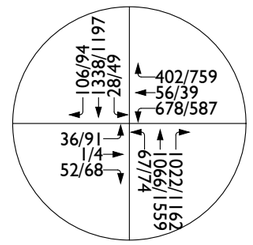
Project Opening Year (2028) With Project Conditions traffic volumes consist of three (3) years of annual growth on top of baseline existing (2025) traffic volumes at one percent (1%) per year (i.e., 3% total growth), plus traffic generated by the cumulative projects and the proposed project.

Project Opening Year (2028) With Project Conditions traffic volumes are shown in **Exhibit 4-8**.

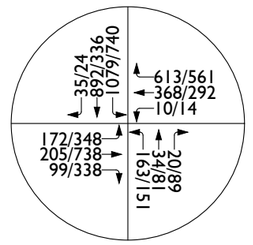
Exhibit 4-8

Project Opening Year (2028) With Project Conditions Traffic Volumes

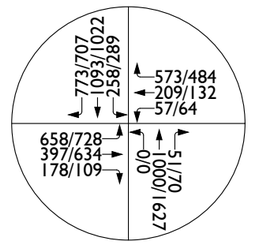




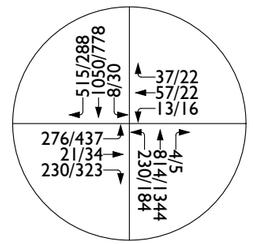
1. El Toro Road (NS) at
Bridger Road / I-5 NB Ramps (EW)



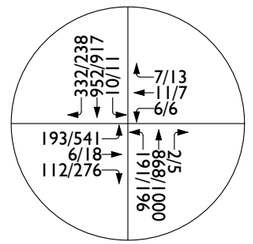
2. Paseo De Valencia / I-5 SB Ramps (NS) at
Avenida De La Carlota (EW)



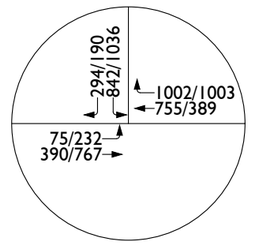
3. El Toro Road (NS) at
Avenida De La Carlota (EW)



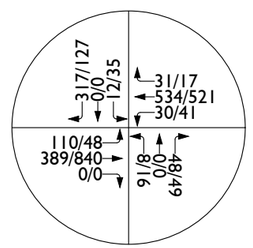
4. Los Alisos Boulevard (NS) at
Rockfield Boulevard / Fordview (EW)



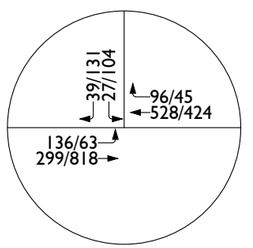
5. Los Alisos Boulevard (NS) at
Avenida De La Carlota (EW)



6. Los Alisos Boulevard (NS) at
Paseo De Valencia (EW)



7. Project Driveway No. 1 (NS) at
Avenida De La Carlota (EW)



8. Project Driveway No. 2 (NS) at
Avenida De La Carlota (EW)

Legend:

10/20 = AM/PM Peak Hour Volumes
① = Study Area Intersection
--- = Project Site Boundary
--- = Project Access Driveway

N

5.0 Study Intersection Peak Hour LOS Analysis

This section of the report provides a discussion on the study intersection peak hour LOS analysis and findings.

The minimum acceptable LOS thresholds for each study intersection are detailed in Section 2.3 of this report. Furthermore, operational improvements shall be identified for the study area intersections in which the LOS performance criteria also discussed in Section 2.3 of this report are met.

5.1 Existing Conditions Level of Service

Existing Conditions LOS calculations for the eight (8) study intersections are shown in **Table 5-1** and are based on the existing traffic volumes shown in Exhibit 3-2 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-1, all study intersections are currently operating at an acceptable LOS during the AM and PM peak hours under Existing Conditions.

Detailed LOS analysis worksheets for Existing Conditions are included in **Appendix D**.

5.2 Existing Plus Project Conditions Level of Service

Existing Plus Project Conditions LOS calculations for the eight (8) study intersections are also shown in Table 5-1 and are based on the Existing Plus Project traffic volumes shown in Exhibit 4-4 and the existing lane geometry shown in Exhibit 3-1.

As also shown in Table 5-1, all study intersections are forecasted to continue operating at an acceptable LOS during the AM and PM peak hours under Existing Plus Project Conditions.

Detailed LOS analysis worksheets for Existing Plus Project Conditions are included in **Appendix E**.

5.3 Project Opening Year (2028) Without Project Conditions Level of Service

Project Opening Year (2028) Without Project Conditions LOS calculations for the eight (8) study intersections are shown in **Table 5-2** and are based on the Project Opening Year (2028) Without Project Conditions traffic volumes shown in Exhibit 4-7 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-2, all study intersections are forecasted to continue operating at an acceptable LOS during the AM and PM peak hours under Project Opening Year (2028) Without Project Conditions.

Table 5-1
Study Intersection LOS Analysis Summary
Existing Conditions

	Study Intersection	Traffic Control[1]	Methodology	Acceptable LOS	Without Project								With Project													
					HCM 7				ICU				HCM 7						ICU						Requires LOS Improvement?	
					Delay (sec/veh)[2,3]		Level of Service		V/C Ratio[2,3]		Level of Service		Delay (sec/veh)[2,3]		Increase in Delay		Level of Service		V/C Ratio[2,3]		Increase in V/C		Level of Service			
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1.	Bridger Road / I-5 NB Ramps at El Toro Road[4]	TS	HCM 7/ ICU	E	22.1	34.8	C	C	0.536	0.790	A	C	22.4	36.1	0.3	1.3	C	D	0.543	0.801	0.007	0.011	A	C	No	No
2.	Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps	TS	HCM 7/ ICU	D	42.1	41.7	D	D	0.508	0.538	A	A	42.1	42.0	0.0	0.3	D	D	0.515	0.537	0.007	-0.001	A	A	No	No
3.	Avenida De La Carlota / I-5 SB Ramps at El Toro Road[4]	TS	HCM 7/ ICU	E	24.8	30.9	C	C	0.586	0.670	A	B	25.3	33.5	0.5	2.6	C	C	0.590	0.696	0.004	0.026	A	B	No	No
4.	Rockfield Boulevard / Fordview Street at Los Alisos Boulevard	TS	ICU	D	- -	- -	- -	- -	0.780	0.653	C	B	- -	- -	- -	- -	- -	- -	0.784	0.658	0.004	0.005	C	B	No	No
5.	Avenida De La Carlota at Los Alisos Boulevard	TS	ICU	D	- -	- -	- -	- -	0.432	0.531	A	A	- -	- -	- -	- -	- -	- -	0.446	0.543	0.014	0.012	A	A	No	No
6.	Paseo De Valencia at Los Alisos Boulevard	TS	ICU	D	- -	- -	- -	- -	0.435	0.461	A	A	- -	- -	- -	- -	- -	- -	0.438	0.465	0.003	0.004	A	A	No	No
7.	Project Access Driveway No. 1 at Avenida De La Carlota	CSS	HCM	D	14.2	18.5	B	C	- -	- -	- -	- -	17.0	26.6	2.8	8.1	C	D	- -	- -	- -	- -	- -	- -	No	No
8.	Project Access Driveway No. 2 at Avenida De La Carlota	CSS	HCM	D	14.2	16.3	B	C	- -	- -	- -	- -	23.1	35.0	8.9	18.7	C	D	- -	- -	- -	- -	- -	- -	No	No

[1] TS = Traffic Signal
CSS = Cross-Street Stop

[2] Deficient operation shown in **Bold**.

[3] ICU and HCM Analysis Software: PTV Vistro, Version 2025.
Volume to Capacity Ratio (V/C) is calculated utilizing the Intersection Capacity Utilization methodology for signalized intersections.
Per the Highway Capacity Manual 7th Edition, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown for intersections with cross-street stop control.

[4] Congestion Management Plan (CMP) intersection. LOS E established as miminum acceptable level of service for CMP intersections.

Table 5-2
Study Intersection LOS Analysis Summary
Project Opening Year (2028) Conditions

	Study Intersection	Traffic Control[1]	Methodology	Acceptable LOS	Without Project								With Project													
					HCM 7				ICU				HCM 7						ICU						Requires LOS Improvement?	
					Delay (sec/veh)[2,3]		Level of Service		V/C Ratio[2,3]		Level of Service		Delay (sec/veh)[2,3]		Increase in Delay		Level of Service		V/C Ratio[2,3]		Increase in V/C		Level of Service			
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1.	Bridger Road / I-5 NB Ramps at El Toro Road[4]	TS	HCM 7/ ICU	E	24.5	35.2	C	D	0.609	0.792	A	C	24.9	36.5	0.4	1.3	C	D	0.616	0.803	0.007	0.011	B	C	No	No
2.	Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps	TS	HCM 7/ ICU	D	44.5	41.5	D	D	0.594	0.548	A	A	44.8	41.7	0.3	0.2	D	D	0.593	0.547	-0.001	-0.001	A	A	No	No
3.	Avenida De La Carlota / I-5 SB Ramps at El Toro Road[4]	TS	HCM 7/ ICU	E	29.3	30.7	C	C	0.658	0.650	B	B	43.9	37.2	14.6	6.5	D	D	0.661	0.676	0.003	0.026	B	B	No	No
4.	Rockfield Boulevard / Fordview Street at Los Alisos Boulevard	TS	ICU	D	- -	- -	- -	- -	0.808	0.675	C	B	- -	- -	- -	- -	- -	- -	0.812	0.679	0.004	0.004	D	B	No	No
5.	Avenida De La Carlota at Los Alisos Boulevard	TS	ICU	D	- -	- -	- -	- -	0.453	0.545	A	A	- -	- -	- -	- -	- -	- -	0.466	0.557	0.013	0.012	A	A	No	No
6.	Paseo De Valencia at Los Alisos Boulevard	TS	ICU	D	- -	- -	- -	- -	0.456	0.475	A	A	- -	- -	- -	- -	- -	- -	0.459	0.479	0.003	0.004	A	A	No	No
7.	Project Access Driveway No. 1 at Avenida De La Carlota	CSS	HCM	D	14.9	19.0	B	C	- -	- -	- -	- -	23.7	28.8	8.8	9.8	C	D	- -	- -	- -	- -	- -	- -	No	No
8.	Project Access Driveway No. 2 at Avenida De La Carlota	CSS	HCM	D	15.1	16.9	C	C	- -	- -	- -	- -	**35.2**	**69.9**	20.1	**53.0**	**E**	**F**	- -	- -	- -	- -	- -	- -	**Yes**	**Yes**
	With Improvements	CSS	HCM	D	- -	- -	- -	- -	- -	- -	- -	- -	18.2	24.8	- -	- -	C	C	- -	- -	- -	- -	- -	- -	No	No

[1] TS = Traffic Signal
CSS = Cross-Street Stop

[2] Deficient operation shown in **Bold**.

[3] ICU and HCM Analysis Software: PTV Vistro, Version 2025.
Volume to Capacity Ratio (V/C) is calculated utilizing the Intersection Capacity Utilization methodology for signalized intersections.
Per the Highway Capacity Manual 7th Edition, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown for intersections with cross-street stop control.

[4] Congestion Management Plan (CMP) intersection. LOS E established as miminum acceptable level of service for CMP intersections.

Detailed LOS analysis worksheets for Project Opening Year (2028) Without Project Conditions are included in **Appendix F**.

5.4 Project Opening Year (2028) With Project Conditions Level of Service

Project Opening Year (2028) With Project Conditions LOS calculations for the eight (8) study intersections are shown in Table 5-2 and are based on the Project Opening Year (2028) With Project Conditions traffic volumes shown in Exhibit 4-8 and the existing lane geometry shown in Exhibit 3-1.

As shown in Table 5-2, all study intersections are forecasted to continue operating at an acceptable LOS during the AM and PM peak hours under Project Opening Year (2028) With Project Conditions except for the following one (1) study intersection.

Deficient Intersection:

8. Project Access Driveway No.2 at Avenida De La Carlota
    - AM Peak Hour – LOS E (35.2 seconds per vehicle)
    - PM Peak Hour – LOS F (69.9 seconds per vehicle)

Detailed LOS analysis worksheets for Project Opening Year (2028) Without Project Conditions are included in **Appendix G**.

5.5 Recommended Intersection Operational Improvements

As shown in Table 5-2, based on agency-established performance criteria and thresholds of significance, the proposed project is deemed to have a significant impact at the deficient study intersection and will be required to make intersection improvements to reduce the project's impact to levels less than significant for Project Opening Year (2028) With Project Conditions.

The following recommended improvements are identified to restore traffic operations to acceptable levels of service and reduce the project's impact to less than significant levels for Project Opening Year (2028) With Project Conditions:

Intersection Improvement #1

Int #8: Project Access Driveway No.2 at Avenida De La Carlota

- Restripe the existing median on the easterly leg along Avenida De La Carlota to provide an acceleration lane for southbound left-turning vehicles (i.e., project exiting vehicles).

As shown in Table 5-2, assuming implementation of the recommended intersection improvements, the project's impact under Project Opening Year (2028) With Project Conditions would be considered less than significant. As such, the project shall be conditioned to the following item in the event this improvement is installed:

> "Prior to issuance of Certificate of Occupancy, Project Applicant shall apply for an Encroachment Permit for the installation of a southbound acceleration lane in the center median at the most southerly project driveway access on Avenida De La Carlota, located approximately 500 feet north of Los Alisos Boulevard. The Encroachment Permit shall include Construction Plans reviewed and approved by the Public Works Director or assigned designee. At a minimum, the Construction Plans shall include Signing and Striping Plans and Civil Street Improvement Plans for a street slurry seal for up to 250 feet in both directions on Avenida De La Carlota from the most southerly project driveway access."

The level of service calculations for Project Opening Year (2028) With Project Conditions – Mitigated are provided in **Appendix H**.

5.6 Alternative Improvement Measure

RK evaluated the deficient study intersection (i.e., Project Access Driveway No. 2 at Avenida De La Carlota) for signalization based on the peak hour signal warrants and procedures contained in the California Manual on Uniform Traffic Control Devices (CA MUTCD), 2014 Edition, Revision 8 (January 11, 2024).

The purpose of this traffic signal warrant analysis is to determine whether this unsignalized study intersection meets the minimum peak hour traffic volume requirements to warrant the recommendation of a traffic signal installation (i.e., CA MUTCD Signal Warrant #3).

Table 5-3 summarizes the results of the CA MUTCD peak hour traffic signal warrant analysis at the study intersection under all "with project conditions" analysis scenarios and time periods evaluated as part of this study.

As shown in Table 5-3, the peak hour traffic signal warrant is met during the PM peak hour under both Existing Plus Project Conditions and Project Opening Year (2028) With Project Conditions.

Detailed CA MUTCD traffic signal warrant analysis worksheets are included in **Appendix I**.

As detailed in Section 5.5 above, although a traffic signal peak hour warrant is met, the project proposes to instead improve the median along Avenida De La Carlota to provide an acceleration lane (in lieu of installing a traffic signal). However, based on communication with City staff, the project shall

Table 5-3

CA MUTCD Peak Hour Signal Warrant Analysis Summary

Study Intersection		Peak Hour Signal Warrant Met?			
		Existing Plus Project Conditions		Project Opening Year (2028) With Project Conditions	
		AM	PM	AM	PM
8.	Project Access Driveway No. 2 at Avenida De La Carlota	NO	**YES**	NO	**YES**

be conditioned to the following items in the event a traffic signal is deemed necessary to facilitate adequate traffic operations in the future (i.e., post project occupancy):

> "Prior to issuance of Certificate of Occupancy (or the first Certificate of Occupancy if the proposed project will be implemented over multiple phases), the Project Applicant shall prepare Construction Plans to install a traffic signal at the most southerly project driveway access on Avenida De La Carlota, located approximately 500 feet north of Los Alisos Boulevard. Said traffic signal shall be designed in accordance to the latest traffic signal standard plans and specifications and shall include the following standard features for the City of Laguna Hills: accessible pedestrian signals (APS), emergency vehicle preemption (EVP) and battery backup system (BBS). Said Construction Plans shall also include a traffic signal communications plan for connection and integration of traffic signal into the City's Traffic Management Center (TMC) and traffic management software (i.e., Centracs).
>
> Said Construction Plans may include, but not limited to, Civil Street Improvement Plans, Signing and Striping Plans, and Utility Improvement Plans, necessary for the construction of said traffic signal. These Construction Plans shall be reviewed and approved by the Public Works Director or assigned designee. As appropriate, Project Applicant shall grant the City of Laguna Hills an easement in perpetuity for maintenance of the traffic signal equipment located on private property.
>
> Project Applicant shall post a construction bond for the construction of said traffic signal valid from the issuance of the Certificate of Occupancy (or the first Certificate of Occupancy if the proposed project will be implemented in multiple phases) to at least five (5) years after the issuance of the final Certificate of Occupancy. Based on the construction phasing of the project, the construction bond may exceed five (5) years. Every two (2) years after the issuance of first Certificate of Occupancy and at least six (6) months prior to expiration of said construction bond (i.e., just before 4.5 years after issuance of final Certificate of Occupancy), Project Applicant shall submit a supplemental traffic study to demonstrate that the proposed signing and striping improvements to the center median on Avenida De La Carlota (i.e., southbound acceleration lane in the center median) is operating at satisfactory conditions.
>
> However, if the supplemental traffic study demonstrates that additional measures beyond signing and striping improvements are needed such as a traffic signal, or that the future traffic volumes at said project driveway access exceeded those forecasted in the TIA, or that the Project Applicant did not submit the supplemental traffic studies based on the timeframes described above, the City reserves the right to immediately pull the construction bond for the construction of said traffic signal. "

6.0 CEQA Vehicle Miles Traveled (VMT) Analysis

The following section provides a discussion of the vehicle miles traveled (VMT) analysis and findings.

Per the City of Laguna Hills VMT guidelines, projects located in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT.

Residential projects shall utilize and compare the TAZ VMT/capita rate to the citywide average of 18.6 VMT/capita; non-residential projects shall utilize and compare the TAZ VMT/employee rate to the citywide average of 20.1 VMT per employee. If the project is located in a Traffic Analysis Zone (TAZ) with VMT per capita or VMT per employee that is less than or equal to the citywide average of VMT per capita and VMT per employee, then the project is considered to be located in a low VMT area and can be presumed to have a less than significant impact on VMT. **OCTAM 5.1** is the preferred traffic model for screening and analyzing VMT in the City of Laguna Hills.

The City of Laguna Hills provides a VMT screening form that evaluates project land uses for VMT under CEQA. The VMT screening form requires the input of the project traffic analysis zone (TAZ) for VMT evaluation. The Orange County Transportation Analysis Model (OCTAM) TAZ map is provided in **Exhibit 6-1**. As shown in Exhibit 6-1, the project site is located within TAZ 1511.

Since the future project development plan is anticipated to include a medical-dental office as well as a residential component, the City of Laguna Hills VMT screening form has been prepared for both the residential and non-residential land uses and are provided in **Appendix J**, respectively.

Based on the results of the City of Laguna Hills VMT screening forms, the proposed project's residential VMT per capita (i.e., 11.9 VMT per capita) and nonresidential VMT per employee (i.e., 14.5 VMT per employee) are below the Citywide averages of 18.6 VMT per capita and 20.1 VMT per employee, respectively.

As a result, the project can be assumed to have a less than significant impact on VMT under CEQA and no further VMT analysis is required.

Exhibit 6-1

OCTAM TAZ Map

7.0 Findings, Conclusions & Recommendations

7.1 Project Summary

The project site, located at 24422 Avenida De La Carlota, is bound between the I-5 Freeway, Los Alisos Boulevard, and Avenida De La Carlota, in the City of Laguna Hills. The project is located within the Urban Village Specific Plan ("UVSP") area. The project site is currently occupied by an approximately 121,000 square-foot (SF) general/medical office building and is currently designated as approximately 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF).

Representatives of the project propose to convert the existing general/medical office building into a 100% medical office building and to add 250 dwelling units of senior adult (age restricted 55+) housing in a separate building.

Access to the project site is currently provided and is proposed to continue to be provided via:

- One (1) unsignalized right-in/right-out driveway (i.e., Project Access No.1) along Avenida De La Carlota; and
- One (1) unsignalized full-access driveway (i.e., Project Access No.2) located along Avenida De La Carlota.

The proposed project is planned to open in 2028 and will be evaluated in one phase.

The proposed project is located within the Urban Village Specific Plan (UVSP) area, which contains development regulations. Development intensity within the UVSP is regulated based on the remaining vehicle trip capacity within the UVSP as opposed to land use type or project size. As such, applicants for any new or expanded project within the plan area must prepare a traffic study to document that their respective project-generated AM and PM peak hour trips will not exceed the capacity of the UVSP's circulation network (i.e., trip budget caps).

This analysis references UVSP trip budget information provided by City of Laguna Hills staff, received on April 2, 2025. The current remaining trip budget for the UVSP area is 181 AM peak hour trips and 2,527 PM peak hour trips.

An existing trip credit will be applied to the currently unused USVP trip budgets to account for the existing 121,000 SF general/medical office building which is currently designated as 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF).

Consistent with the 24422 Avenida De La Carlota Joint Use Parking Plan, prepared by RK Engineering Group, Inc., dated March 26, 2025, the proposed 121,000 SF medical office building will consist of approximately 80% medical-dental office and 20% "low intensity" medical office land uses.

According to City of Laguna Hills Ordinance No. 2023-1, "low intensity" medical offices include chiropractic, acupuncture, optometry, physical therapy, psychotherapy offices, and similar services. These offices are expected to occupy the proposed project, with a parking requirement of 1 stall per 300 SF-GFA (3.33 parking spaces per 1,000 SF of gross floor area, GFA). The ITE Trip Generation Manual does not distinguish between general medical-dental office and "low intensity" medical office land uses. Therefore, considering that the low-intensity medical office land uses will be parked at 1 stall per 300 SF-GFA (3.33 parking spaces per 1,000 SF of GFA), which is the same requirement as business and professional office land uses per City of Laguna Hills Municipal Code §9-44.050, the project's trip generation analysis utilizes ITE land Use Code 710: General Office trip rates to represent the low intensity medical office land uses. Consequently, the analysis uses ITE Land Use Code 720: Medical-Dental Office and ITE Land Use Code 252: Senior Adult Housing (Multifamily) trip rates for the respective land uses.

The existing general/medical office building currently generates approximately 1,920 daily trips, which include approximately 222 AM peak hour trips and approximately 234 PM peak hour trips. When these trips are added to the currently unused USVP trip budgets (i.e., 181 AM peak hour trips and 2,527 PM peak hour trips), the available UVSP trip budgets are increased to 403 AM peak hour trips and 2,761 PM peak hour trips.

The proposed project is forecast to generate approximately 4,557 daily trips which include approximately 387 AM peak hour trips and 478 PM peak hour trips.

When these trips are deducted from the available UVSP trip budget (i.e., 403 AM peak hour trips and 2,761 PM peak hour trips), the remaining available UVSP trip budget is 16 AM peak hour trips and 2,283 PM peak hour trips. **As such, the final development plan does not exceed the available trip budget caps.**

7.2 Traffic Study Area & Analysis Scenarios

The study area intersections fall under the jurisdiction of several governing bodies including the Orange County Congestion Management Plan (CMP), Caltrans, the City of Lake Forest (LF), and the City of Laguna Hills (LH).

The study area consists of the following eight (8) intersections listed below. The jurisdiction(s) where each study intersection resides is also identified.

1. Bridger Road / I-5 NB Ramps at El Toro Road (CMP, Caltrans, LF)
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps (Caltrans, LH);
3. Avenida De La Carlota / I-5 SB Ramps at El Toro Road (CMP, Caltrans, LH);
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard (LF);
5. Avenida De La Carlota at Los Alisos Boulevard (LH);
6. Paseo De Valencia at Los Alisos Boulevard (LH);
7. Project Access Driveway 1 at Avenida De La Carlota (LH); and
8. Project Access Driveway 2 at Avenida De La Carlota (LH).

The analysis evaluates traffic conditions of the study area under the following scenarios during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00 PM) peak hour conditions:

- Existing Conditions;
- Existing Plus Project Conditions;
- Project Opening Year (2028) Without Project Conditions; and
- Project Opening Year (2028) With Project Conditions.

7.3 Intersection LOS Analysis Summary

The intersection level of service analysis has been performed at the eight (8) study intersections within the vicinity of the site where the project may contribute a significant amount of traffic. Project deficiencies have been evaluated within the study area based on peak hour level of service criteria.

The following study area intersection has been identified to operate deficiently during the PM peak hour(s) under the Project Opening Year (2028) With Project Conditions scenario.

8. Project Access Driveway 2 at Avenida De La Carlota

The following recommended improvements are identified to restore traffic operations to acceptable levels of service and reduce the project's impact to less than significant levels for the Project Opening Year (2028) With Project Conditions scenario:

Intersection Improvement #1

Int #8: Project Access Driveway No.2 at Avenida De La Carlota

- Restripe the existing median on the easterly leg along Avenida De La Carlota to provide an acceleration lane for southbound left-turning vehicles (i.e., project exiting vehicles).

RK has also determined that the deficient study intersection meets the peak hour traffic signal warrant during the PM peak hour under both Existing Plus Project Conditions and Project Opening Year (2028) With Project Conditions.

7.4 CEQA Vehicles Miles Traveled (VMT) Analysis Summary

Per the City of Laguna Hills VMT guidelines, projects located in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT.

Residential projects shall utilize and compare the TAZ VMT/capita rate to the citywide average of 18.6 VMT/capita; non-residential projects shall utilize and compare the TAZ VMT/employee rate to the citywide average of 20.1 VMT per employee. If the project is located in a Traffic Analysis Zone (TAZ) with VMT per capita or VMT per employee that is less than or equal to the citywide average of VMT per capita and VMT per employee, then the project is considered to be located in a low VMT area and can be presumed to have a less than significant impact on VMT. **OCTAM 5.1** is the preferred traffic model for screening and analyzing VMT in the City of Laguna Hills.

The City of Laguna Hills provides a VMT screening form that evaluates project land uses for VMT under CEQA. The VMT screening form requires the input of the project traffic analysis zone (TAZ) for VMT evaluation. As shown in Exhibit 6-1, the project site is located within TAZ 1511.

Based on the results of the City of Laguna Hills VMT screening forms, the proposed project's residential VMT per capita (i.e., 11.9 VMT per capita) and nonresidential VMT per employee (i.e., 14.5 VMT per employee) are below the Citywide averages of 18.6 VMT per capita and 20.1 VMT per employee, respectively.

As a result, the project can be assumed to have a less than significant impact on VMT under CEQA and no further VMT analysis is required.

Appendices

Appendix A

Approved Scope of Work

HARTZOG & CRABILL, Inc.

Trammell Hartzog, President
Gerald J. Stock, PE, TE,
Executive Vice President

17852 E. 17th Street
Suite 101
Tustin, CA 92780

Phone: (714) 731-9455
FAX: (714) 731-9498

www.hartzog-crabill.com

March 29, 2023

Mr. Joe Ames, P.E., T.E,
Director of Public Services/City Engineer
City of Laguna Hills
24035 El Toro Road
Laguna Hills, CA 92653

Subject: 24422 Avenida De La Carlata Mixed-Use Project
Traffic Impact Study - Proposed Scope of Work

Dear Mr. Ames:

Pursuant to your request, Hartzog & Crabill, Inc. (HCI) has reviewed the subject Phase 2 Traffic Impact Study (TIS) scope of work prepared by RK Engineering Group, Inc. (RK) dated March 3, 2023.

The project is located at 24422 Avenida De La Carlata within the Urban Village Specific Plan area (UVSP). RK proposed a two (2) phase scoping process for the final TIS. The phase 1 scope provides the general scope and processes for the TIS. The phase 2 scope identified the specific land use and parameters for the TIS. These parameters include the specific project description, project trip generation and trip distribution patterns, specific study intersections, required parking and building size based on available trip capacity.

The project proposes to modify the existing general/medical office building and add a residential component to the site. The TIS will document that the project AM and PM peak hour trips will not exceed the USVP's trip budget caps. The proposed 2 phase scoping approach is logical.

The TIS is proposed to utilize the Village at Laguna Hills Traffic Impact Analysis dated September 1, 2020 prepared by Linscott, Law and Greenspan (LLG) as it provides the most current analysis within the UVSP. The LLG study indicates that the remaining trip budget is 216 AM and 2,590 PM peak hour trips. This approach is appropriate and is consistent with what is contained in the LLG study. However, if a more current UVSP analysis is available, RK proposes to coordinate with City staff to ensure the correct trip budget is utilized.

The proposed scope proposes to use the most current Institute of Transportation Engineers (ITE) trip generation rates for the applicable land uses. This approach is appropriate.

With completion of the proposed development plan, the trip generation and trip distribution was developed. The TIS proposes to use the existing trip credits in conjunction with the proposed development characteristics and associated traffic volumes, such that the available trip budgets determined that the final development plan will not exceed the available trip budget caps. These forecasts are included in the final scoping agreement for review and approval by the City prior to preparing the draft TIS.

As stated previously, the proposed study intersections are contained within the phase 2 scoping agreement. A total of eight (8) study intersections are proposed and are appropriate. The analysis scenarios include weekday AM (7:00 to 9:00 AM) and PM (4:00 to 6:00 PM) peak hour conditions. The proposed scenarios are correct. In addition, the TIS will assess the existing, existing plus project, project opening year with and without project conditions. This is an acceptable approach. Signalized intersections will be evaluated using the Intersection Capacity Utilization (IC) methodology with the Highway Capacity Manual methodology used for unsignalized intersections including project driveways. These approaches for assessment are acceptable.

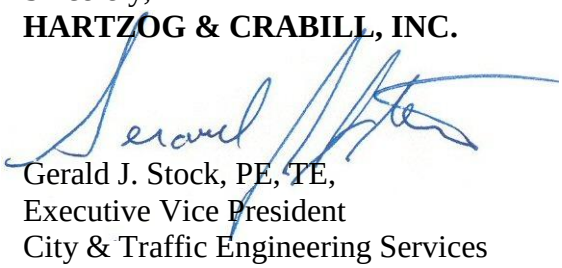
In terms of traffic count data, RK proposes to use the pre-Covid 19, (September 2019) traffic volumes increased by 1% annually to estimate 2023 traffic volumes. In addition, recent road construction activities could impact current count data, hence the approach to using the 2019 counts contained in the LLG study. This approach is appropriate given the constraints described.

A Vehicle Miles Travelled (VMT) screening analysis specific to the City of Laguna Hills was conducted and concluded for both the residential and non-residential project components, regardless of the final site plan size and characteristics, a less than significant impact on VMT under CEQA will result and no further VMT analysis is required. The conclusions are correct.

In conclusion, the proposed phase 2 scope is appropriate and no revisions are required.

It has been our pleasure to prepare this assessment for your review. If you have any questions or need additional information, please contact me via my cell phone at 714-448-5835.

Sincerely,
HARTZOG & CRABILL, INC.



Gerald J. Stock, PE, TE,
Executive Vice President
City & Traffic Engineering Services

Appendix F
TRAFFIC STUDY SCOPING AGREEMENT

This letter acknowledges the City of Laguna Hills requirements for traffic impact analysis of the following project. The analysis must follow the City of Laguna Hills Traffic Impact Study Guidelines.

The Traffic Study pertains to which of the following:

- ☐ Access / Internal Circulation / Parking Review (less than 50 peak hour trips or 500 ADT)
- ☑ Project Buildout Traffic Impact Study (50 or more peak hour trips or 500 ADT)
- ☐ Zone Change / General Plan Amendment Traffic Impact Study (more trips than existing zoning / General Plan)
- ☐ Parking Study Only
- ☐ Other: _____

Case Numbers: _____
Project Name: 24422 Avenida De La Carlota Mixed-Use Project
Project Address: 24422 Avenida De La Carlota, City of Laguna Hills, CA
Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 240 DU senior housing.).

Consultant		Developer	
Name:	RK Engineering Group Inc.	Name:	BSP Bristol LLC
Address:	1401 Dove Street, Suite 540	Address:	3501 Jamboree Road, Suite 4200
	Newport Beach, CA		Newport Beach, CA
Telephone:	(949) 474-0810	Telephone:	(949) 219-2329

A. Trip Generation Source: ITE Trip Generation, Latest Edition or other approved source

Current GP Land Use	Village Commerical	Proposed Land Use	Village Commerical
Current Zoning	Urban Village Specific Plan	Proposed Zoning	Urban Village Specific Plan

	Current Trip Generation to be Credited:			Project Trip Generation:			Net Trip Generation:		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Trips	188	34	222	312	111	423	124	77	201
PM Trips	53	181	234	177	359	536	124	178	302

Internal Trip Allowance ☐ Yes ☑ No _____ % Trip Discount
Pass-By Trip Allowance ☐ Yes ☑ No _____ % Trip Discount

The full project trips should be applied to the trips at adjacent study area intersections and project driveways and shall be indicated on a report figure.

B. Trip Geographic Distribution (%): North = 65 % South = 0 % East = 15 % West = 20 %
(attached exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year 2025 Annual Ambient Growth Rate: 1 %
Phase Year(s) 1
Other area projects to be analyzed: To be provided by the City of Laguna Hills.
Model/Forecast methodology ICU Methodology for Signalized Intersections; HCM 7 Methodology for Unsignalized Intersections.

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. Bridger Road / I-5 NB Ramps at El Toro Road
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps
3. Avenida De La Carlota / I-5 SB ramps at El Toro Road
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard
5. Avenida De La Carlota at Los Alisos Boulevard
6. Paseo De Valencia at Los Alisos Boulevard
7. Project Access Driveway 1 at Avenida De La Carlota
8. Project Access Driveway 2 at Avenida De La Carlota
9.
10.
11.
12.
13.
14.

E. Other Jurisdictional Impacts:

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☑ Yes ☐ NO

If so, name of adjacent City Jurisdiction: Laguna Woods, Lake Forest, Mission Viejo

F. Site Plan (please attach reduced copy)

G. Specific issues to be addressed in the Study (To be filled out by the City of Laguna Hills)

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of counts: Please refer to Section G of the attached scoping agreement.

I. Level of Service (LOS)

Acceptable intersection LOS for this study: D or Better

Recommended by:

Justin Tucker, P.E. — 3/3/2023

Consultant's Representative — Date

Approved Traffic Study Specifications:

City of Laguna Hills — Date

24422 Avenida De La Carlota Mixed-Use Project
Phase 2 Traffic Impact Study Scoping Agreement

March 3, 2023

The following provides information on the proposed project, summarizes the analysis scope, parameters, and assumptions for review and approval, and also includes a request for information on items related to the study. RK proposes a two (2) phase scoping process for this study.

The 1st phase, prepared by RK Engineering Group, Inc., dated November 18, 2022, provided the general scope and process for the study. The 2nd Phase (i.e. this document) identifies in detail the specific assumptions (i.e. land uses, etc.) and parameters for the traffic analysis. These include the specific project description, project trip generation and distribution patterns, study area intersections and any special issues that may need to be evaluated such as the required parking for the project.

A. Project Description: The triangle-shaped project site, located at 24422 Avenida De La Carlota, is bound between the I-5 Freeway, Los Alisos Boulevard, and Avenida De La Carlota, in the City of Laguna Hills. The project is located within the Urban Village Specific Plan ("UVSP") area. The project site is currently occupied by an approximately 121,000 square-foot (SF) general/medical office building. The approximately 121,000 SF general/medical office building is currently occupied by approximately 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF).

The project proposes to convert the existing 121,000 SF general/medical-dental office building into 100% medical-dental office and add 240 senior adult (multifamily) dwelling units.

Access to the project site is currently provided and is proposed to continue to be provided via:

- One (1) unsignalized right-in/right-out driveway (i.e., Project Access No. 1) along Avenida De La Carlota; and

- One (1) unsignalized full-access driveway (i.e., Project Access No. 2) located along Avenida De La Carlota.

Development intensity within the UVSP is regulated based on the remaining vehicle trip capacity within the UVSP as opposed to land use type or project size. As such, applicants for any new or expanded project within the plan area must prepare a traffic study to

document that project-generated A.M. and P.M. peak hour trips will not exceed the capacity of the UVSP's circulation network (i.e., trip budget caps).

As such, RK will utilize the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, as it provides the most recent analysis within the UVSP. As shown at the bottom of Table 6 of the LLG TIA, the current remaining trip budget for the UVSP area is 216 AM peak hour trips and 2,590 PM peak hour trips. Relevant pages from the LLG TIA are included in Attachment A located at the end of this scoping agreement.

If the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, is not the most recent UVSP traffic analysis, the remaining trip budget would likely be different. RK will coordinate with City staff to ensure the correct trip budget is utilized.

The project is planned to open in 2025 and will be evaluated in one phase.

Exhibit A shows the location map of the proposed project. Exhibit B shows the proposed project site plan.

B. Project Trip Generation: Trip generation represents the amount of traffic that is attracted and produced by a development.

Trip generation is typically estimated based on the trip generation rates from the latest *Institute of Transportation Engineers (ITE) Trip Generation Manual.* The latest and most recent version (11th Edition, 2021) ITE Manual will be utilized in the traffic study. This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

An existing trip credit will be applied to the currently unused UVSP trip budgets to account for the existing 121,000 SF general/medical office building which is currently occupied by 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF). Table 1 shows the ITE trip generation rates utilized for the existing general/medical office building.

The project proposes to convert the existing 121,000 SF general/medical-dental office building into 100% medical-dental office and add 240 senior adult (multifamily) dwelling units. As such, ITE Land Use 720: Medical-Dental Office and ITE Land Use 252: Senior Adult Housing (Multifamily) trip rates are the most appropriate rates for these land uses. Table 1 also shows the ITE trip generation rates utilized for the proposed project.

Table 2 shows the ITE trip generation for the existing general/medical office building and for the proposed project utilizing the trip generation rates shown in Table 1.

As shown in Table 2, the existing general/medical office building currently generates approximately 1,920 daily trips, which include approximately 222 AM peak hour trips and approximately 234 PM peak hour trips. When these trips are added to the currently unused UVSP trip budgets (i.e., 216 AM peak hour trips and 2,590 PM peak hour trips), the available UVSP trip budgets are increased to 438 AM peak hour trips and 2,824 PM peak hour trips.

As also shown in Table 2, the proposed project is forecast to generate approximately 5,134 daily trips which include approximately 423 AM peak hour trips and 536 PM peak hour trips.

When these trips are deducted from the available UVSP trip budget (i.e. 438 AM peak hour trips and 2,824 PM peak hour trips), the remaining available UVSP trip budget is 15 AM peak hour trips and 2,288 PM peak hour trips. **As such, the final development plan will not exceed the available trip budget caps.**

C. Project Trip Distribution: Exhibit C-1 shows the project's outbound trip distribution pattern and Exhibit C-2 shows the project's inbound trip distribution pattern.

D. Study Intersections: The analysis will evaluate the following eight (8) study intersections:

1. Bridger Road / I-5 NB Ramps at El Toro Road;
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps;
3. Avenida De La Carlota / I-5 SB ramps at El Toro Road;
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard;
5. Avenida De La Carlota at Los Alisos Boulevard;
6. Paseo De Valencia at Los Alisos Boulevard;
7. Project Access Driveway 1 at Avenida De La Carlota; and
8. Project Access Driveway 2 at Avenida De La Carlota.

E. Analysis Scenarios: The analysis will evaluate traffic conditions for the following scenarios during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00 PM) peak hour conditions:

- Existing Conditions;
- Existing Plus Project Conditions;
- Project Opening Year (Year 2025) Without Project Conditions; and
- Project Opening Year (Year 2025) Plus Project Conditions.

F. Traffic Analysis Parameters: The analysis will utilize the following parameters:

- Vistro 2022 analysis software.
- Signalized intersections will be analyzed via the Intersection Capacity Utilization (ICU) methodology.
- Unsignalized intersections will be analyzed via the Highway Capacity Manual 7th Edition (HCM 7) methodology.
- Intersection LOS parameters as identified within the *City of Laguna Hills Traffic Study Guidelines*, City of Laguna Hills, California, dated August 31, 2010, prepared by RK Engineering Group Inc.

G. Existing Traffic Counts: It is RK's understanding that the Village at Laguna Hills Traffic Impact Analysis, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, is the most recent UVSP traffic analysis.

In order to account for traffic associated with the redevelopment of the Laguna Hills Mall, which is located in close proximity to this proposed project, RK proposes to utilize the existing traffic volumes from the Village at Laguna Hills TIA (September 1, 2020, LLG). Additionally, there is on-going road construction along Avenida De La Carlota, El Toro Road, and the I-5 Freeway Ramps in the vicinity of the project that may affect new traffic count volumes.

LLG conducted traffic counts during the weekday AM and PM peak period while local schools were still in session (7:00 to 9:00 AM, 4:00 to 6:00 PM) in September 2019.

LLG explains that approximately 309,000 SF GLA of mall space was not occupied on the dates that traffic counts were conducted. To address this, and to account for trips

corresponding with the mall's entitled and historically occupied square footage, LLG estimated trip generation for the 309,000 SF GLA based on the application of ITE rates/equations, and resulting trips were then assigned to the street system and added to the raw traffic counts.

Figures 4A through 5D from the LLG Village at Laguna Hills TIA (September 1, 2020) illustrate the existing weekday AM and weekday PM peak hour traffic volumes, respectively, and are also contained at the end of this scoping agreement in Attachment A. RK proposes to utilize these existing volumes for the proposed eight (8) study intersections.

RK proposes to utilize an existing year of 2023. RK will grow these 2019 traffic volumes from the LLG study at one percent (1%) per year to establish baseline existing (2023) conditions (i.e., 4% total growth).

It should be noted that RK will include the net increase in trips from the Village at Laguna Hills development as a cumulative project under opening year conditions (i.e., 119 AM peak hour trips & negative 910 PM peak hour trips, see Table 6 in Attachment A).

H. Project Opening Year Conditions Traffic Volumes: Background (project opening year) traffic volumes will be derived by applying an annual growth rate of one percent (1%) per year to the Existing (Year 2023) traffic volumes and adding traffic from any cumulative developments located within one and one-half mile of the project site.

RK will utilize the list of cumulative projects from the LLG Village at Laguna Hills TIA (September 1, 2020), plus any additional cumulative projects not already accounted in the previous LLG study. Table 7, Table 8, and Figure 11 from the LLG study are presented in Attachment A located at the end of this scoping agreement.

I. VMT Screening Analysis: The City of Laguna Hills has adopted methodologies and recommendations for VMT assessment as contained within the City of Laguna Hills Vehicles Miles Traveled Analysis Guidelines under the *California Environment Quality Act and General Plan Development Review Traffic Study Guidelines*, dated August 2021. In accordance with the City of Laguna Hills VMT guidelines, there are five (5) types of screening that lead agencies can be applied to effectively screen projects from project-level assessment. These are summarized below:

1. 100% Affordable Housing
2. Located within ½ mile of Qualifying Transit
3. Local Serving Land Use

4. Low VMT Area

5. Net Daily Trips Less Than 500 ADT

VMT Screening Type 4: Low VMT Area

Per the City of Laguna Hills VMT guidelines, Projects located in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Residential projects shall utilize and compare the TAZ VMT/capita rate to the citywide average of 21.6 VMT/capita; non-residential projects shall utilize and compare the TAZ VMT/employee rate to the citywide average of 25.1 VMT per employee. If the project is located in a Traffic Analysis Zone (TAZ) with VMT per capita or VMT per employee that is less than or equal to the citywide average of VMT per capita and VMT per employee, then the project is considered to be located in a low VMT area and can be presumed to have a less than significant impact on VMT. OCTAM is the preferred traffic model for screening and analyzing VMT in the City of Laguna Hills.

The City of Laguna Hills provides a VMT screening form that evaluates project land uses for VMT under CEQA. The VMT screening form requires the input of the project traffic analysis zone (TAZ) for VMT evaluation. The Orange County Transportation Analysis Model (OCTAM) TAZ map is provided in Exhibit D. As shown in Exhibit D, the project site is located within TAZ 1450.

Since the future project development plan is anticipated to include a medical-dental office as well as a residential component, the City of Laguna Hills VMT screening form has been prepared for both the residential and non-residential land uses and are included as Attachment B and Attachment C, respectively.

Based on the results of the City of Laguna Hills VMT screening form in Attachment B and Attachment C, the proposed project's residential VMT per capita (i.e. 18.0 VMT per capita) and nonresidential VMT per employee (i.e. 22.7 VMT per employee) are below the Citywide averages of 21.6 VMT per capita and 25.1 VMT per employee, respectively.

As a result, the project can be assumed to have a less than significant impact on VMT under CEQA and no further VMT analysis is required.

J. Performance Criteria: The City of Laguna Hills level of service standard for signalized and unsignalized intersections is LOS D.

K. Significant Impact Criteria:

For signalized intersections, a significant impact is identified when an intersection or roadway segment is already operating at an ICU or V/C ratio at or below 0.900 and the project causes the level to exceed 0.900 by an impact equal to or greater than 0.010. Furthermore, if an intersection or roadway segment is already operating at a LOS E or F, any ICU or V/C ratio impact equal to or greater than 0.010 would be considered a significant impact by the project.

For unsignalized intersections, utilizing the HCM 7 methodology, a significant impact is identified when an intersection is operating at a LOS E or F and the project causes any increase in delay.

L. Request for Information: Please provide information on the following for use in the traffic study:

- Confirmation of utilization of appropriate trip budget caps;
- Information on cumulative projects that need to be included in the traffic analysis (location, land use type(s), and land use quantities); and
- Avenida De La Carlota Street Improvement Plans, El Toro Freeway Interchange Improvement Plans, and/or any additional future roadway and circulation system modifications/improvements that are planned within the study area and would potentially affect the analysis.

If you have any questions, or would like further review, please call us at (949) 474-0809.

Sincerely,

RK ENGINEERING GROUP, INC.

Justin Tucker, P.E.
Principal Engineer

Attachments

Approved by:

_____

City of Laguna Hills

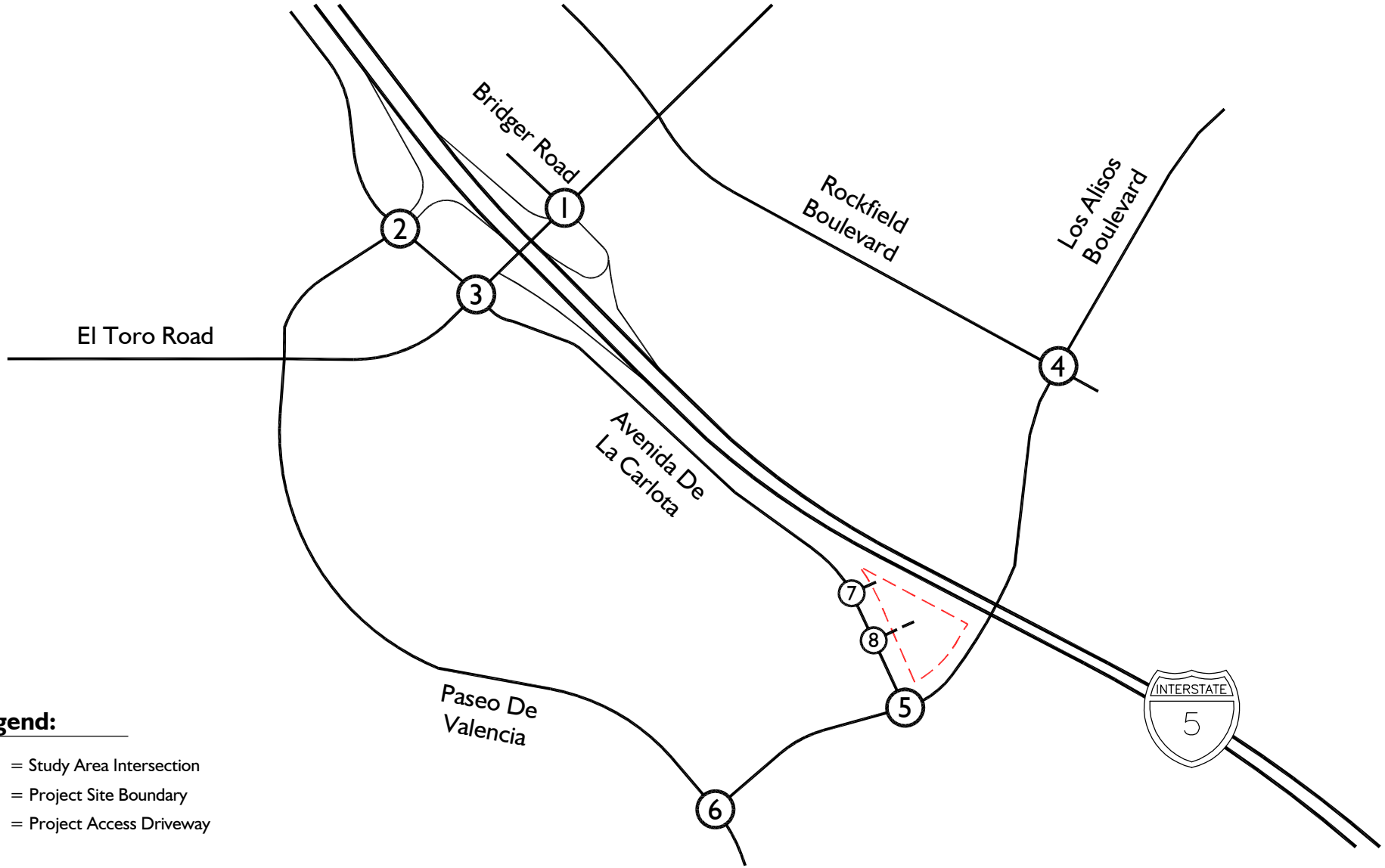
_____

Date

Exhibits

Exhibit A

Location Map



Legend:

① = Study Area Intersection

- - - = Project Site Boundary

— — — = Project Access Driveway

N

RK engineering group, inc.

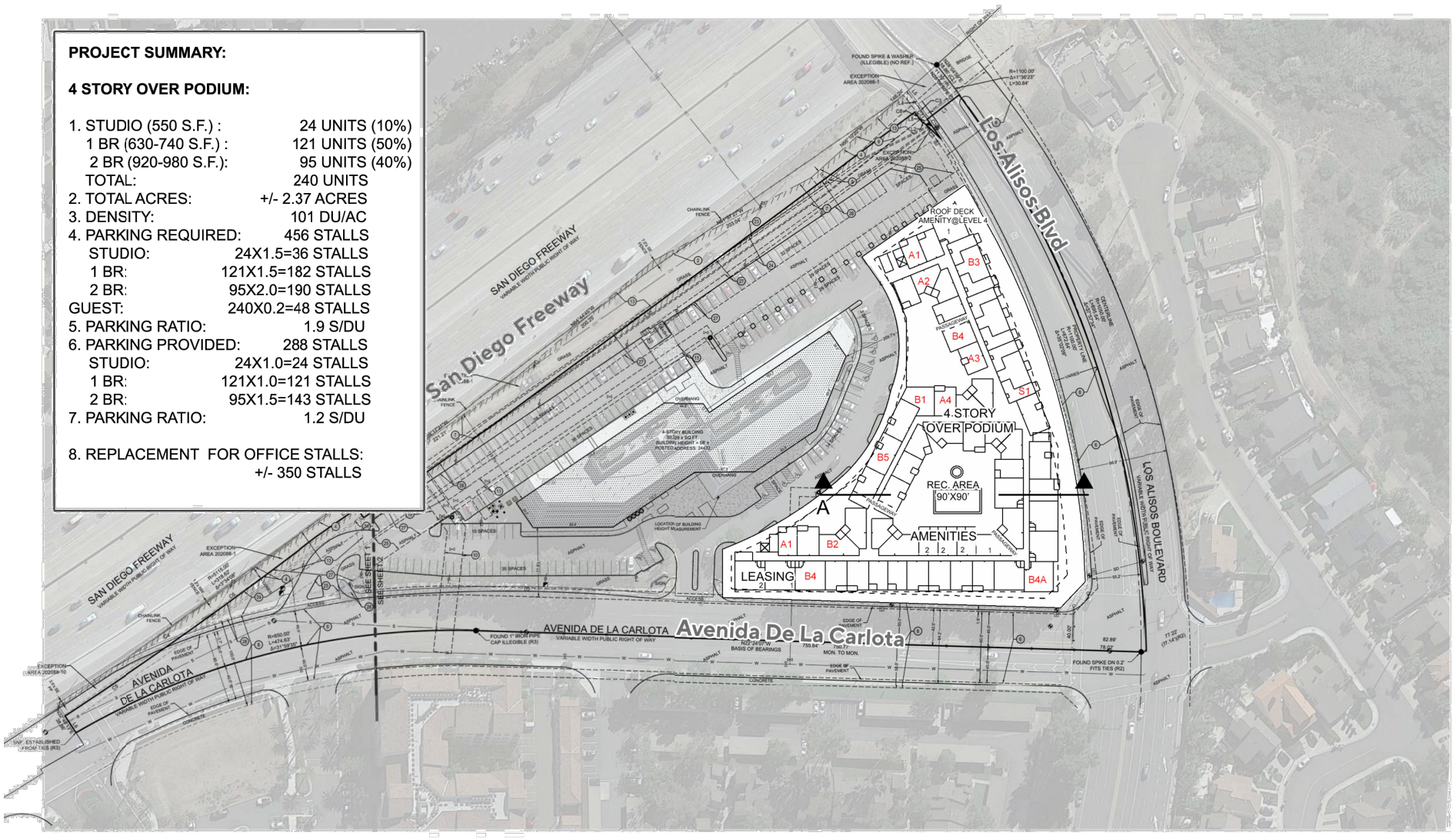
Exhibit B

Site Plan

PROJECT SUMMARY:

4 STORY OVER PODIUM:

1. STUDIO (550 S.F.) :	24 UNITS (10%)
1 BR (630-740 S.F.) :	121 UNITS (50%)
2 BR (920-980 S.F.):	95 UNITS (40%)
TOTAL:	240 UNITS
2. TOTAL ACRES:	+/- 2.37 ACRES
3. DENSITY:	101 DU/AC
4. PARKING REQUIRED:	456 STALLS
STUDIO:	24X1.5=36 STALLS
1 BR:	121X1.5=182 STALLS
2 BR:	95X2.0=190 STALLS
GUEST:	240X0.2=48 STALLS
5. PARKING RATIO:	1.9 S/DU
6. PARKING PROVIDED:	288 STALLS
STUDIO:	24X1.0=24 STALLS
1 BR:	121X1.0=121 STALLS
2 BR:	95X1.5=143 STALLS
7. PARKING RATIO:	1.2 S/DU
8. REPLACEMENT FOR OFFICE STALLS:	+/- 350 STALLS



N

Exhibit C-1

Outbound Project Trip Distribution

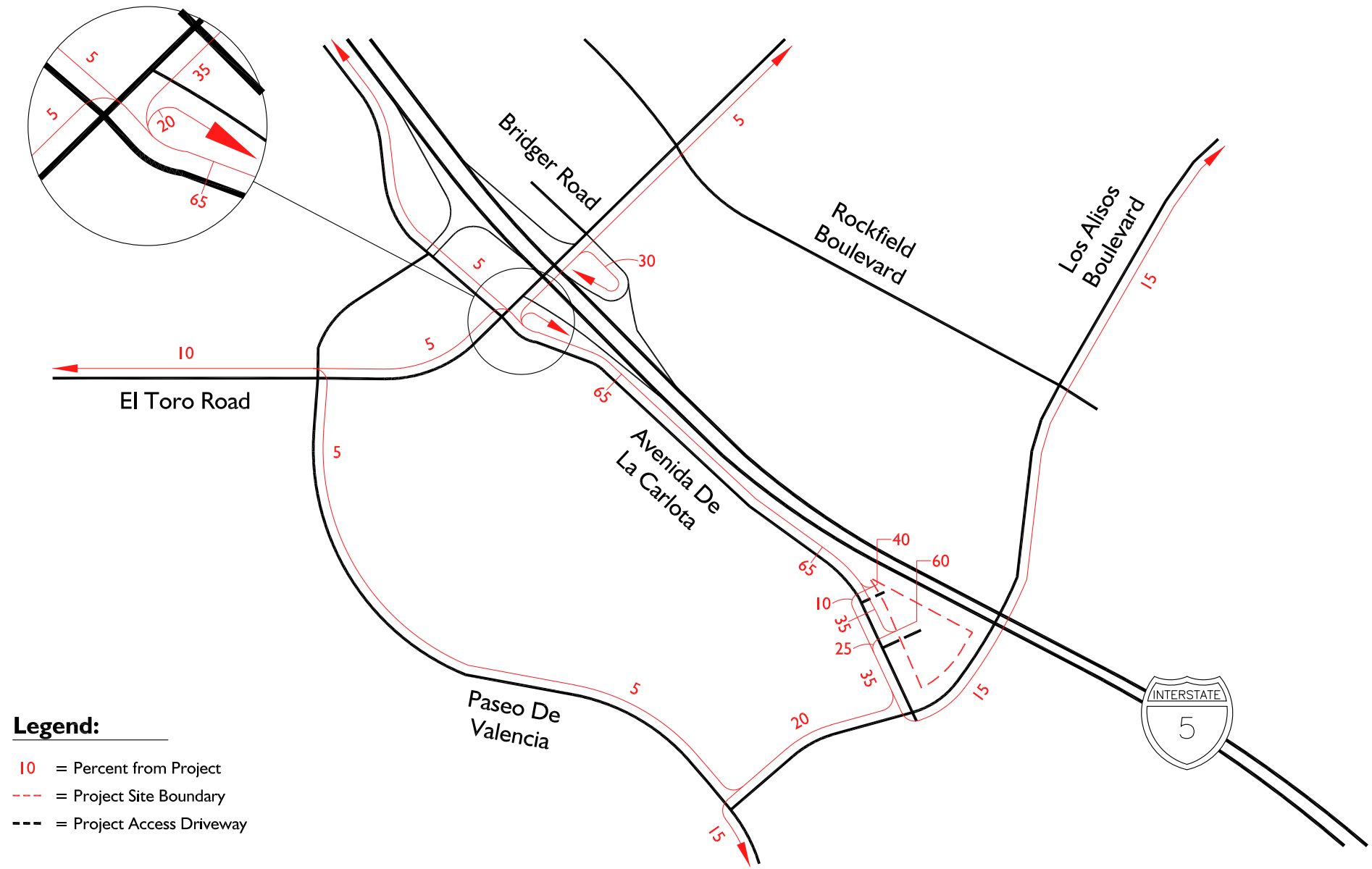
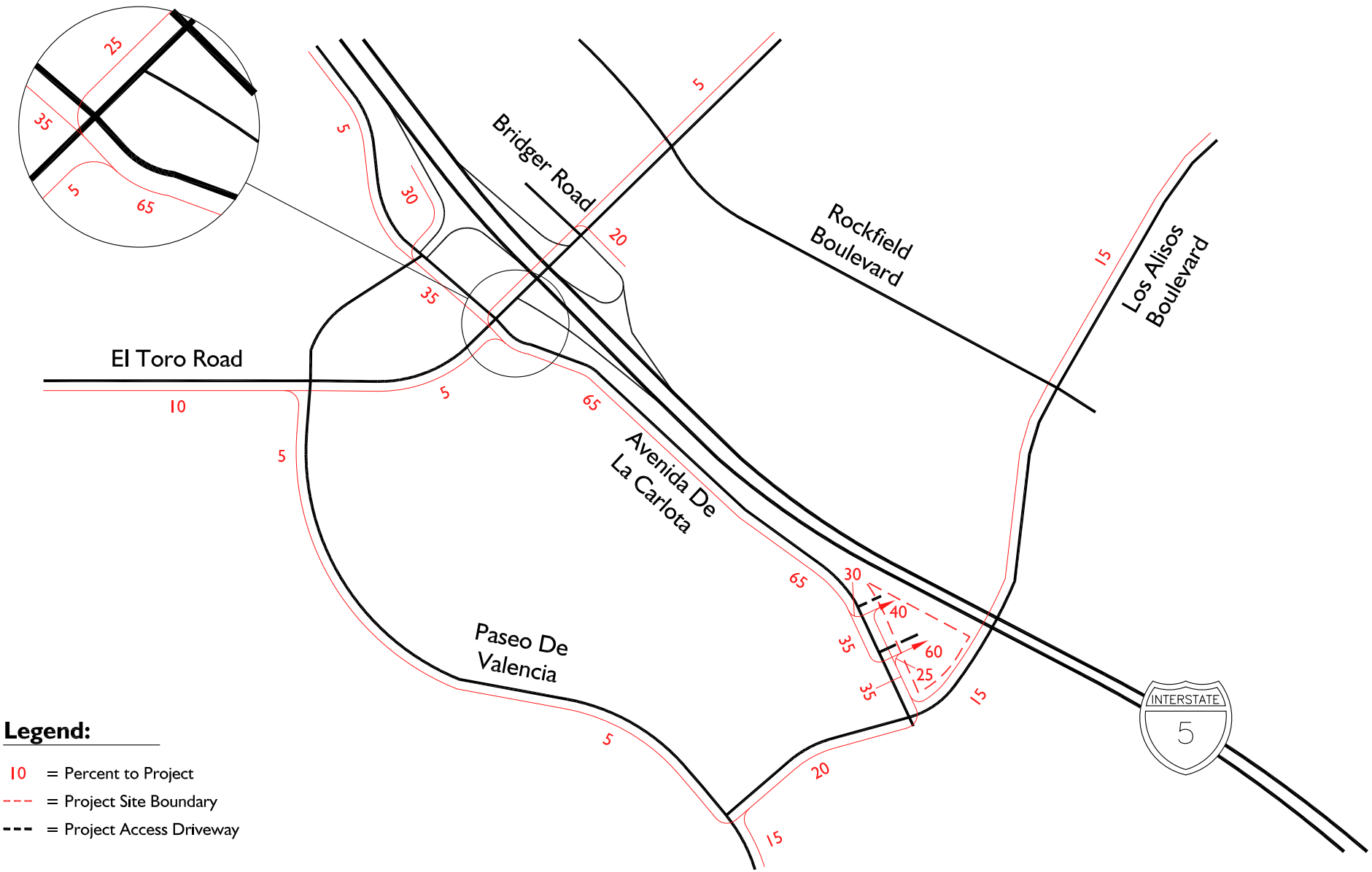


Exhibit C-2

Inbound Project Trip Distribution



Legend:

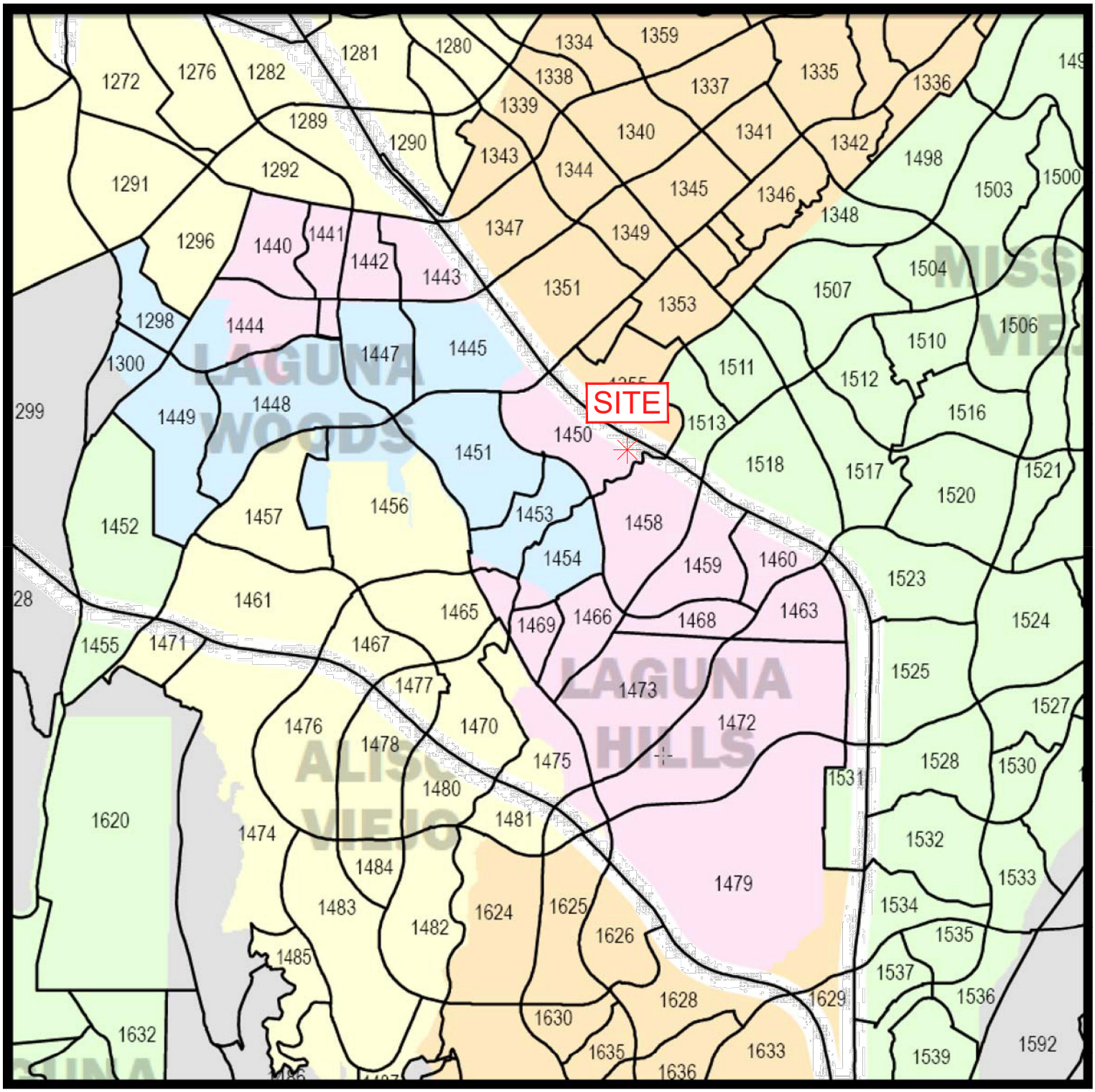
10 = Percent to Project

--- = Project Site Boundary

--- = Project Access Driveway

Exhibit D

OCTAM TAZ Map



Tables

Table 1

ITE Trip Generation Rates[1]

Land Use	ITE Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Senior Adult Housing (Multifamily)	252	DU	34%	66%	0.20	56%	44%	0.25	3.24
General Office Building	710	TSF	88%	12%	1.52	17%	83%	1.44	10.84
Medical-Dental Office Building - Stand Alone	720	TSF	79%	21%	3.10	30%	70%	3.93	36.00

[1] Source: *ITE Trip Generation Manual* (11th Edition, 2021).

[2] DU = Dwelling Unit
TSF = Thousand Square Feet

Table 2
Project Trip Generation

Land Use (ITE Code)	Units[2]	Quantity	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing Land Use									
Oakbrook Laguna Hills (General Office Portion) (710) [A]	TSF	96.8	129	18	147	24	115	139	1,049
Oakbrook Laguna Hills (Medical Office Portion) (720) [A]	TSF	24.2	59	16	75	29	66	95	871
Existing Land Use Trip Generation [A]			**188**	**34**	**222**	**53**	**181**	**234**	**1,920**
Proposed Land Use									
Medical-Dental Office (100% of Existing Building) (720)	TSF	121	296	79	375	143	333	476	4,356
Senior Adult Housing (Multifamily) (252)	DU	240	16	32	48	34	26	60	778
Total Proposed Project Trip Generation [B]			**312**	**111**	**423**	**177**	**359**	**536**	**5,134**
Urban Village Specific Plan (UVSP) Trip Budgets									
Urban Village Specific Plan (UVSP) Trip Budgets[3] [C]			--	--	216	--	--	2,590	--
Unused UVSP Trip Budgets (After Removal of Existing Land Uses) [C] + [A]			**--**	**--**	**438**	**--**	**--**	**2,824**	**--**
Unused UVSP Trip Budgets (After Construction of Proposed Land Uses) [C] + [A] - [B]			**--**	**--**	**15**	**--**	**--**	**2,288**	**--**
Total Net Trip Generation (Proposed Land Uses vs. Existing Land Uses) [B] - [A]			**124**	**77**	**201**	**124**	**178**	**302**	**3,214**

[1] Source: *ITE Trip Generation Manual* (11th Edition, 2021).

[2] DU = Dwelling Unit
TSF = Thousand Square Feet

[3] Source: *Traffic Impact Analysis for the Village at Laguna Hills Project* , dated September 1, 2020, prepared by LLG Engineers. As described in the UVSP, development intensity within the UVSP is regulated by trip budget limits. As presented in the Village at Laguna Hills TIA, which is the latest development activity within the UVSP area, the available trip budget is 216 trips in the AM peak hour and 2,590 trips in the PM peak hour. It should be noted that these trip budgets are based on the latest Village at Laguna Hills TIA which may not be the most recent analysis conducted within the UVSP area. As such, these results are subject to change after coordination with City staff.

Attachments

Attachment A

Relevant Pages from the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by LLG Engineers

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS FOR THE VILLAGE AT LAGUNA HILLS PROJECT

Laguna Hills, California
September 1, 2020

Prepared for:

MERLONE GEIER PARTNERS, LLC
3580 Carmel Mountain Road, Suite 260
San Diego, CA 92130

DUDEK
31878 CAMINO CAPISTRANO, SUITE 200
SAN JUAN CAPISTRANO, CA 92675

CITY OF LAGUNA HILLS
24035 EL TORO ROAD
LAGUNA HILLS, CA 92653

LLG Ref. 2.19.4208.1

Linscott, Law & Greenspan, Engineers
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Irvine, CA 92614
949.825.6175 T
949.825.6173 F
www.llgengineers.com

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

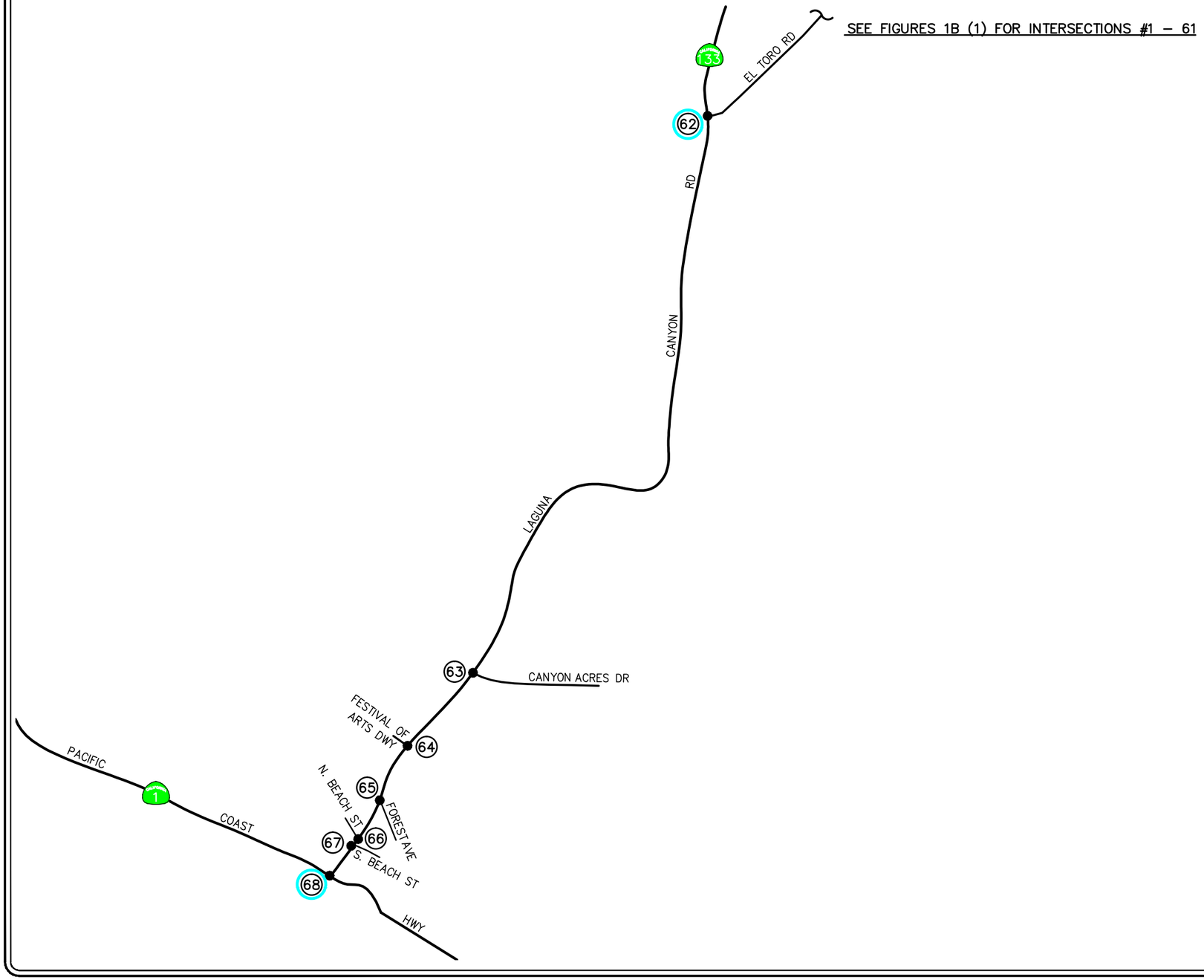
KEY

- (#) = INTERSECTION MEETS 50 PEAK-HOUR TRIP THRESHOLD
- (#) = INTERSECTION DOES NOT MEET 50 PEAK-HOUR TRIP THRESHOLD, BUT ANALYZED ANYWAY
- = PROJECT SITE
- (#) = CMP INTERSECTION
- (#) = CALTRANS INTERSECTION

FIGURE 1B (1)

INTERSECTIONS MEETING STUDY CRITERIA

VILLAGE AT LAGUNA HILLS



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = INTERSECTION MEETS 50 PEAK-HOUR TRIP THRESHOLD

(#) = INTERSECTION DOES NOT MEET 50 PEAK-HOUR TRIP THRESHOLD, BUT ANALYZED ANYWAY

= PROJECT SITE

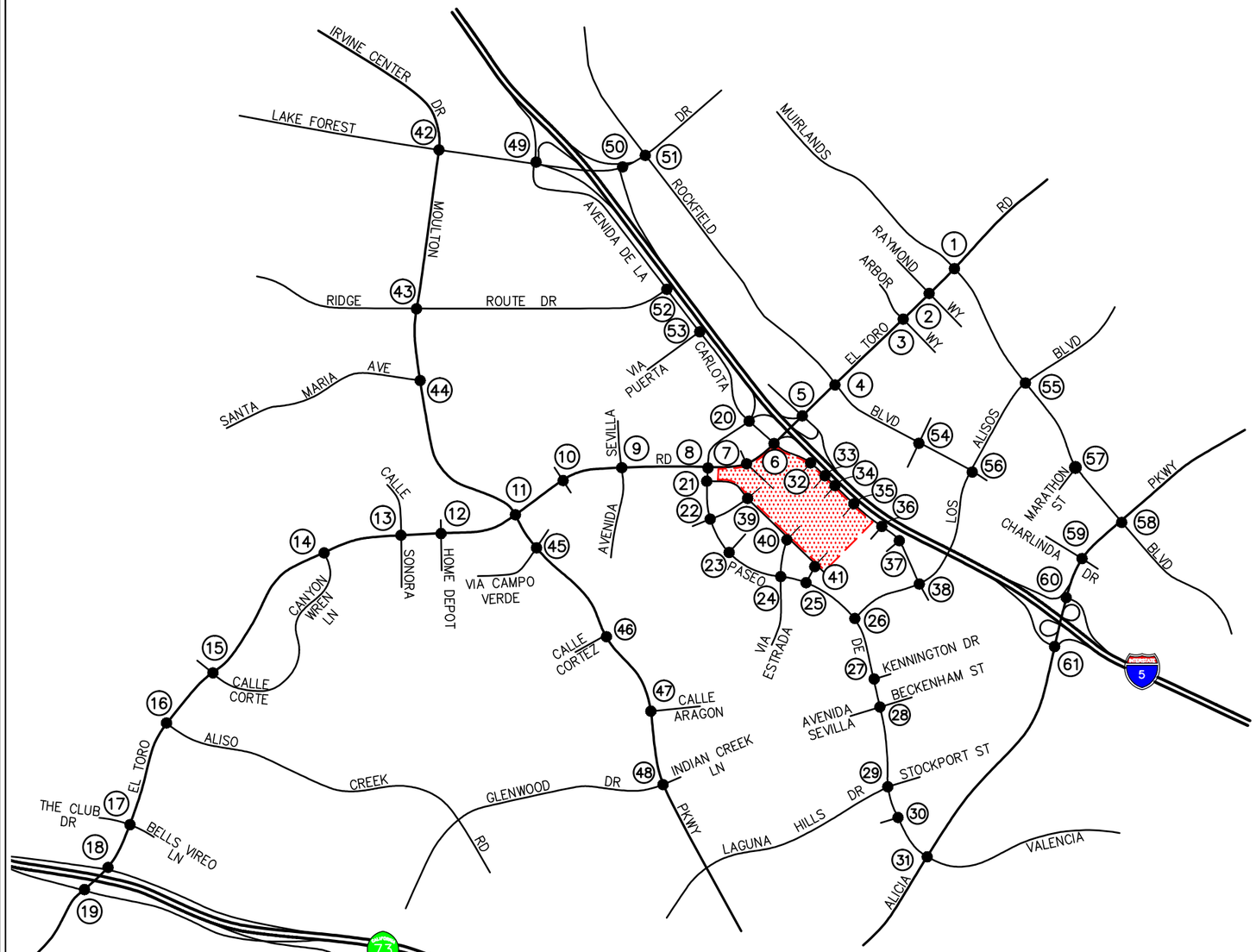
(#) = CMP INTERSECTION

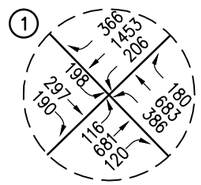
(#) = CALTRANS INTERSECTION

FIGURE 1B (2)

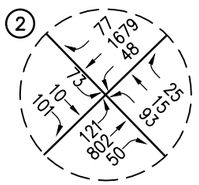
INTERSECTIONS MEETING STUDY CRITERIA

VILLAGE AT LAGUNA HILLS

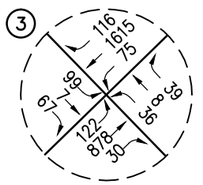




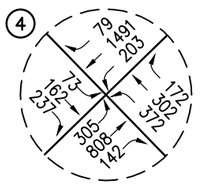
MUIRLANDS BLVD @
EL TORO RD



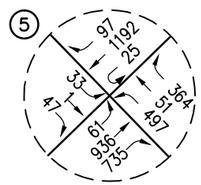
RAYMOND WY @
EL TORO RD



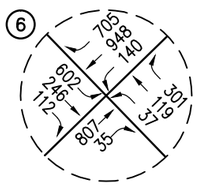
ARBOR WY @
EL TORO RD



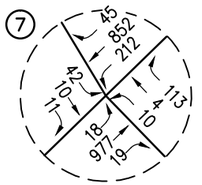
ROCKFIELD BLVD @
EL TORO RD



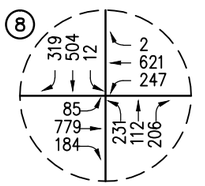
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



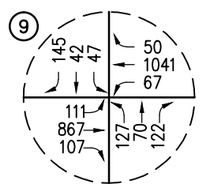
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



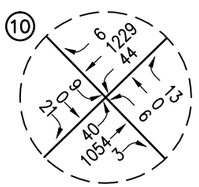
REGIONAL CENTER DR @
EL TORO RD



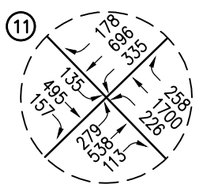
PASEO DE VALENCIA @
EL TORO RD



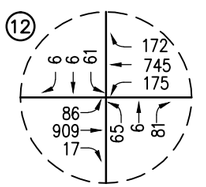
AVENIDA SEVILLA @
EL TORO RD



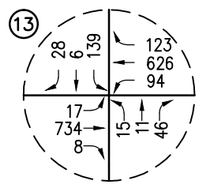
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



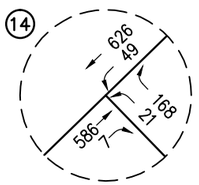
MOULTON PKWY @
EL TORO RD



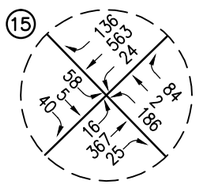
HOME DEPOT/TOWN CENTRE @
EL TORO RD



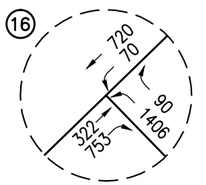
CALLE SONORA @
EL TORO RD



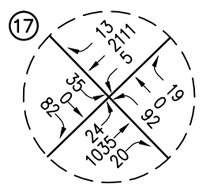
CANYON WREN LN @
EL TORO RD



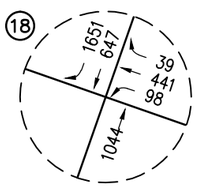
CALLE CORTA @
EL TORO RD



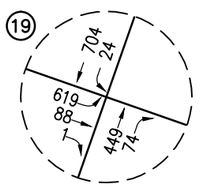
ALISO CREEK RD @
EL TORO RD



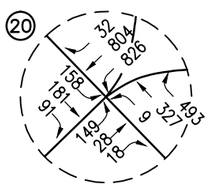
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f4-a.dwg LDP 10:22:46 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

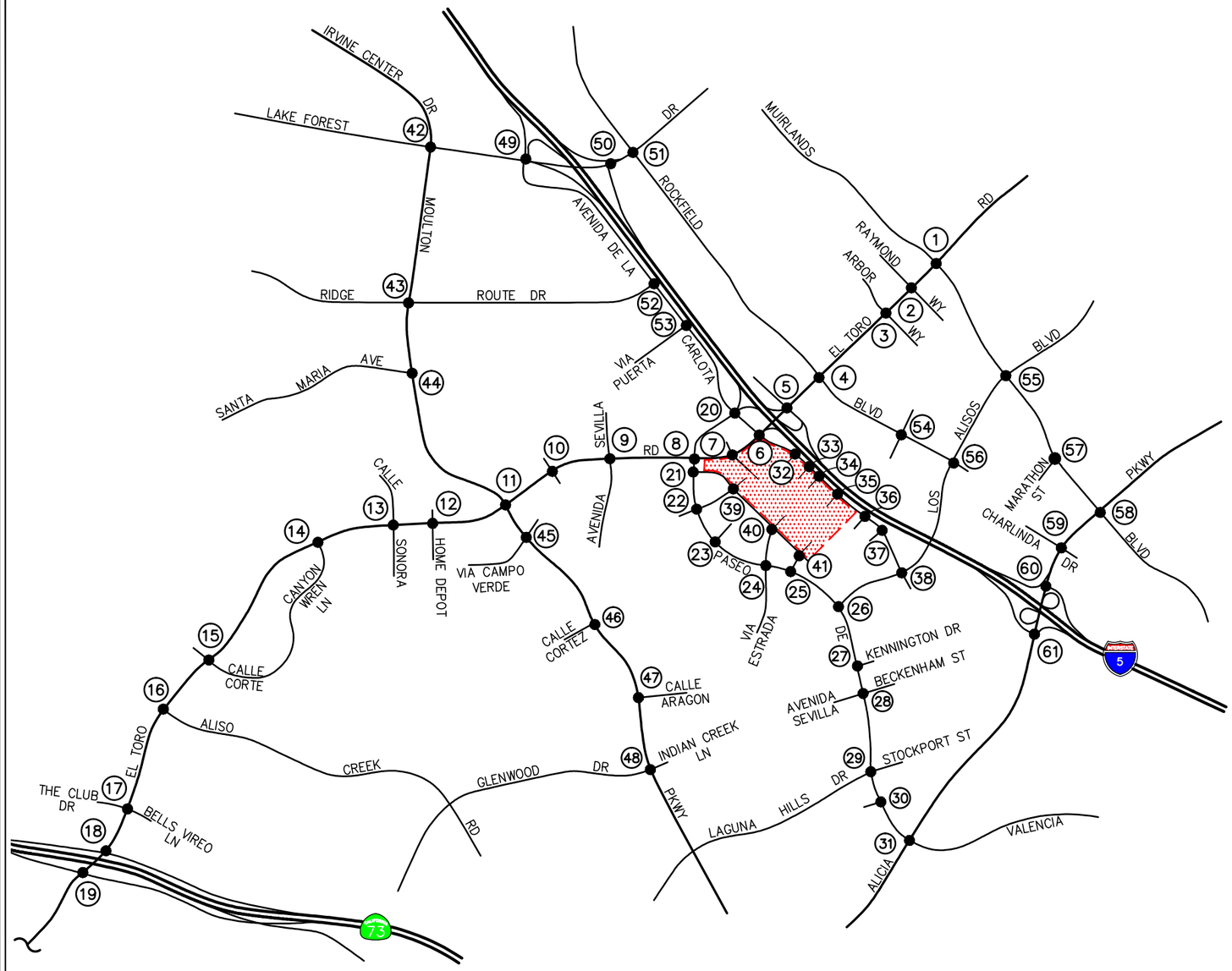
(#) = STUDY INTERSECTION

= PROJECT SITE

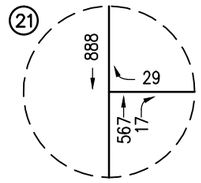
FIGURE 4A

EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

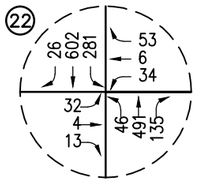
VILLAGE AT LAGUNA HILLS



SEE FIGURE 4D FOR INTERSECTIONS #62 – 68



PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



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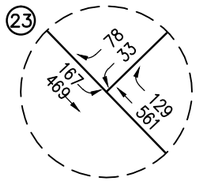

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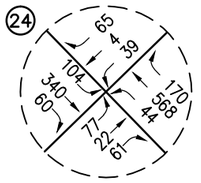
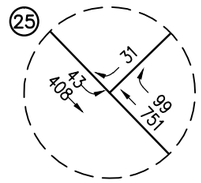
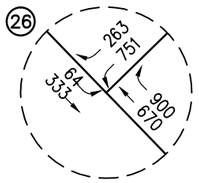


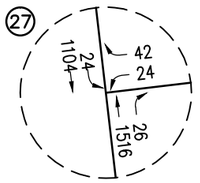
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



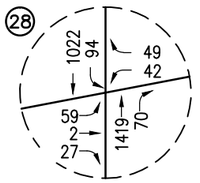
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



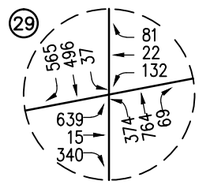
PASEO DE VALENCIA @ LOS ALISOS BLVD



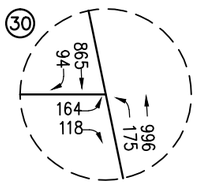
PASEO DE VALENCIA @ KENNINGTON DR



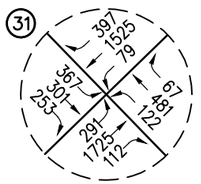
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



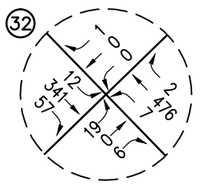
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



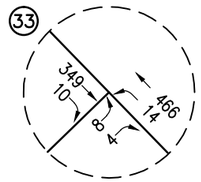
PASEO DE VALENCIA@ HAWK HWY



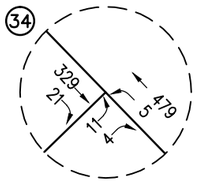
PASEO DE VALENCIA @ ALICIA PKWY



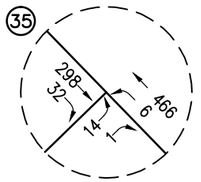
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



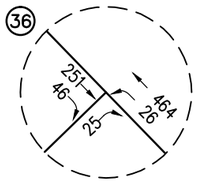
AVENIDA DE LA CARLOTA @ MALL DWY 1



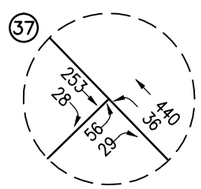
AVENIDA DE LA CARLOTA @ MALL DWY 2



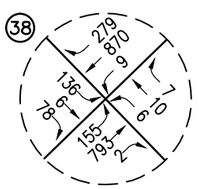
AVENIDA DE LA CARLOTA @ MALL DWY 3



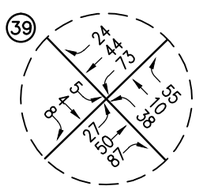
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



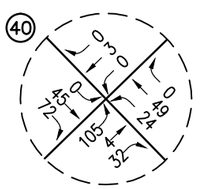
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f4-b.dwg LDP 10:24:05 03-13-2020 cervantes

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(#) = STUDY INTERSECTION

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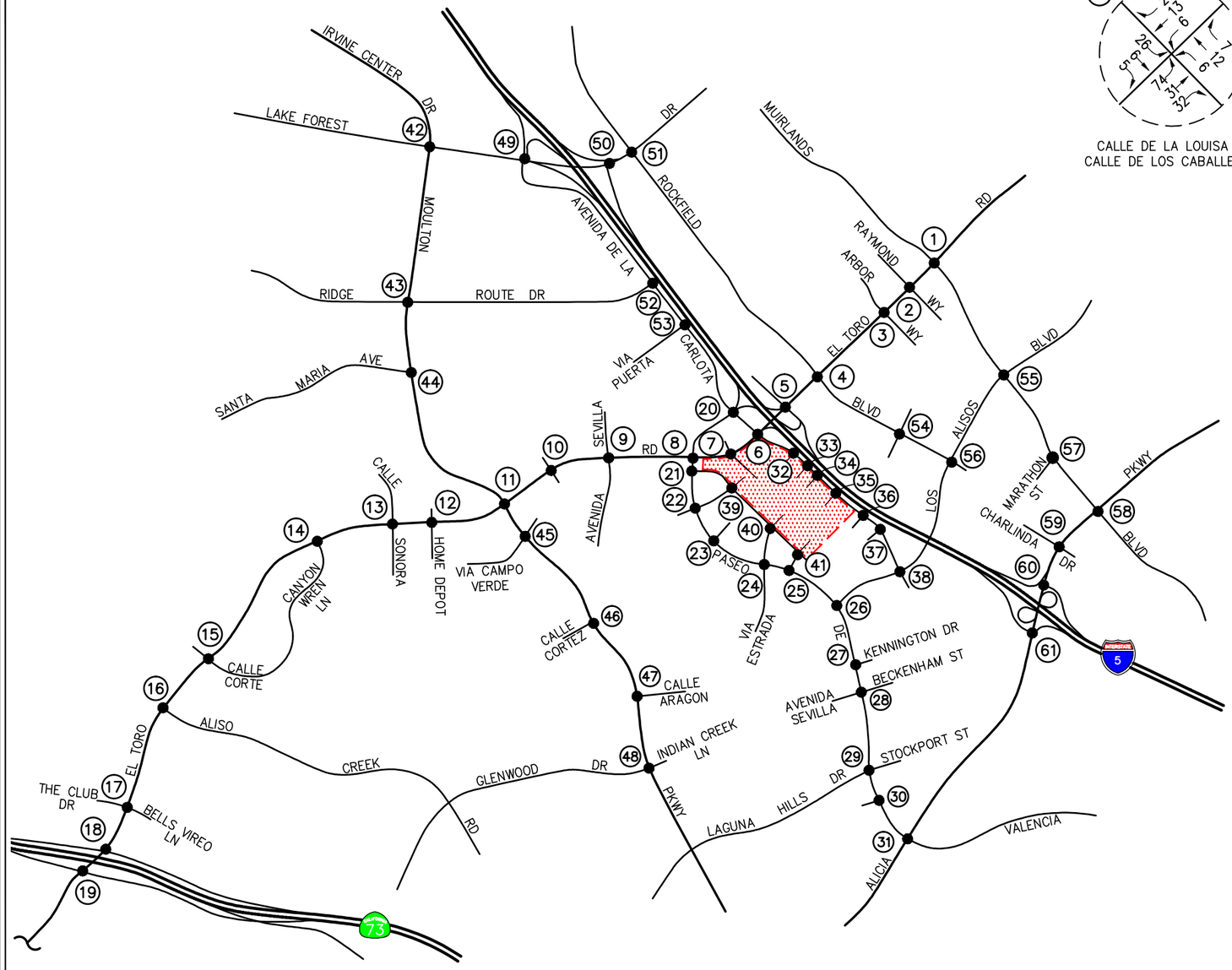
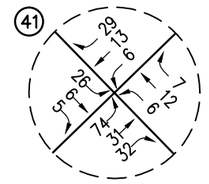
FIGURE 4B

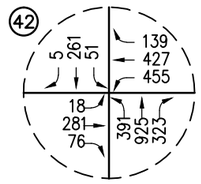
EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

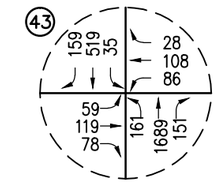




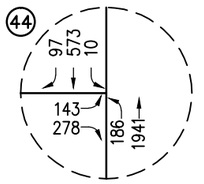
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



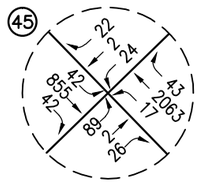
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



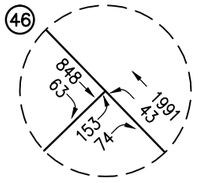
MOULTON PKWY @
RIDGE ROUTE DR



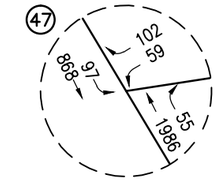
MOULTON PKWY @
SANTA MARIA AVE



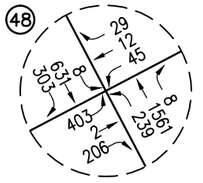
MOULTON PKWY @
VIA CAMPO VERDE



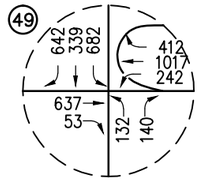
MOULTON PKWY @
CALLE CORTEZ



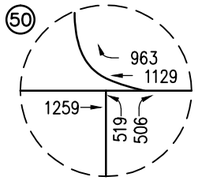
MOULTON PKWY @
CALLE ARAGON



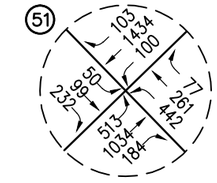
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



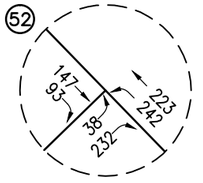
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



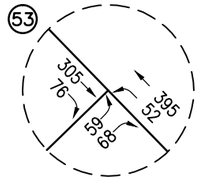
I-5 NB RAMPS @
LAKE FOREST DR



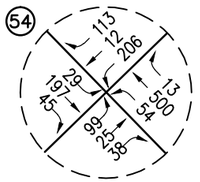
ROCKFIELD BLVD @
LAKE FOREST DR



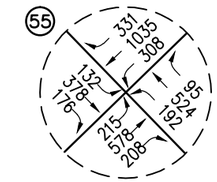
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



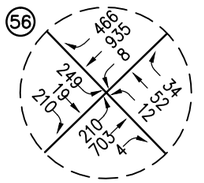
AVENIDA DE LA CARLOTA @
VIA PUERTA



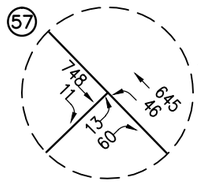
ROCKFIELD BLVD @
LANDISVIEW AVE



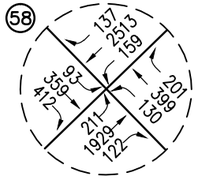
MUIRLANDS BLVD @
LOS ALISOS BLVD



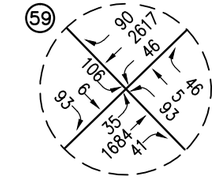
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



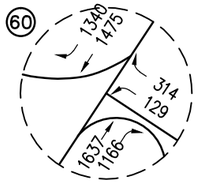
MUIRLANDS BLVD @
MARATHON ST



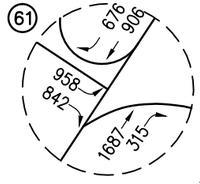
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

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(#) = STUDY INTERSECTION

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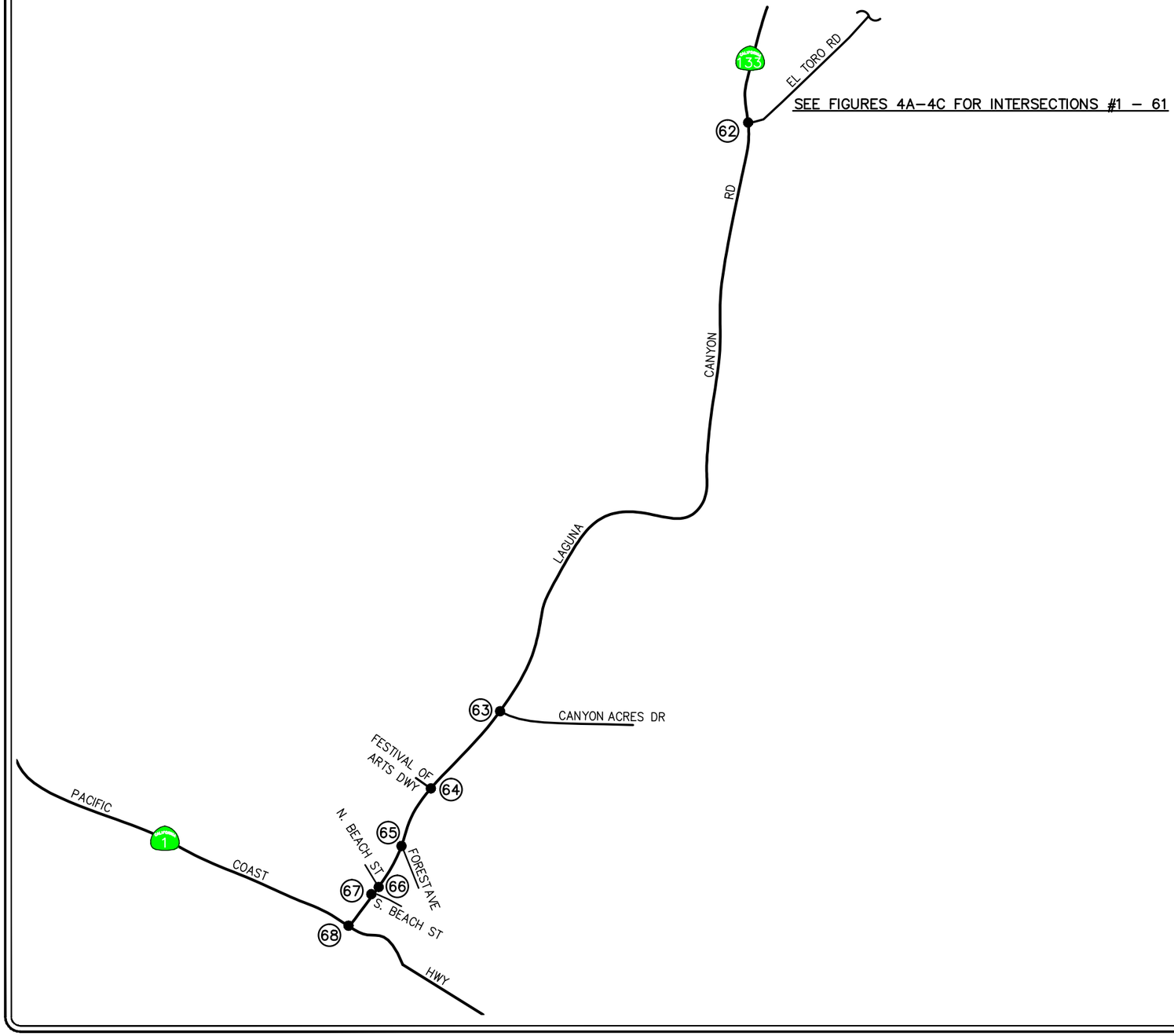
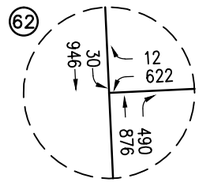
FIGURE 4C

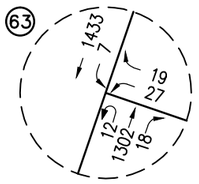
EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

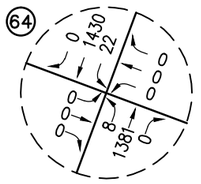




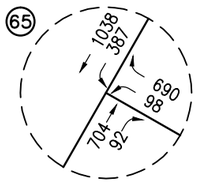
LAGUNA CANYON RD @
EL TORO RD



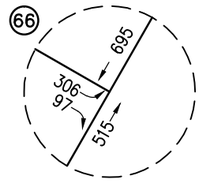
LAGUNA CANYON RD @
CANYON ACRES DR



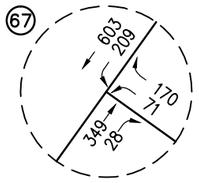
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



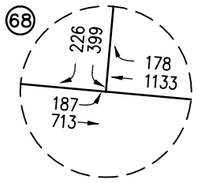
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

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N NO SCALE

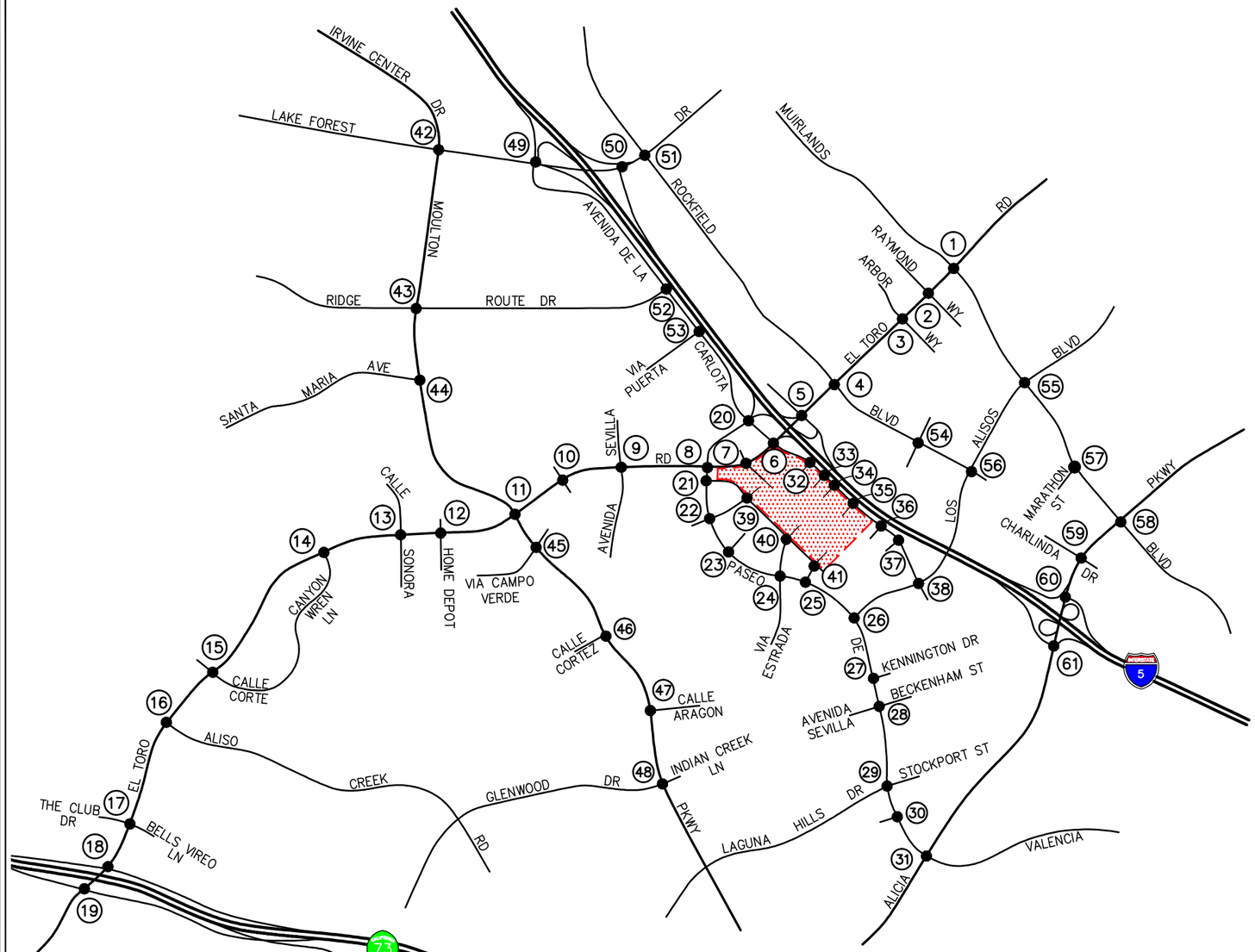
KEY

(#) = STUDY INTERSECTION

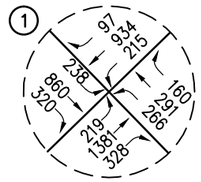
FIGURE 4D

EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

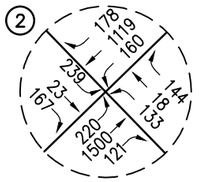
VILLAGE AT LAGUNA HILLS



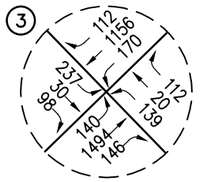
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



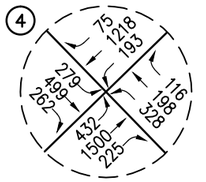
MUIRLANDS BLVD @
EL TORO RD



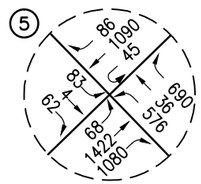
RAYMOND WY @
EL TORO RD



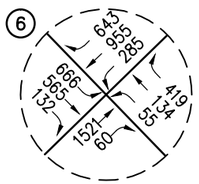
ARBOR WY @
EL TORO RD



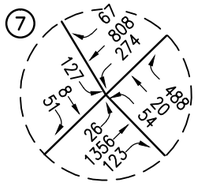
ROCKFIELD BLVD @
EL TORO RD



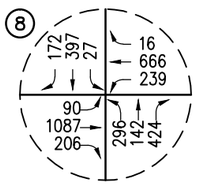
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



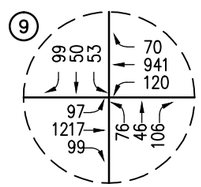
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



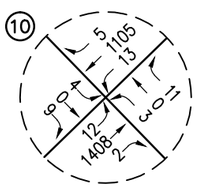
REGIONAL CENTER DR @
EL TORO RD



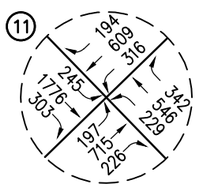
PASEO DE VALENCIA @
EL TORO RD



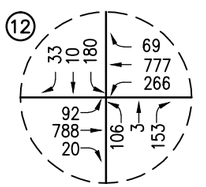
AVENIDA SEVILLA @
EL TORO RD



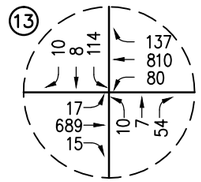
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



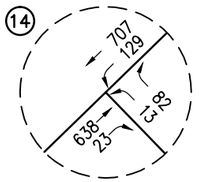
MOULTON PKWY @
EL TORO RD



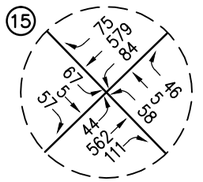
HOME DEPOT/TOWN CENTRE @
EL TORO RD



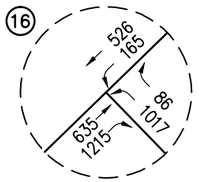
CALLE SONORA @
EL TORO RD



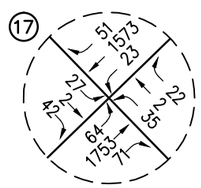
CANYON WREN LN @
EL TORO RD



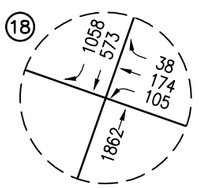
CALLE CORTA @
EL TORO RD



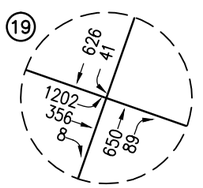
ALISO CREEK RD @
EL TORO RD



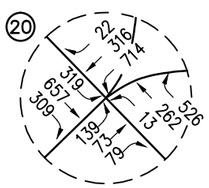
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

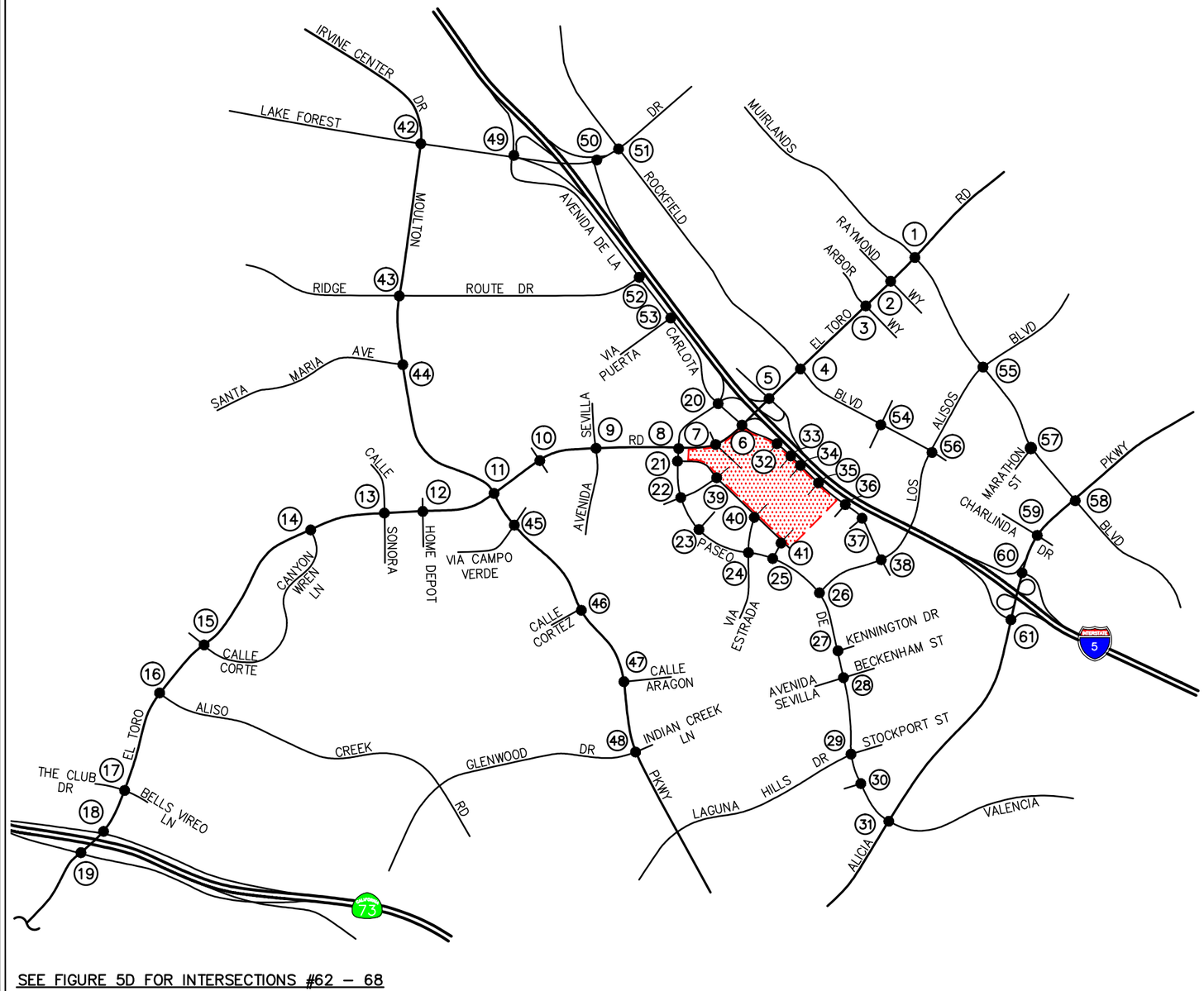
(#) = STUDY INTERSECTION

= PROJECT SITE

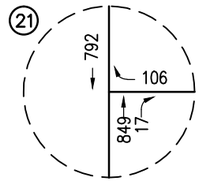
FIGURE 5A

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

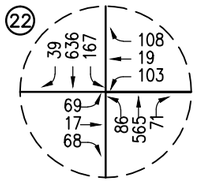
VILLAGE AT LAGUNA HILLS



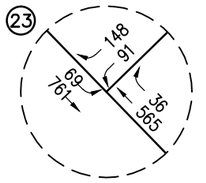
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



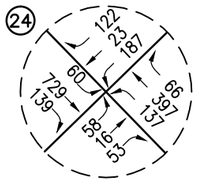
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



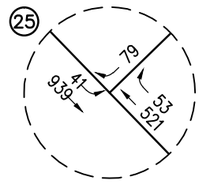
PASEO DE VALENCIA @ CALLE DE LA PLATA



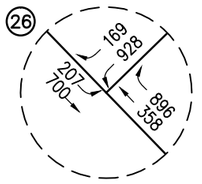
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



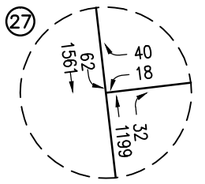
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



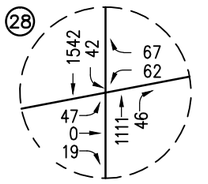
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



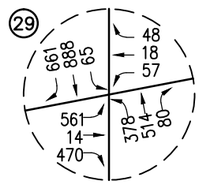
PASEO DE VALENCIA @ LOS ALISOS BLVD



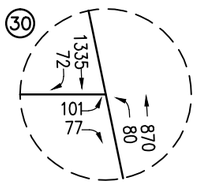
PASEO DE VALENCIA @ KENNINGTON DR



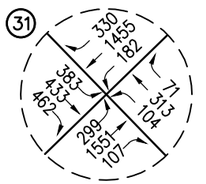
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



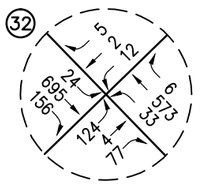
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



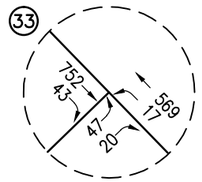
PASEO DE VALENCIA@ HAWK HWY



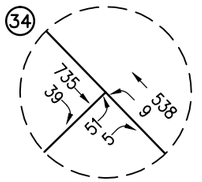
PASEO DE VALENCIA @ ALICIA PKWY



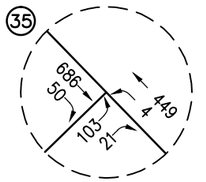
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



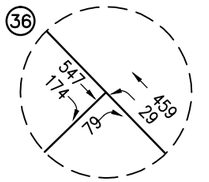
AVENIDA DE LA CARLOTA @ MALL DWY 1



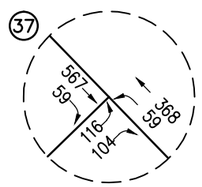
AVENIDA DE LA CARLOTA @ MALL DWY 2



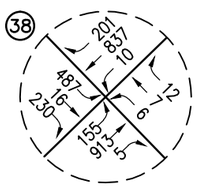
AVENIDA DE LA CARLOTA @ MALL DWY 3



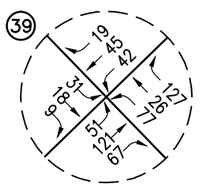
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



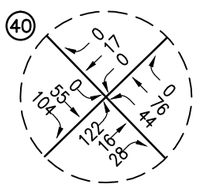
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

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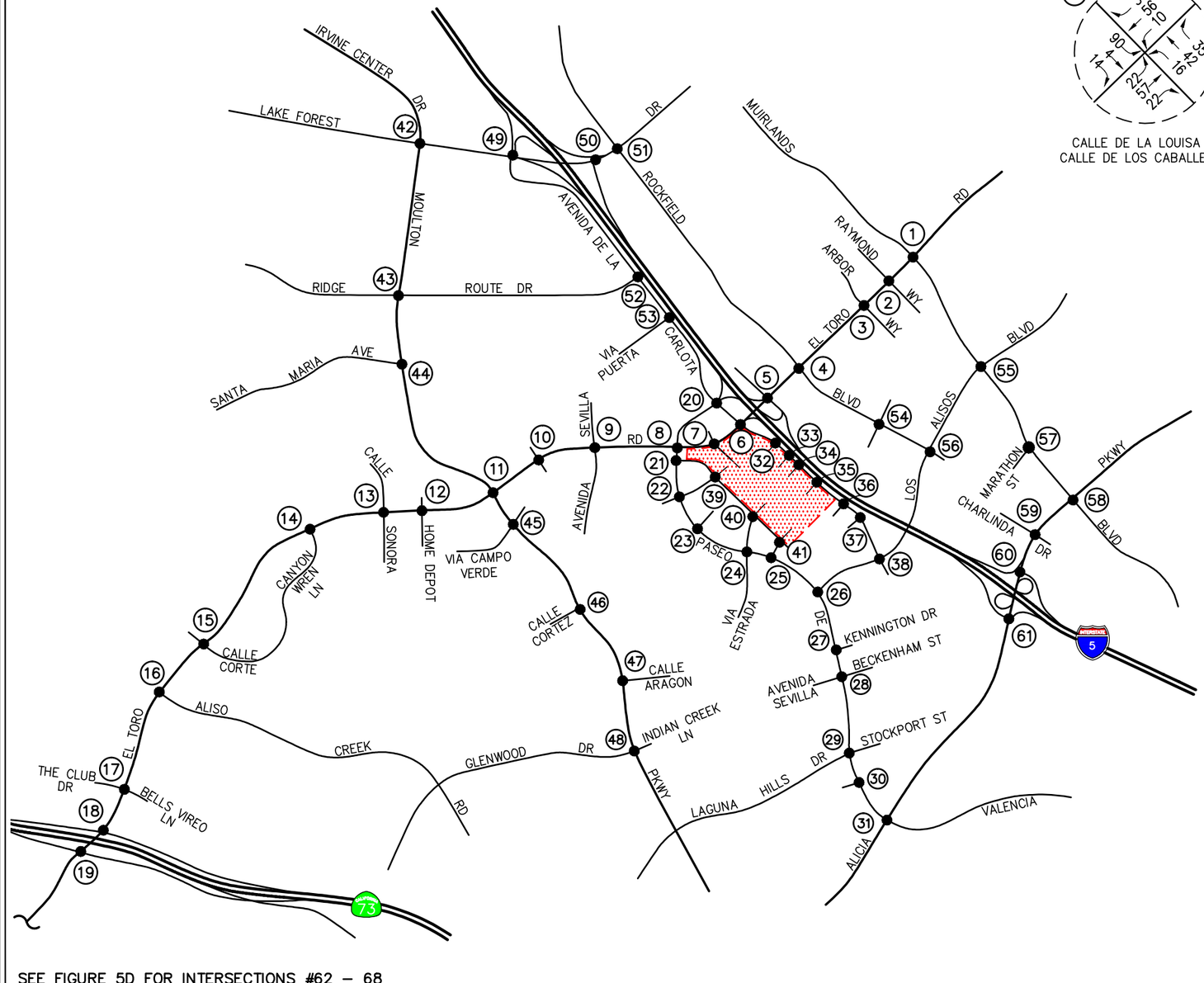
(#) = STUDY INTERSECTION

= PROJECT SITE

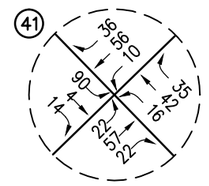
FIGURE 5B

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

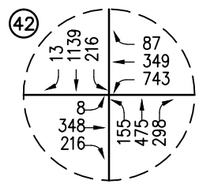
VILLAGE AT LAGUNA HILLS



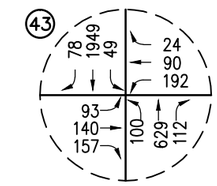
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



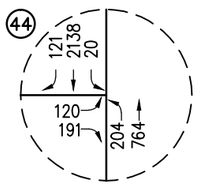
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



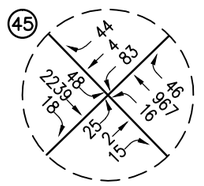
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



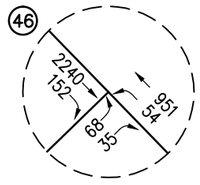
MOULTON PKWY @
RIDGE ROUTE DR



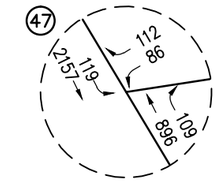
MOULTON PKWY @
SANTA MARIA AVE



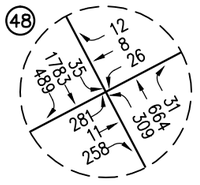
MOULTON PKWY @
VIA CAMPO VERDE



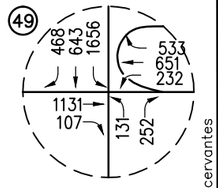
MOULTON PKWY @
CALLE CORTEZ



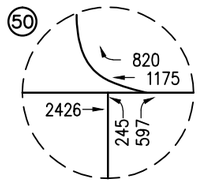
MOULTON PKWY @
CALLE ARAGON



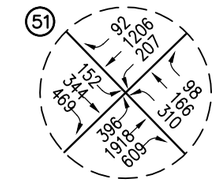
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



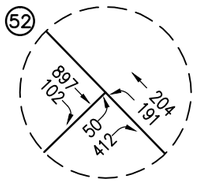
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



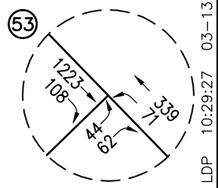
I-5 NB RAMPS @
LAKE FOREST DR



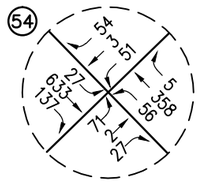
ROCKFIELD BLVD @
LAKE FOREST DR



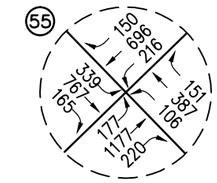
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



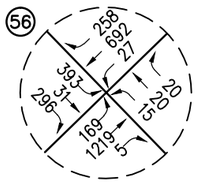
AVENIDA DE LA CARLOTA @
VIA PUERTA



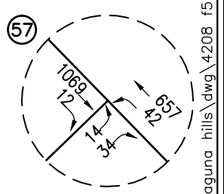
ROCKFIELD BLVD @
LANDISVIEW AVE



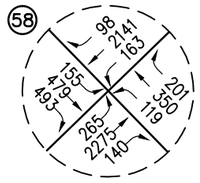
MUIRLANDS BLVD @
LOS ALISOS BLVD



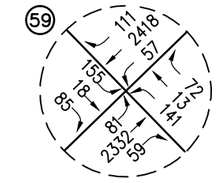
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



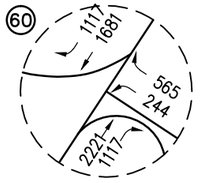
MUIRLANDS BLVD @
MARATHON ST



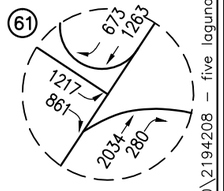
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

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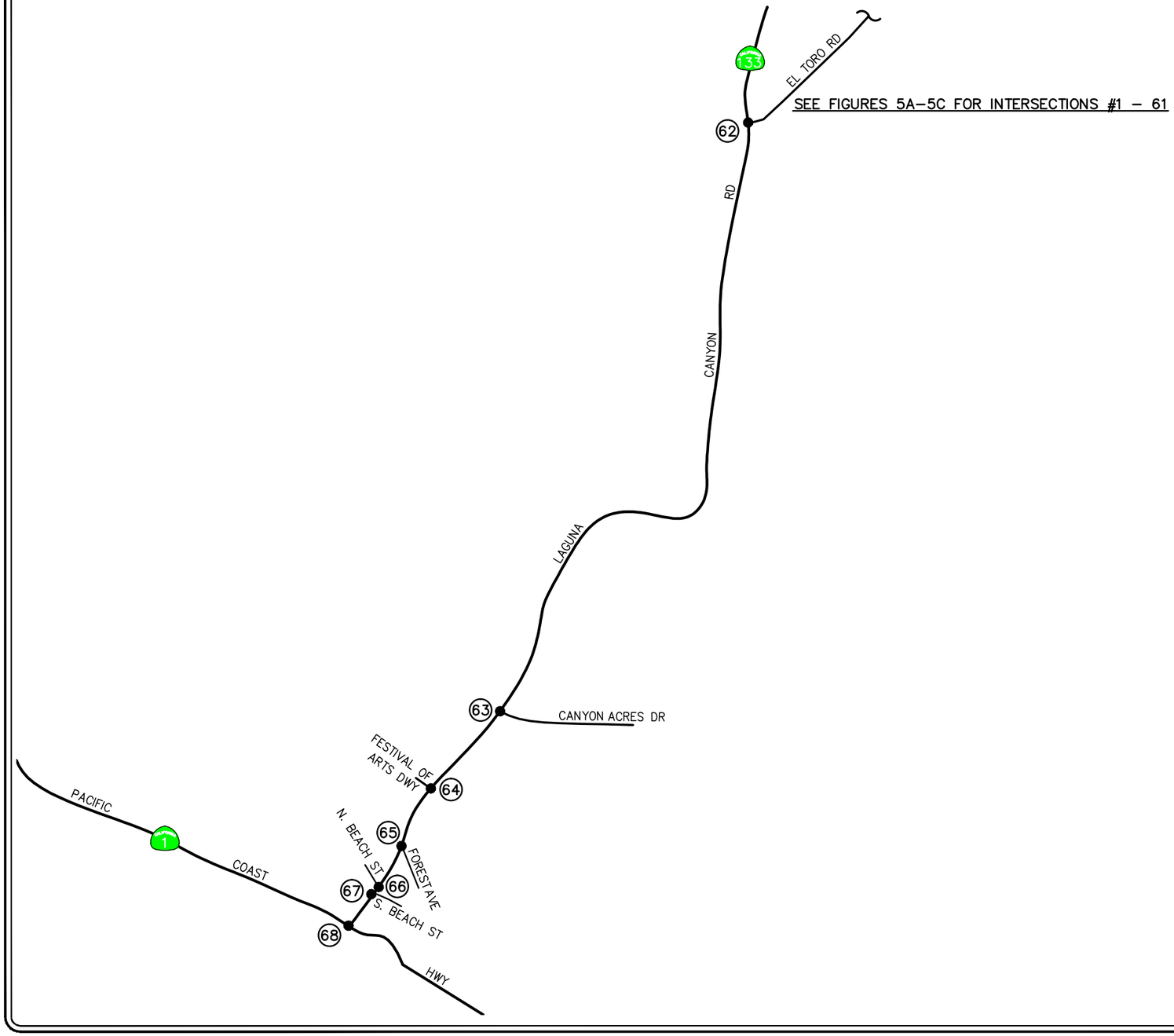
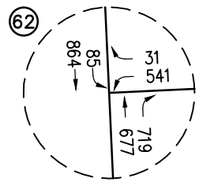
= PROJECT SITE

FIGURE 5C

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS





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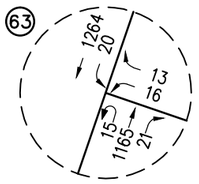
EL TORO RD



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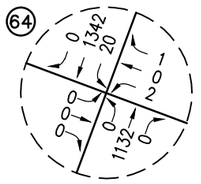
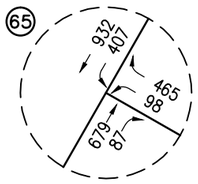
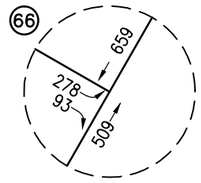


LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



BROADWAY ST @
FOREST AVENUE



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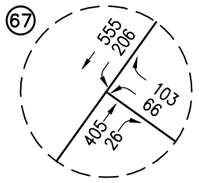
N. BEACH ST



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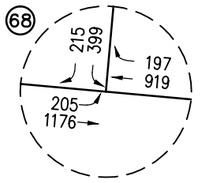
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

FIGURE 5D

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

4.0 TRAFFIC FORECASTS

In order to determine potential traffic impacts of the Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is estimated by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation with applicable trip adjustments/credits to account for the existing land uses on site, internal capture, and/or alternative modes of transportation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic 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 project traffic assignments developed, the impact of the proposed project is isolated by comparing levels of service at selected key intersections using expected future traffic volumes with and without project-generated traffic. The significance of the Project's impacts, and the need for site-specific and/or cumulative local area traffic improvements, can then be determined.

4.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 10th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2017]. The trip rates for ITE Land Use 820: Shopping Center, 720: General Office Building, 221: Multifamily (Mid-Rise), and 310: Hotel were applied to the Project.

Since the Project is comprised of a mix of uses (including retail, restaurant, cinema, health club, office, and residential), it was appropriate to account for "internal" tripmaking/interactions that will occur between the various land uses on site, and will not occur by traveling on the external street system. ITE trip generation rates and equations are derived from single-use, stand-alone sites, and do not reflect the potential for interaction among uses in a mixed-use setting. The methodology used in estimating internal trips for the project is well documented in the Third Edition of ITE's *Trip Generation Handbook* [Washington, D.C., August 2014].

Additionally, because of the retail component of the Project, "pass-by" reductions were applied to retail-generated trips (after accounting for internal trip reductions). This is typically done to account

for conditions when the total number of trips generated by a retail-oriented development is not entirely new to the external street system. Retail-oriented developments such as shopping centers and restaurants, which are located along major/busy roadways, attract a portion of their trips from traffic already on the street system for a different purpose (i.e., the retail site is not the primary or ultimate destination). These retail trips do not add new traffic to the surrounding street system. The methodology used in estimating pass-by trips is also contained in ITE's *Trip Generation Handbook*.

Modest internal capture and pass-by trip reductions were applied (despite the vast majority of uses surrounding the site that could realistically result in greater interactions with the Project than assumed), which are appropriate for application based on the Project setting and ITE-recommended methodology, and are allowed per the City's traffic study guidelines for LOS analysis. It should be noted that internal tripmaking within the mall is inherent in the ITE Shopping Center rates/equations; therefore, internal trip reductions were not applied to shopping center trips, and only applied to the residential, hotel, and office trips in this study. As a conservative measure, no further trip reductions to account for alternative modes of travel (despite the Project's proximity to the Laguna Hills Transportation Center) have been applied.

As shown in ***Table 6***, the net Project trips are estimated to be 9,970 fewer than for Five Lagunas on a typical weekday. During the AM peak hour, weekday trips would be 119 more than for Five Lagunas. During the PM peak hour, weekday trips would be 910 fewer than for Five Lagunas.

On Saturdays, the net Project trips are estimated to be 15,542 fewer than for Five Lagunas. During the Saturday midday peak hour, net Project trips would be 1,704 fewer than for Five Lagunas.

The reductions in all trip generation categories other than the weekday AM peak is explained by the Project's substantial rebalancing of square footage, creating more residential and less retail use than Five Lagunas.

The potential impact of any added/incremental trips generated by the Project (Village at Laguna Hills) are assessed in this report as compared to background conditions that include the previously approved Five Lagunas; specifically, the incremental trips assigned to the street system within the study area and evaluated in this traffic impact analysis correspond to the "Project versus Five Lagunas" line item on *Table 6* (highlighted in blue), which indicates a reduction of 9,970 weekday daily trips, an increase of 119 AM peak hour trips, and reduction of 910, 15,542, and 1,704 trips during the PM peak hour. Saturday daily, and Saturday midday peak hour, respectively.

Table 6 also presents a trip budget assessment for the Project, given its location within the UVSP area. As described in the UVSP, the Program EIR, and the 2016 Addendum, development intensity within the UVSP is regulated by trip budget limits that correlate with LOS D (except with regard to CMP intersections), and the "anticipated" land uses referenced in the Program EIR and UVSP do not function as development limits.

City staff identified development projects that have been assigned UVSP trips subsequent to the certification of the Program EIR. After deducting the assigned UVSP trips (including Five Lagunas),

335 AM peak hour trips and 1,680 PM peak hour trips remain unassigned and available for redevelopment in the UVSP. Deducting the incremental trips between the Project and Five Lagunas from the unassigned UVSP trips results in 216 AM peak hour trips and 2,590 PM peak hour trips remaining in the UVSP budget.

TABLE 6
PROJECT TRIP GENERATION

LAND USE	Unit / Size	Typical Weekday Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Saturday Daily	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total
ITE TRIP RATES												
Shopping Ctr	trips/KSF GLA	[a]	62%	38%	[a]	48%	52%	[a]	[a]	52%	48%	[a]
General Office	trips/KSF GFA	[b]	86%	14%	[b]	16%	84%	[b]	2.21	54%	46%	0.53
Multifamily (Mid-Rise)	trips/DU	5.44	26%	74%	0.36	61%	39%	0.44	4.91	49%	51%	0.44
Hotel	trips/Room	8.36	59%	41%	0.47	51%	49%	0.60	8.19	56%	44%	0.72
PROPOSED PROJECT												
Mall [c]	**250,000 SF GLA**	11,210	172	105	277	514	556	1,070	15,730	664	613	1,277
Retail (99,305 SF GLA)												
Restaurants (60,695 SF GLA)												
Health Club (40,000 SF GLA)												
Cinema (50,000 SF GLA)												
Hotel	**150 RM**	1,254	42	29	71	46	44	90	1,229	60	48	108
General Office	**465,000 SF GFA**	4,712	399	65	464	78	412	490	1,028	133	113	246
Multifamily	**1,500 DU**	8,160	140	400	540	403	257	660	7,365	323	337	660
FUTURE (Gross Project Trips)		**25,336**	**753**	**599**	**1,352**	**1,041**	**1,269**	**2,310**	**25,352**	**1,180**	**1,111**	**2,291**
Internal Trip Reduction [d]		(2,825)	(58)	(49)	(107)	(105)	(143)	(248)	(1,924)	(103)	(100)	(203)
	Sub-Total	22,511	695	550	1,245	936	1,126	2,062	23,428	1,077	1,011	2,088
Pass-By Trip Reduction [e]		(1,121)	(9)	(5)	(14)	(51)	(56)	(107)	(1,573)	(66)	(61)	(127)
	Net Future Trips	**21,390**	**686**	**545**	**1,231**	**885**	**1,070**	**1,955**	**21,855**	**1,011**	**950**	**1,961**
FIVE LAGUNAS Net Future Trips [f]		**31,360**	**505**	**607**	**1,112**	**1,437**	**1,428**	**2,865**	**37,397**	**1,780**	**1,885**	**3,665**
PROJECT VS. FIVE LAGUNAS (Project minus Five Lagunas)		**(9,970)**	**181**	**(62)**	**119**	**(552)**	**(358)**	**(910)**	**(15,542)**	**(769)**	**(935)**	**(1,704)**

TABLE 6 (CONTINUED)
PROJECT TRIP GENERATION

LAND USE	Unit / Size	Typical Weekday Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Saturday Daily	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total
UVSP TRIP BUDGETS Per June 2009 GP Update EIR		--	--	--	**1,243**	--	--	**2,272**	--	--	--	--
Less Chevron (approved 5/11)		--	--	--	0	--	--	27	--	--	--	--
Less Taj Mahal (approved 6/11)		--	--	--	(12)	--	--	(49)	--	--	--	--
Less Ash./ChickFilA (approved 7/11)		--	--	--	(128)	--	--	(12)	--	--	--	--
Less Oakbrook Vill. (approved 11/12)		--	--	--	(129)	--	--	33	--	--	--	--
Less Raising Cane's (approved 4/15)		--	--	--	(32)	--	--	3	--	--	--	--
Less Five Lagunas (approved 3/16) [f]		--	--	--	(558)	--	--	(569)	--	--	--	--
Remaining UVSP Trip Budgets (w/ Five Lagunas, w/out Project)		--	--	--	**384**	--	--	**1,705**	--	--	--	--
Less Farmer Boys (approved 9/16)		--	--	--	**(49)**	--	--	**(25)**	--	--	--	--
Remaining UVSP Trip Budgets (Before Project Credits/Debits)		--	--	--	**335**	--	--	**1,680**	--	--	--	--
Less Project vs. Five Lagunas		--	--	--	**(119)**	--	--	**910**	--	--	--	--
Unused UVSP Trip Budgets (After Project Credits/Debits)		--	--	--	**216**	--	--	**2,590**	--	--	--	--

Notes:

[a] Trip generation for shopping centers/retail uses were calculated using the following equations:
Weekday Daily Rate: Ln(T) = 0.68Ln(X) + 5.57
AM Commuter Peak Hour Rate: Ln(T) = 0.50(X) + 151.78
PM Commuter Peak Hour Rate: Ln(T) = 0.74Ln(X) + 2.89
Saturday Daily Rate: Ln(T) = 0.62Ln(X) + 6.24
Saturday Peak Hour of the Generator: Ln(T) = 0.79Ln(X) + 2.79
Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
X = Area in 1,000 gross square feet of leasable area

[b] Trip generation for the general office land use was calculated using the following equations:
Weekday Daily Rate: Ln(T) = 0.97Ln(X) + 2.50
AM Commuter Peak Hour Rate: Ln(T) = 0.94(X) + 26.49
PM Commuter Peak Hour Rate: Ln(T) = 0.95Ln(X) + 0.36
Saturday Daily Rate: Not Given
Saturday Peak Hour of the Generator: Not Given
Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
X = Area in 1,000 gross square feet of leasable area

[c] Per City staff direction and ITE's definition of Land Use: 820 (Shopping Center), the health club SF is included in the Shopping Center SF.

[d] The internal trip reductions correspond to approximately 7% to 12% of total future trips.

[e] The pass-by trip reductions applied to retail trips are 10% for daily, 5% for AM peak hour, and 10% for PM and Saturday midday peak hours.

[f] Source: *Traffic Impact Analysis for the Five Lagunas Project*, prepared by LLG, November 13, 2015.

TABLE 7
LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS[4]

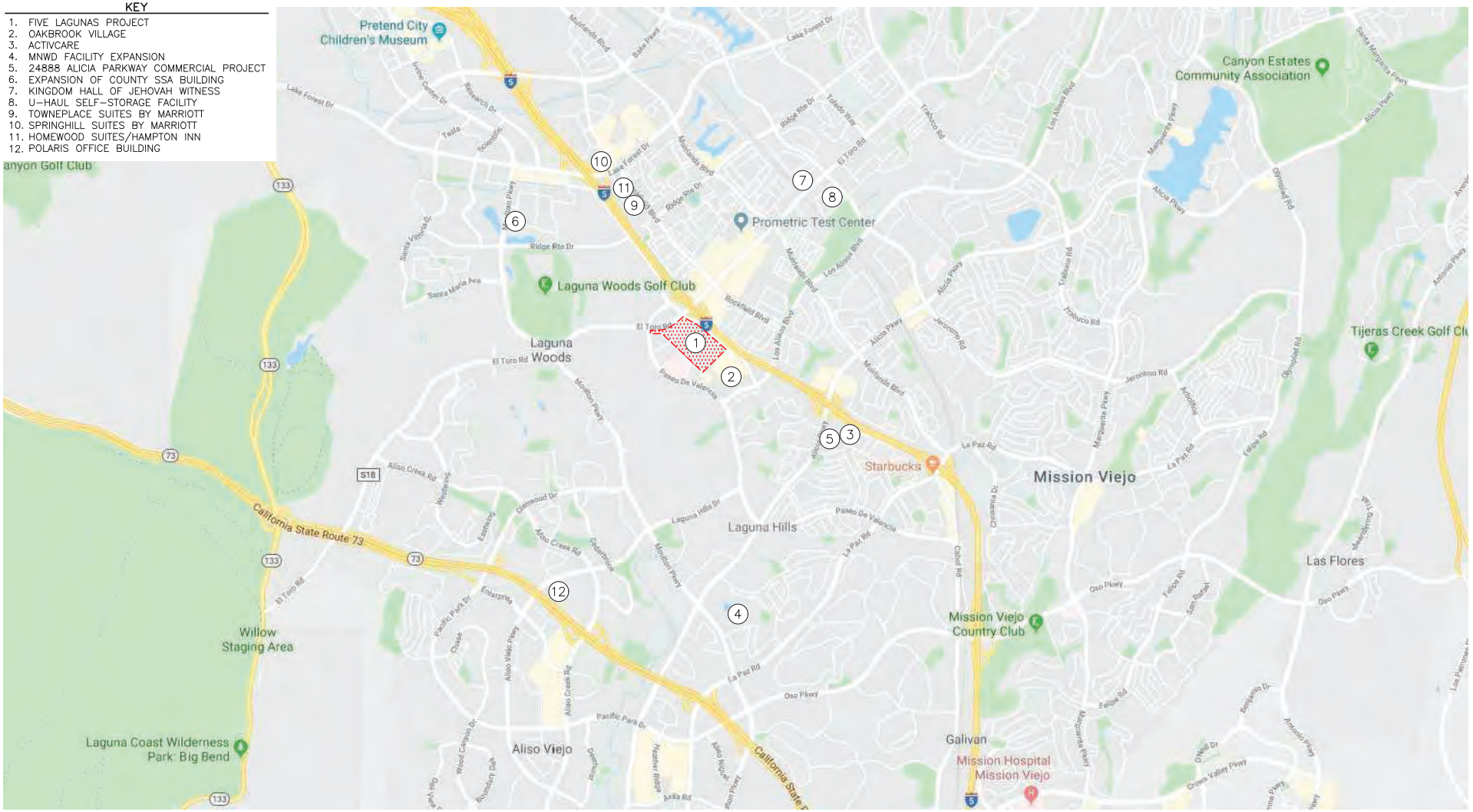
No.	Cumulative Project	Location/Address	Description
City of Laguna Hills			
1.	Five Lagunas	Bound by El Toro Road on the northwest, Avenida de la Carlota on the northeast, Calle de la Louisa on the southwest, and Calle de los Caballeros on the southeast	834,706 Shopping Center 45,890 SF Medical Office 988 DU Multifamily
2.	Oakbrook Village	Avenida de la Carlota, north of Los Alisos Boulevard	200 DU Multi-Family (Mid-Rise) 7,476 SF Retail
3.	ActivCare	24888 Alicia Parkway	72 Bed Elderly Care Housing
4.	MNWD Facility Expansion	26161 Gordon Road	64,000 SF MNWD Facility Expansion
5.	24888 Alicia Pkwy Commercial Project	24888 Alicia Parkway	2,500 SF Taco Bell Restaurant w/ Drive-Thru 2,175 SF Starbucks with Drive-Thru 2,507 SF Plant Power w/ Drive-Thru
6.	Expansion of County SSA Building	23330 Moulton Parkway	12,176 SF Office Expansion (52,212 SF Total)
City of Lake Forest			
7.	Kingdom Hall of Jehovah Witness	23061 & 23071 El Toro Road	Two 3,312 SF (6,624 SF) Religion Institution
8.	U-Haul Self-Storage Facility	Orange Avenue and Jeronimo Road	120,172 SF Storage Building 5,350 SF General Warehouse Building
9.	TownePlace Suites by Marriott	23150 Lake Center Drive	112 Room Hotel
10.	Springhill Suites by Marriott	23600 Rockfield Boulevard	102 Room Hotel
11.	Homewood Suites/Hampton Inn	23021 Lake Center Drive	208 Room Hotel
City of Aliso Viejo			
12.	Polaris Office Building	6 Polaris	42,400 SF Office

[4] Source: City of Laguna Hills, Lake Forest, Aliso Viejo, and Mission Viejo Planning Departments.

TABLE 8
CUMULATIVE PROJECTS TRIP GENERATION FORECAST[5]

	Weekday							Saturday			
	Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
Cumulative Project Description	**2-Way**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**2-Way**	**In**	**Out**	**Total**
1. Five Lagunas[6]	6,434	162	396	558	335	234	569	4,919	240	216	456
2. Oakbrook Village	1,342	22	56	78	62	44	106	1,292	56	57	113
3. ActivCare[7]	187	9	5	14	7	12	19	211	9	10	19
4. MNWD Facility Expansion[8]	288	19	7	26	12	24	36	141	18	16	34
5. 24888 Alicia Pkwy Commercial Project[9]	3,107	102	98	200	77	75	152	3,632	142	138	280
6. Expansion of County SSA Building	119	12	2	14	2	12	14	27	3	3	119
7. Kingdom Hall of Jehovah Witness	46	1	1	2	1	2	3	40	11	7	18
8. U-Haul Self-Storage Facility	190	8	5	13	9	12	21	235	22	15	37
9. TownePlace Suites by Marriott	936	31	22	53	34	33	67	917	45	36	81
10. Springhill Suites by Marriott	853	28	20	48	31	30	61	835	41	32	73
11. Homewood Suites/Hampton Inn	1,739	58	40	98	64	61	125	1,704	84	66	150
12. Polaris Office Building	413	42	7	49	8	41	49	94	12	10	22
Cumulative Projects Trip Generation Forecast	**15,654**	**494**	**659**	**1,153**	**642**	**580**	**1,222**	**14,047**	**683**	**606**	**1,289**

[5] Unless otherwise noted, Source: *Trip Generation*, 10th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2017).
[6] Source: *Traffic Impact Analysis Report for the Addendum to the City of Laguna Hills General Plan Program Environmental Impact Report for Five Lagunas*, prepared by LLG Engineers, dated November 13, 2015.
[7] Source: *ActivCare Laguna Hills Trip Generation Evaluation*, prepared by Urban Crossroads, Inc., dated January 4, 2019.
[8] Source: *Traffic Impact Study Moulton Niguel Water District Site Consolidation*, prepared by LSA, dated May 2017.
[9] Source: *Traffic Impact Analysis for Five Lagunas*, prepared by LLG, November 13, 2015.



n:\4200\2194208 - five lagunas seir, laguna hills\dwg\4208 f-11.dwg LDP 11:03:50 08-27-2020 cervantes

KEY

(#) = CUMULATIVE PROJECT LOCATION

= PROJECT SITE

N NO SCALE

FIGURE 11

LOCATION OF CUMULATIVE PROJECTS

VILLAGE AT LAGUNA HILLS

Attachment B

VMT Screening Form for Residential Portion

CITY OF LAGUNA HILLS
VMT SCREENING FORM FOR LAND USE PROJECTS

This Screening Form acknowledges the City of Laguna Hills requirements for the evaluation of vehicle miles traveled (VMT) under CEQA. The analysis provided in this form should follow the City of Laguna Hills approved VMT Guidelines, dated July 9, 2020.

I. Project Description

Case Number:

Project Name: 24422 Avenida De La Carlota Mixed-Use Project

Project Location: 24422 Avenida De La Carlota, City of Laguna Hills, CA

Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 240 DU senior housing).

(Please attach a copy of the project Site Plan)

Current GP Land Use: Village Commerical **Proposed GP Land Use:** Village Commerical

Current Zoning: Urban Village Specific Plan **Proposed Zoning:** Urban Village Specific Plan

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RTP/SCS Strategies and RHNA Allocation Plan.

II. VMT Screening Criteria

	YES		NO		Attachments:
A. Is the Project 100% affordable housing?	YES		NO	X	
B. Is the Project within 1/2 mile of qualifying transit?	YES		NO	X	
C. Is the Project a local serving land use?	YES		NO	X	
D. Is the Project in a low VMT area?	YES	X	NO		
E. Are the Project's Net Daily Trips less than 500 ADT?	YES		NO	X	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	21.6	VMT/Capita
Citywide Employment VMT =	25.1	VMT/Employee

Project TAZ	VMT Rate for Project TAZ[1]		Type of Project	
1450	18.0	VMT/Capita	Residential:	X
	22.7	VMT/Employee	Non-Residential:	

[1] Base year (2016) projections from OCTAM.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: 778 Average Daily Trips (ADT)

Internal Trip Credit:	YES		NO	X	% Trip Credit:
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:
Affordable Housing Credit:	YES		NO	X	% Trip Credit:
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:

Net Project Trip Generation: 778 Average Daily Trips (ADT) Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?	YES	X	NO	

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?
A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?
If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X

If the Project does not satisfy at least one (1) of the VMT screening criteria AND generates 2,400 or more net daily trips, then additional VMT modeling using OCTAM is required. If the project generates less than 2,400 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	**N/A**	**N/A**
B. Unmitigated Project TAZ VMT Rate:	**N/A**	**N/A**
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	**N/A**	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	**N/A**	**N/A**

F. Is the project presumed to have a less than significant impact with mitigation?

N/A

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	RK Engineering Group Inc.	**Company:**	BSP Oakbrook, LLC
Contact:	Justin Tucker, P.E.	**Contact:**	Matthew Haugen
Address:	1401 Dove Street, Suite 540, Newport Beach, CA	**Address:**	3501 Jamboree Road, Suite 4200, Newport Beach, CA
Phone:	(949) 474-0810	**Phone:**	(949) 219-2329
Email:	jt@rkengineer.com	**Email:**	mhaugen@buchananstreet.com
Date:	3/2/2023	**Date:**	3/2/2023

Approved by:

Laguna Hills Community Development Dept. Date	**Laguna Hills Public Services Dept. Date**

Attachment C

VMT Screening Form for Non-Residential Portion

CITY OF LAGUNA HILLS
VMT SCREENING FORM FOR LAND USE PROJECTS

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Case Number:

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If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RTP/SCS Strategies and RHNA Allocation Plan.

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**	**X**	Attachments:	
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**	**X**	Attachments:	
C. Is the Project a local serving land use?	**YES**		**NO**	**X**	Attachments:	
D. Is the Project in a low VMT area?	**YES**	**X**	**NO**		Attachments:	
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**		**NO**	**X**	Attachments:	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	21.6	VMT/Capita
Citywide Employment VMT =	25.1	VMT/Employee

Project TAZ	**VMT Rate for Project TAZ[1]**		**Type of Project**	
1450	**18.0**	VMT/Capita	Residential:	
	22.7	VMT/Employee	Non-Residential:	**X**

[1] Base year (2016) projections from OCTAM.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: **4,356** **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	**X**	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	**X**	% Trip Credit:	
Affordable Housing Credit:	YES		NO	**X**	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	**X**	Trip Credit:	

Net Project Trip Generation: **4,356** **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?	**YES**	**X**	**NO**	

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?
A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?
If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X

If the Project does not satisfy at least one (1) of the VMT screening criteria AND generates 2,400 or more net daily trips, then additional VMT modeling using OCTAM is required. If the project generates less than 2,400 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	**N/A**	**N/A**
B. Unmitigated Project TAZ VMT Rate:	**N/A**	**N/A**

C. Percentage Reduction Required to Achieve the Citywide Average VMT: **N/A**

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	**N/A**	**N/A**

F. Is the project presumed to have a less than significant impact with mitigation? **N/A**

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	RK Engineering Group Inc.	**Company:**	BSP Oakbrook, LLC
Contact:	Justin Tucker, P.E.	**Contact:**	Matthew Haugen
Address:	1401 Dove Street, Suite 540, Newport Beach, CA	**Address:**	3501 Jamboree Road, Suite 4200, Newport Beach, CA
Phone:	(949) 474-0810	**Phone:**	(949) 219-2329
Email:	jt@rkengineer.com	**Email:**	mhaugen@buchananstreet.com
Date:	3/2/2023	**Date:**	3/2/2023

Approved by:

Laguna Hills Community Development Dept. **Date**	**Laguna Hills Public Services Dept.** **Date**

Appendix F
TRAFFIC STUDY SCOPING AGREEMENT

This letter acknowledges the City of Laguna Hills requirements for traffic impact analysis of the following project. The analysis must follow the City of Laguna Hills Traffic Impact Study Guidelines.

The Traffic Study pertains to which of the following:

- ☐ Access / Internal Circulation / Parking Review (less than 50 peak hour trips or 500 ADT)
- ☑ Project Buildout Traffic Impact Study (50 or more peak hour trips or 500 ADT)
- ☐ Zone Change / General Plan Amendment Traffic Impact Study (more trips than existing zoning / General Plan)
- ☐ Parking Study Only
- ☐ Other: _____

Case Numbers: _____
Project Name: 24422 Avenida De La Carlota Mixed-Use Project
Project Address: 24422 Avenida De La Carlota, City of Laguna Hills, CA
Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 240 DU senior housing.).

Consultant		Developer	
Name:	RK Engineering Group Inc.	Name:	BSP Bristol LLC
Address:	1401 Dove Street, Suite 540	Address:	3501 Jamboree Road, Suite 4200
	Newport Beach, CA		Newport Beach, CA
Telephone:	(949) 474-0810	Telephone:	(949) 219-2329

A. Trip Generation Source: ITE Trip Generation, Latest Edition or other approved source

Current GP Land Use	Village Commerical	Proposed Land Use	Village Commerical
Current Zoning	Urban Village Specific Plan	Proposed Zoning	Urban Village Specific Plan

	Current Trip Generation to be Credited:			Project Trip Generation:			Net Trip Generation:		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Trips	188	34	222	312	111	423	124	77	201
PM Trips	53	181	234	177	359	536	124	178	302

Internal Trip Allowance ☐ Yes ☑ No _____ % Trip Discount
Pass-By Trip Allowance ☐ Yes ☑ No _____ % Trip Discount

The full project trips should be applied to the trips at adjacent study area intersections and project driveways and shall be indicated on a report figure.

B. Trip Geographic Distribution (%): North = 65 % South = 0 % East = 15 % West = 20 %
(attached exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year 2025 Annual Ambient Growth Rate: 1 %
Phase Year(s) 1
Other area projects to be analyzed: To be provided by the City of Laguna Hills.
Model/Forecast methodology ICU Methodology for Signalized Intersections; HCM 7 Methodology for Unsignalized Intersections.

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. Bridger Road / I-5 NB Ramps at El Toro Road
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps
3. Avenida De La Carlota / I-5 SB ramps at El Toro Road
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard
5. Avenida De La Carlota at Los Alisos Boulevard
6. Paseo De Valencia at Los Alisos Boulevard
7. Project Access Driveway 1 at Avenida De La Carlota
8. Project Access Driveway 2 at Avenida De La Carlota
9.
10.
11.
12.
13.
14.

E. Other Jurisdictional Impacts:

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☑ Yes ☐ NO

If so, name of adjacent City Jurisdiction: Laguna Woods, Lake Forest, Mission Viejo

F. Site Plan (please attach reduced copy)

G. Specific issues to be addressed in the Study (To be filled out by the City of Laguna Hills)

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of counts: Please refer to Section G of the attached scoping agreement.

I. Level of Service (LOS)

Acceptable intersection LOS for this study: D or Better

Recommended by:

Justin Tucker, P.E. — 3/3/2023

Consultant's Representative — Date

Approved Traffic Study Specifications:

City of Laguna Hills — Date

24422 Avenida De La Carlota Mixed-Use Project
Phase 2 Traffic Impact Study Scoping Agreement

March 3, 2023

The following provides information on the proposed project, summarizes the analysis scope, parameters, and assumptions for review and approval, and also includes a request for information on items related to the study. RK proposes a two (2) phase scoping process for this study.

The 1st phase, prepared by RK Engineering Group, Inc., dated November 18, 2022, provided the general scope and process for the study. The 2nd Phase (i.e. this document) identifies in detail the specific assumptions (i.e. land uses, etc.) and parameters for the traffic analysis. These include the specific project description, project trip generation and distribution patterns, study area intersections and any special issues that may need to be evaluated such as the required parking for the project.

A. Project Description: The triangle-shaped project site, located at 24422 Avenida De La Carlota, is bound between the I-5 Freeway, Los Alisos Boulevard, and Avenida De La Carlota, in the City of Laguna Hills. The project is located within the Urban Village Specific Plan ("UVSP") area. The project site is currently occupied by an approximately 121,000 square-foot (SF) general/medical office building. The approximately 121,000 SF general/medical office building is currently occupied by approximately 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF).

The project proposes to convert the existing 121,000 SF general/medical-dental office building into 100% medical-dental office and add 240 senior adult (multifamily) dwelling units.

Access to the project site is currently provided and is proposed to continue to be provided via:

- One (1) unsignalized right-in/right-out driveway (i.e., Project Access No. 1) along Avenida De La Carlota; and

- One (1) unsignalized full-access driveway (i.e., Project Access No. 2) located along Avenida De La Carlota.

Development intensity within the UVSP is regulated based on the remaining vehicle trip capacity within the UVSP as opposed to land use type or project size. As such, applicants for any new or expanded project within the plan area must prepare a traffic study to

document that project-generated A.M. and P.M. peak hour trips will not exceed the capacity of the UVSP's circulation network (i.e., trip budget caps).

As such, RK will utilize the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, as it provides the most recent analysis within the UVSP. As shown at the bottom of Table 6 of the LLG TIA, the current remaining trip budget for the UVSP area is 216 AM peak hour trips and 2,590 PM peak hour trips. Relevant pages from the LLG TIA are included in Attachment A located at the end of this scoping agreement.

If the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, is not the most recent UVSP traffic analysis, the remaining trip budget would likely be different. RK will coordinate with City staff to ensure the correct trip budget is utilized.

The project is planned to open in 2025 and will be evaluated in one phase.

Exhibit A shows the location map of the proposed project. Exhibit B shows the proposed project site plan.

B. Project Trip Generation: Trip generation represents the amount of traffic that is attracted and produced by a development.

Trip generation is typically estimated based on the trip generation rates from the latest *Institute of Transportation Engineers (ITE) Trip Generation Manual.* The latest and most recent version (11th Edition, 2021) ITE Manual will be utilized in the traffic study. This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

An existing trip credit will be applied to the currently unused UVSP trip budgets to account for the existing 121,000 SF general/medical office building which is currently occupied by 80% general office (i.e., 96,800 SF) and 20% medical office (i.e., 24,200 SF). Table 1 shows the ITE trip generation rates utilized for the existing general/medical office building.

The project proposes to convert the existing 121,000 SF general/medical-dental office building into 100% medical-dental office and add 240 senior adult (multifamily) dwelling units. As such, ITE Land Use 720: Medical-Dental Office and ITE Land Use 252: Senior Adult Housing (Multifamily) trip rates are the most appropriate rates for these land uses. Table 1 also shows the ITE trip generation rates utilized for the proposed project.

Table 2 shows the ITE trip generation for the existing general/medical office building and for the proposed project utilizing the trip generation rates shown in Table 1.

As shown in Table 2, the existing general/medical office building currently generates approximately 1,920 daily trips, which include approximately 222 AM peak hour trips and approximately 234 PM peak hour trips. When these trips are added to the currently unused UVSP trip budgets (i.e., 216 AM peak hour trips and 2,590 PM peak hour trips), the available UVSP trip budgets are increased to 438 AM peak hour trips and 2,824 PM peak hour trips.

As also shown in Table 2, the proposed project is forecast to generate approximately 5,134 daily trips which include approximately 423 AM peak hour trips and 536 PM peak hour trips.

When these trips are deducted from the available UVSP trip budget (i.e. 438 AM peak hour trips and 2,824 PM peak hour trips), the remaining available UVSP trip budget is 15 AM peak hour trips and 2,288 PM peak hour trips. **As such, the final development plan will not exceed the available trip budget caps.**

C. Project Trip Distribution: Exhibit C-1 shows the project's outbound trip distribution pattern and Exhibit C-2 shows the project's inbound trip distribution pattern.

D. Study Intersections: The analysis will evaluate the following eight (8) study intersections:

1. Bridger Road / I-5 NB Ramps at El Toro Road;
2. Avenida De La Carlota at Paseo De Valencia / I-5 SB Ramps;
3. Avenida De La Carlota / I-5 SB ramps at El Toro Road;
4. Rockfield Boulevard / Fordview at Los Alisos Boulevard;
5. Avenida De La Carlota at Los Alisos Boulevard;
6. Paseo De Valencia at Los Alisos Boulevard;
7. Project Access Driveway 1 at Avenida De La Carlota; and
8. Project Access Driveway 2 at Avenida De La Carlota.

E. Analysis Scenarios: The analysis will evaluate traffic conditions for the following scenarios during the weekday AM (7:00 AM to 9:00 AM) and weekday PM (4:00 PM to 6:00 PM) peak hour conditions:

- Existing Conditions;
- Existing Plus Project Conditions;
- Project Opening Year (Year 2025) Without Project Conditions; and
- Project Opening Year (Year 2025) Plus Project Conditions.

F. Traffic Analysis Parameters: The analysis will utilize the following parameters:

- Vistro 2022 analysis software.
- Signalized intersections will be analyzed via the Intersection Capacity Utilization (ICU) methodology.
- Unsignalized intersections will be analyzed via the Highway Capacity Manual 7th Edition (HCM 7) methodology.
- Intersection LOS parameters as identified within the *City of Laguna Hills Traffic Study Guidelines*, City of Laguna Hills, California, dated August 31, 2010, prepared by RK Engineering Group Inc.

G. Existing Traffic Counts: It is RK's understanding that the Village at Laguna Hills Traffic Impact Analysis, dated September 1, 2020, prepared by Linscott, Law & Greenspan (LLG) Engineers, is the most recent UVSP traffic analysis.

In order to account for traffic associated with the redevelopment of the Laguna Hills Mall, which is located in close proximity to this proposed project, RK proposes to utilize the existing traffic volumes from the Village at Laguna Hills TIA (September 1, 2020, LLG). Additionally, there is on-going road construction along Avenida De La Carlota, El Toro Road, and the I-5 Freeway Ramps in the vicinity of the project that may affect new traffic count volumes.

LLG conducted traffic counts during the weekday AM and PM peak period while local schools were still in session (7:00 to 9:00 AM, 4:00 to 6:00 PM) in September 2019.

LLG explains that approximately 309,000 SF GLA of mall space was not occupied on the dates that traffic counts were conducted. To address this, and to account for trips

corresponding with the mall's entitled and historically occupied square footage, LLG estimated trip generation for the 309,000 SF GLA based on the application of ITE rates/equations, and resulting trips were then assigned to the street system and added to the raw traffic counts.

Figures 4A through 5D from the LLG Village at Laguna Hills TIA (September 1, 2020) illustrate the existing weekday AM and weekday PM peak hour traffic volumes, respectively, and are also contained at the end of this scoping agreement in Attachment A. RK proposes to utilize these existing volumes for the proposed eight (8) study intersections.

RK proposes to utilize an existing year of 2023. RK will grow these 2019 traffic volumes from the LLG study at one percent (1%) per year to establish baseline existing (2023) conditions (i.e., 4% total growth).

It should be noted that RK will include the net increase in trips from the Village at Laguna Hills development as a cumulative project under opening year conditions (i.e., 119 AM peak hour trips & negative 910 PM peak hour trips, see Table 6 in Attachment A).

H. Project Opening Year Conditions Traffic Volumes: Background (project opening year) traffic volumes will be derived by applying an annual growth rate of one percent (1%) per year to the Existing (Year 2023) traffic volumes and adding traffic from any cumulative developments located within one and one-half mile of the project site.

RK will utilize the list of cumulative projects from the LLG Village at Laguna Hills TIA (September 1, 2020), plus any additional cumulative projects not already accounted in the previous LLG study. Table 7, Table 8, and Figure 11 from the LLG study are presented in Attachment A located at the end of this scoping agreement.

I. VMT Screening Analysis: The City of Laguna Hills has adopted methodologies and recommendations for VMT assessment as contained within the City of Laguna Hills Vehicles Miles Traveled Analysis Guidelines under the *California Environment Quality Act and General Plan Development Review Traffic Study Guidelines*, dated August 2021. In accordance with the City of Laguna Hills VMT guidelines, there are five (5) types of screening that lead agencies can be applied to effectively screen projects from project-level assessment. These are summarized below:

1. 100% Affordable Housing
2. Located within ½ mile of Qualifying Transit
3. Local Serving Land Use

4. Low VMT Area

5. Net Daily Trips Less Than 500 ADT

VMT Screening Type 4: Low VMT Area

Per the City of Laguna Hills VMT guidelines, Projects located in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Residential projects shall utilize and compare the TAZ VMT/capita rate to the citywide average of 21.6 VMT/capita; non-residential projects shall utilize and compare the TAZ VMT/employee rate to the citywide average of 25.1 VMT per employee. If the project is located in a Traffic Analysis Zone (TAZ) with VMT per capita or VMT per employee that is less than or equal to the citywide average of VMT per capita and VMT per employee, then the project is considered to be located in a low VMT area and can be presumed to have a less than significant impact on VMT. OCTAM is the preferred traffic model for screening and analyzing VMT in the City of Laguna Hills.

The City of Laguna Hills provides a VMT screening form that evaluates project land uses for VMT under CEQA. The VMT screening form requires the input of the project traffic analysis zone (TAZ) for VMT evaluation. The Orange County Transportation Analysis Model (OCTAM) TAZ map is provided in Exhibit D. As shown in Exhibit D, the project site is located within TAZ 1450.

Since the future project development plan is anticipated to include a medical-dental office as well as a residential component, the City of Laguna Hills VMT screening form has been prepared for both the residential and non-residential land uses and are included as Attachment B and Attachment C, respectively.

Based on the results of the City of Laguna Hills VMT screening form in Attachment B and Attachment C, the proposed project's residential VMT per capita (i.e. 18.0 VMT per capita) and nonresidential VMT per employee (i.e. 22.7 VMT per employee) are below the Citywide averages of 21.6 VMT per capita and 25.1 VMT per employee, respectively.

As a result, the project can be assumed to have a less than significant impact on VMT under CEQA and no further VMT analysis is required.

J. Performance Criteria: The City of Laguna Hills level of service standard for signalized and unsignalized intersections is LOS D.

K. Significant Impact Criteria:

For signalized intersections, a significant impact is identified when an intersection or roadway segment is already operating at an ICU or V/C ratio at or below 0.900 and the project causes the level to exceed 0.900 by an impact equal to or greater than 0.010. Furthermore, if an intersection or roadway segment is already operating at a LOS E or F, any ICU or V/C ratio impact equal to or greater than 0.010 would be considered a significant impact by the project.

For unsignalized intersections, utilizing the HCM 7 methodology, a significant impact is identified when an intersection is operating at a LOS E or F and the project causes any increase in delay.

L. Request for Information: Please provide information on the following for use in the traffic study:

- Confirmation of utilization of appropriate trip budget caps;
- Information on cumulative projects that need to be included in the traffic analysis (location, land use type(s), and land use quantities); and
- Avenida De La Carlota Street Improvement Plans, El Toro Freeway Interchange Improvement Plans, and/or any additional future roadway and circulation system modifications/improvements that are planned within the study area and would potentially affect the analysis.

If you have any questions, or would like further review, please call us at (949) 474-0809.

Sincerely,

RK ENGINEERING GROUP, INC.

Justin Tucker, P.E.
Principal Engineer

Attachments

Approved by:

_____

City of Laguna Hills

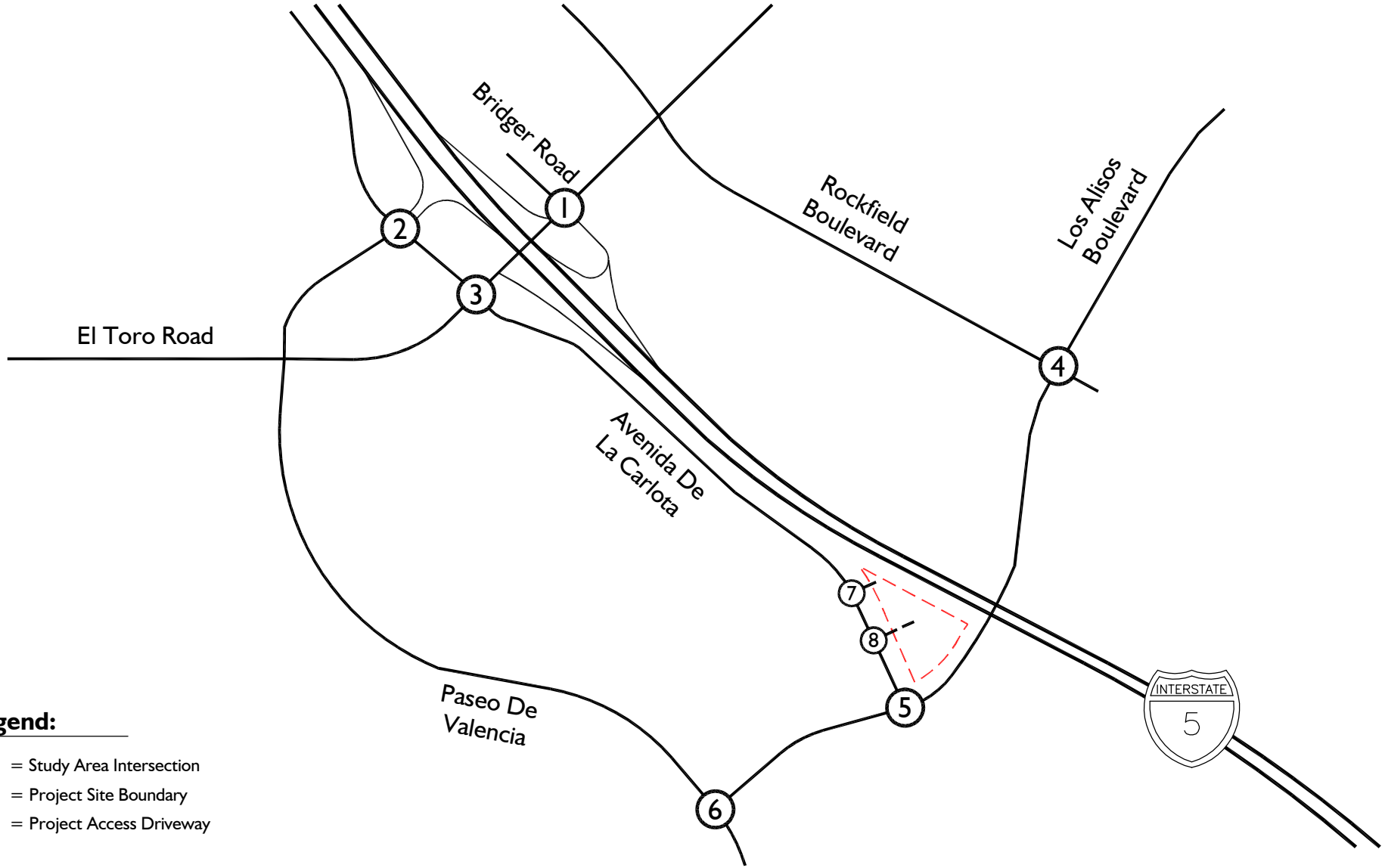
_____

Date

Exhibits

Exhibit A

Location Map



Legend:

① = Study Area Intersection

- - - = Project Site Boundary

— — — = Project Access Driveway

N

RK engineering group, inc.

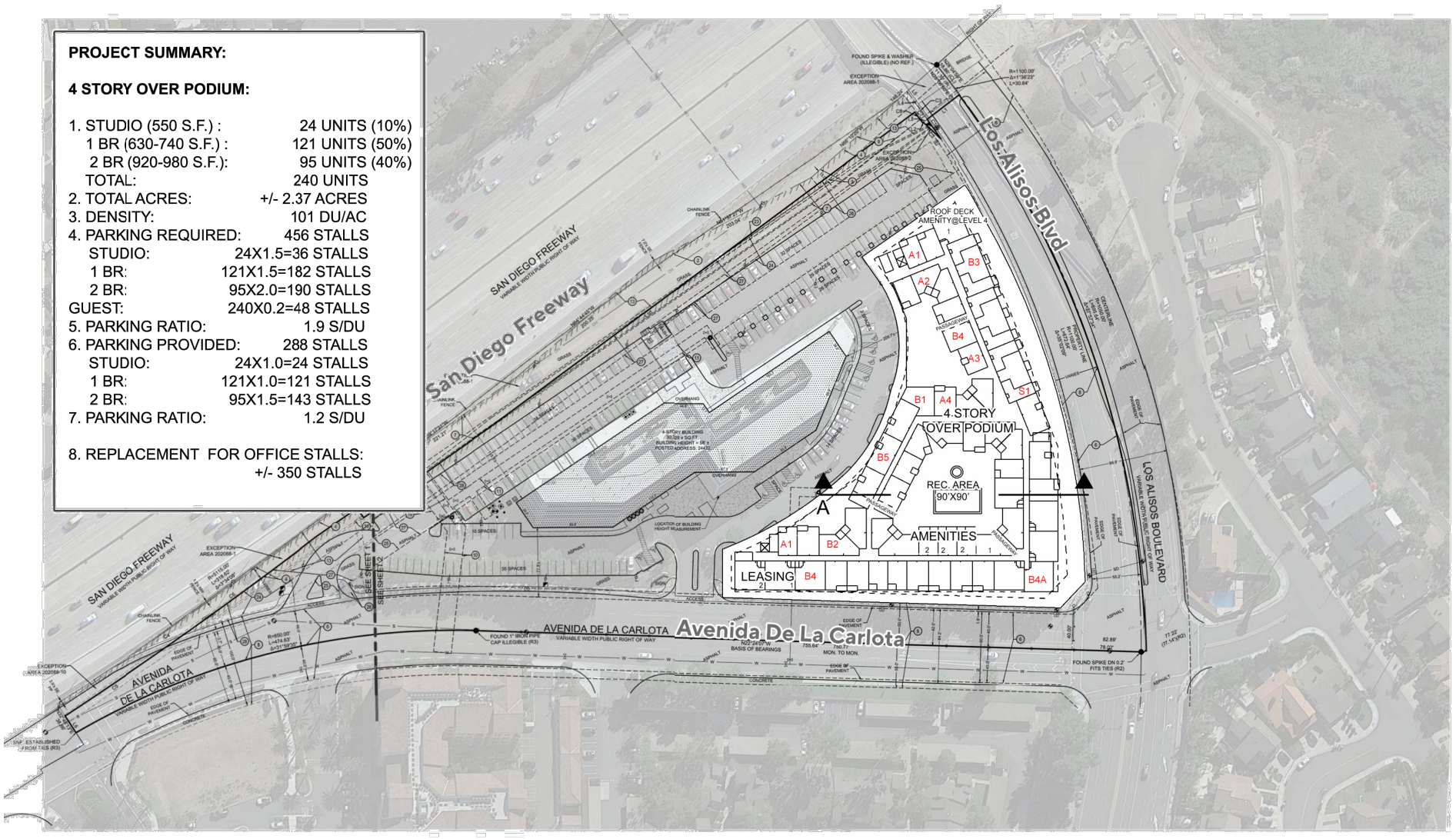
Exhibit B

Site Plan

PROJECT SUMMARY:

4 STORY OVER PODIUM:

1. STUDIO (550 S.F.) :	24 UNITS (10%)
1 BR (630-740 S.F.) :	121 UNITS (50%)
2 BR (920-980 S.F.):	95 UNITS (40%)
TOTAL:	240 UNITS
2. TOTAL ACRES:	+/- 2.37 ACRES
3. DENSITY:	101 DU/AC
4. PARKING REQUIRED:	456 STALLS
STUDIO:	24X1.5=36 STALLS
1 BR:	121X1.5=182 STALLS
2 BR:	95X2.0=190 STALLS
GUEST:	240X0.2=48 STALLS
5. PARKING RATIO:	1.9 S/DU
6. PARKING PROVIDED:	288 STALLS
STUDIO:	24X1.0=24 STALLS
1 BR:	121X1.0=121 STALLS
2 BR:	95X1.5=143 STALLS
7. PARKING RATIO:	1.2 S/DU
8. REPLACEMENT FOR OFFICE STALLS:	+/- 350 STALLS



N

Exhibit C-1

Outbound Project Trip Distribution

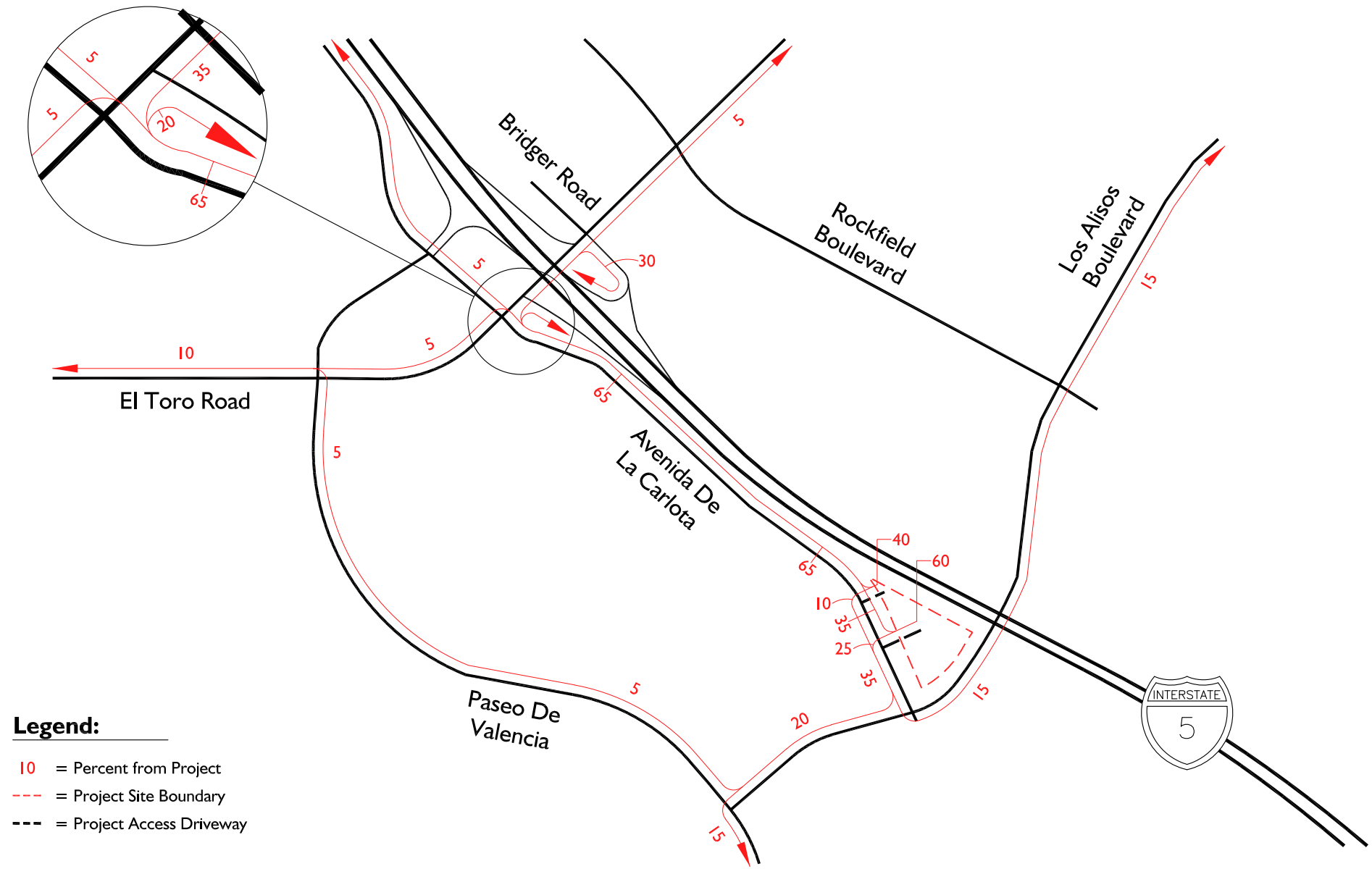
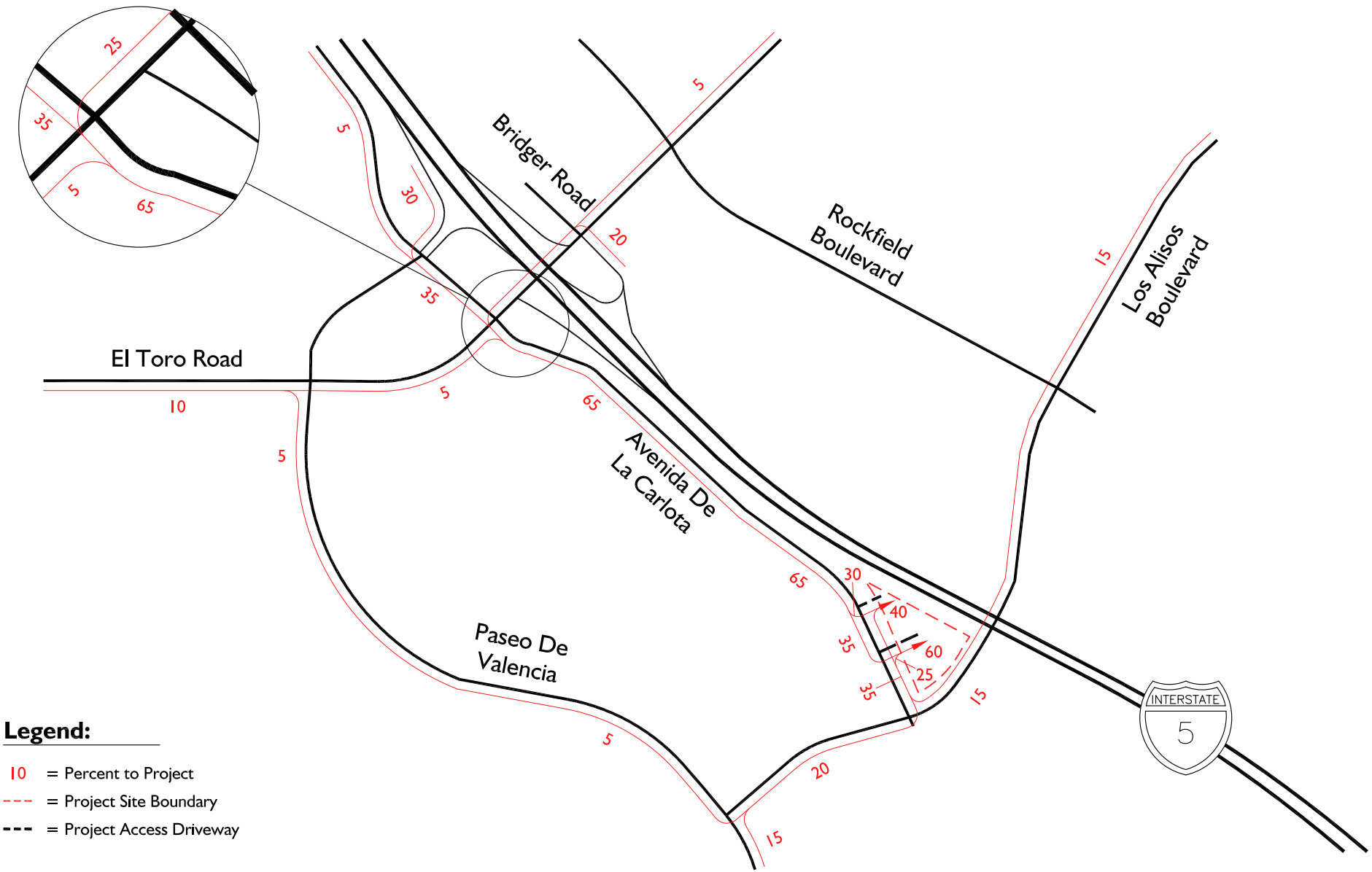


Exhibit C-2

Inbound Project Trip Distribution



Legend:

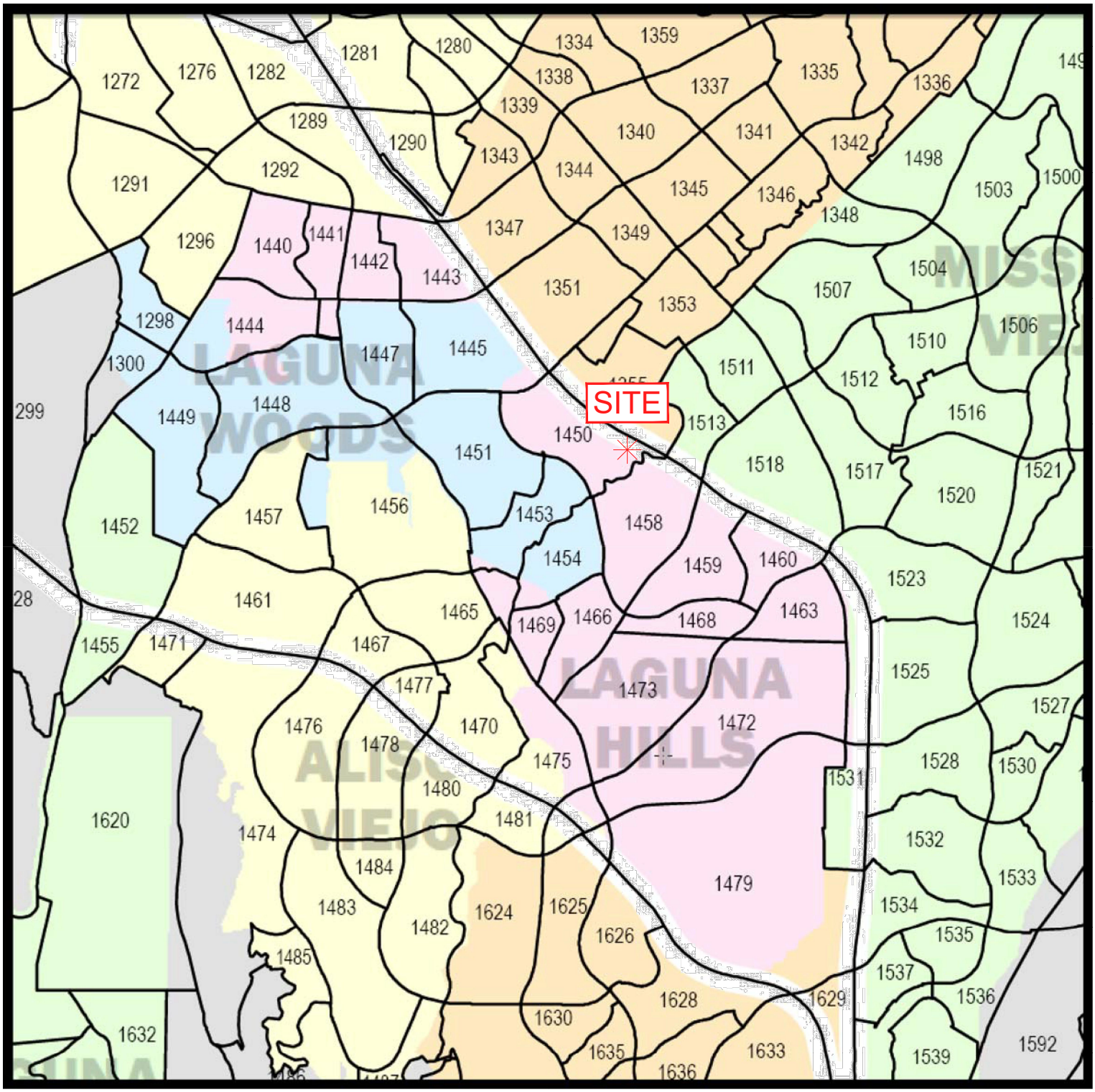
10 = Percent to Project

--- = Project Site Boundary

--- = Project Access Driveway

Exhibit D

OCTAM TAZ Map



Tables

Table 1

ITE Trip Generation Rates[1]

Land Use	ITE Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Senior Adult Housing (Multifamily)	252	DU	34%	66%	0.20	56%	44%	0.25	3.24
General Office Building	710	TSF	88%	12%	1.52	17%	83%	1.44	10.84
Medical-Dental Office Building - Stand Alone	720	TSF	79%	21%	3.10	30%	70%	3.93	36.00

[1] Source: *ITE Trip Generation Manual* (11th Edition, 2021).

[2] DU = Dwelling Unit
TSF = Thousand Square Feet

Table 2
Project Trip Generation

Land Use (ITE Code)	Units[2]	Quantity	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing Land Use									
Oakbrook Laguna Hills (General Office Portion) (710) [A]	TSF	96.8	129	18	147	24	115	139	1,049
Oakbrook Laguna Hills (Medical Office Portion) (720) [A]	TSF	24.2	59	16	75	29	66	95	871
Existing Land Use Trip Generation [A]			**188**	**34**	**222**	**53**	**181**	**234**	**1,920**
Proposed Land Use									
Medical-Dental Office (100% of Existing Building) (720)	TSF	121	296	79	375	143	333	476	4,356
Senior Adult Housing (Multifamily) (252)	DU	240	16	32	48	34	26	60	778
Total Proposed Project Trip Generation [B]			**312**	**111**	**423**	**177**	**359**	**536**	**5,134**
Urban Village Specific Plan (UVSP) Trip Budgets									
Urban Village Specific Plan (UVSP) Trip Budgets[3] [C]			--	--	216	--	--	2,590	--
Unused UVSP Trip Budgets (After Removal of Existing Land Uses) [C] + [A]			**--**	**--**	**438**	**--**	**--**	**2,824**	**--**
Unused UVSP Trip Budgets (After Construction of Proposed Land Uses) [C] + [A] - [B]			**--**	**--**	**15**	**--**	**--**	**2,288**	**--**
Total Net Trip Generation (Proposed Land Uses vs. Existing Land Uses) [B] - [A]			**124**	**77**	**201**	**124**	**178**	**302**	**3,214**

[1] Source: *ITE Trip Generation Manual* (11th Edition, 2021).

[2] DU = Dwelling Unit
TSF = Thousand Square Feet

[3] Source: *Traffic Impact Analysis for the Village at Laguna Hills Project* , dated September 1, 2020, prepared by LLG Engineers. As described in the UVSP, development intensity within the UVSP is regulated by trip budget limits. As presented in the Village at Laguna Hills TIA, which is the latest development activity within the UVSP area, the available trip budget is 216 trips in the AM peak hour and 2,590 trips in the PM peak hour. It should be noted that these trip budgets are based on the latest Village at Laguna Hills TIA which may not be the most recent analysis conducted within the UVSP area. As such, these results are subject to change after coordination with City staff.

Attachments

Attachment A

Relevant Pages from the *Village at Laguna Hills Traffic Impact Analysis*, dated September 1, 2020, prepared by LLG Engineers

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS FOR THE VILLAGE AT LAGUNA HILLS PROJECT

Laguna Hills, California
September 1, 2020

Prepared for:

MERLONE GEIER PARTNERS, LLC
3580 Carmel Mountain Road, Suite 260
San Diego, CA 92130

DUDEK
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www.llgengineers.com

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

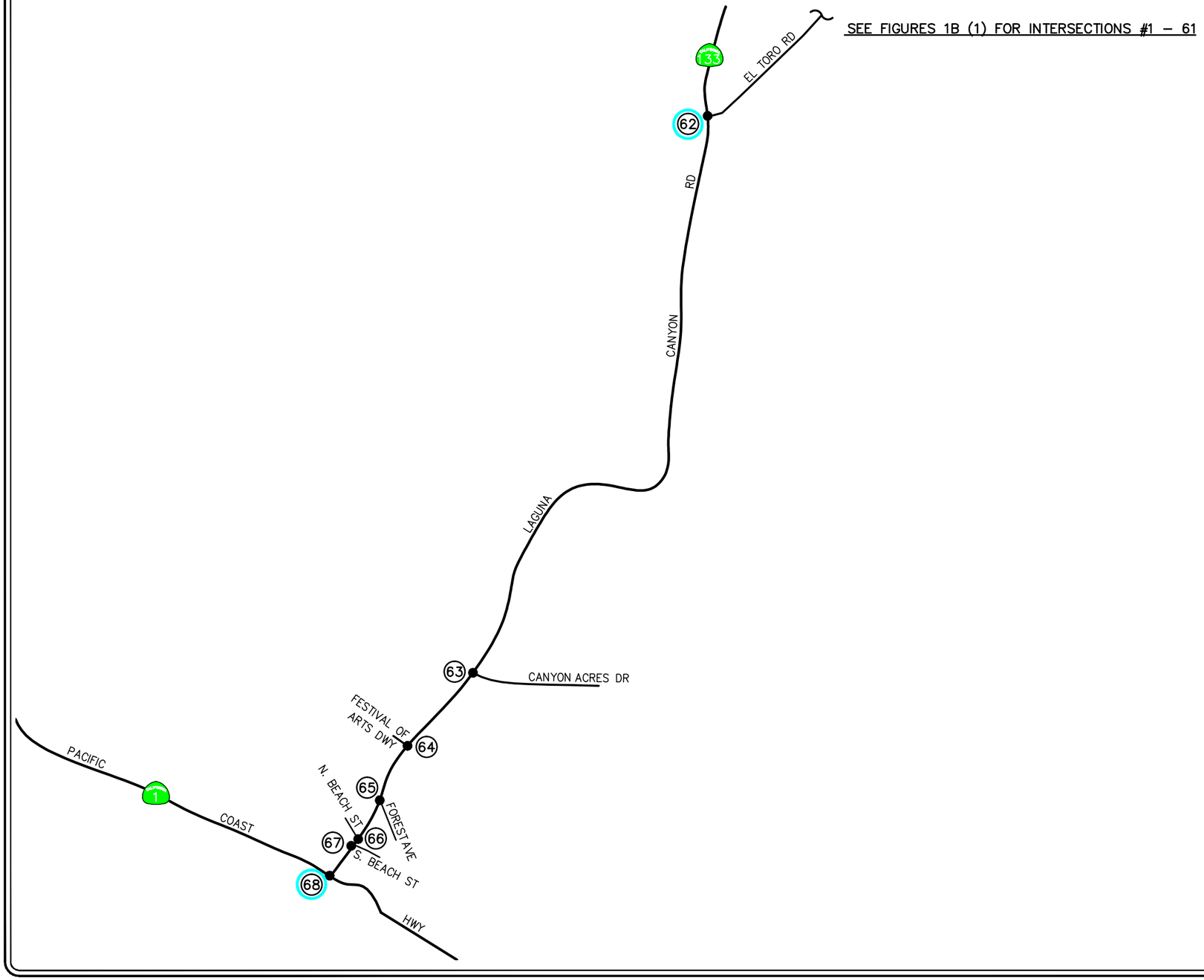
KEY

- (#) = INTERSECTION MEETS 50 PEAK-HOUR TRIP THRESHOLD
- (#) = INTERSECTION DOES NOT MEET 50 PEAK-HOUR TRIP THRESHOLD, BUT ANALYZED ANYWAY
- = PROJECT SITE
- (#) = CMP INTERSECTION
- (#) = CALTRANS INTERSECTION

FIGURE 1B (1)

INTERSECTIONS MEETING STUDY CRITERIA

VILLAGE AT LAGUNA HILLS



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N NO SCALE

KEY

(#) = INTERSECTION MEETS 50 PEAK-HOUR TRIP THRESHOLD

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= PROJECT SITE

(#) = CMP INTERSECTION

(#) = CALTRANS INTERSECTION

FIGURE 1B (2)

INTERSECTIONS MEETING STUDY CRITERIA

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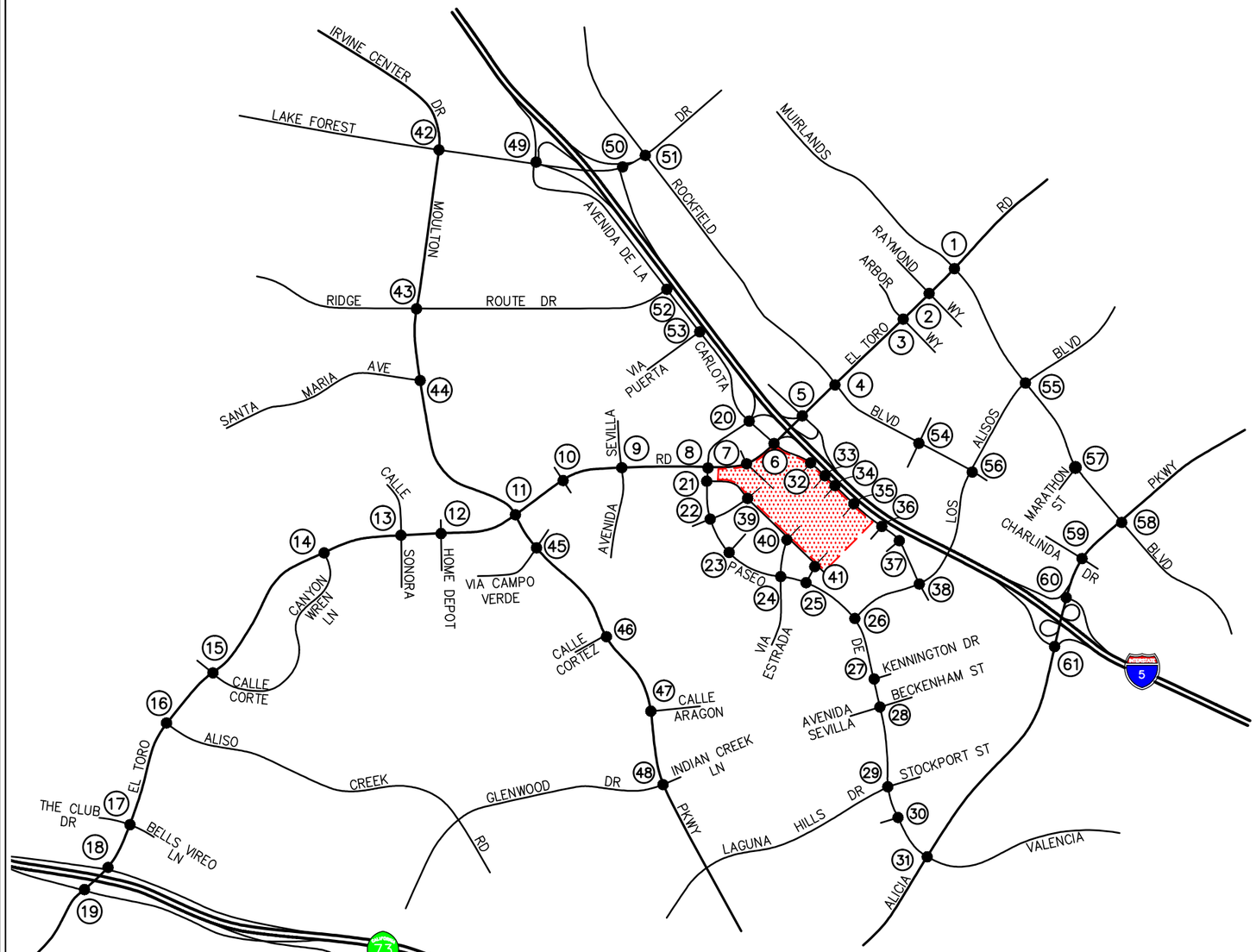
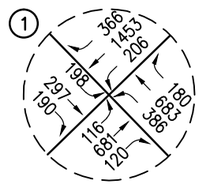
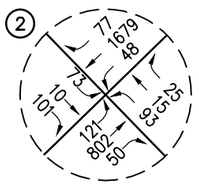
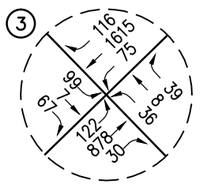




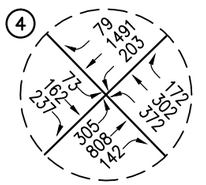
MUIRLANDS BLVD @
EL TORO RD



RAYMOND WY @
EL TORO RD



ARBOR WY @
EL TORO RD



ROCKFIELD BLVD @
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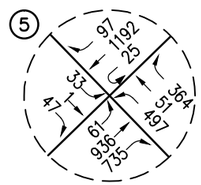
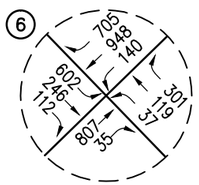
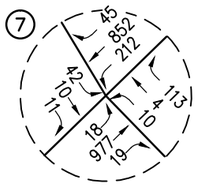


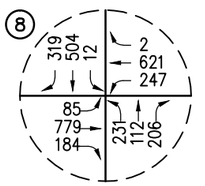
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



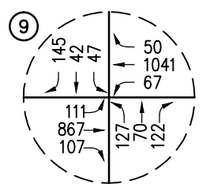
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



REGIONAL CENTER DR @
EL TORO RD



PASEO DE VALENCIA @
EL TORO RD



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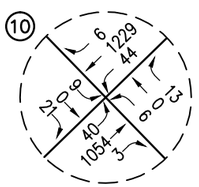
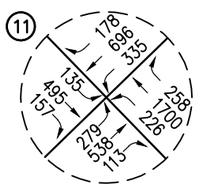
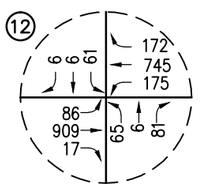
EL TORO RD



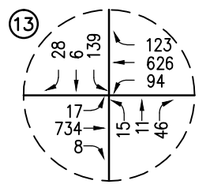
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



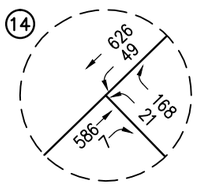
MOULTON PKWY @
EL TORO RD



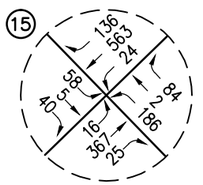
HOME DEPOT/TOWN CENTRE @
EL TORO RD



CALLE SONORA @
EL TORO RD



CANYON WREN LN @
EL TORO RD



CALLE CORTA @
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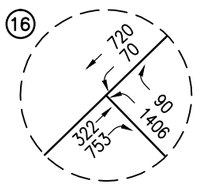
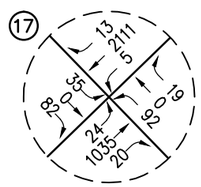
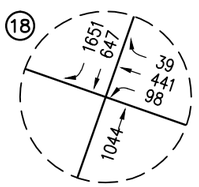


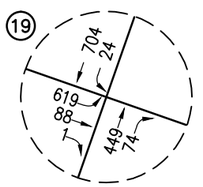
ALISO CREEK RD @
EL TORO RD



THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
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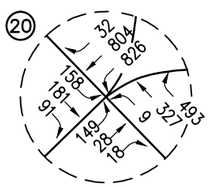

AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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KEY

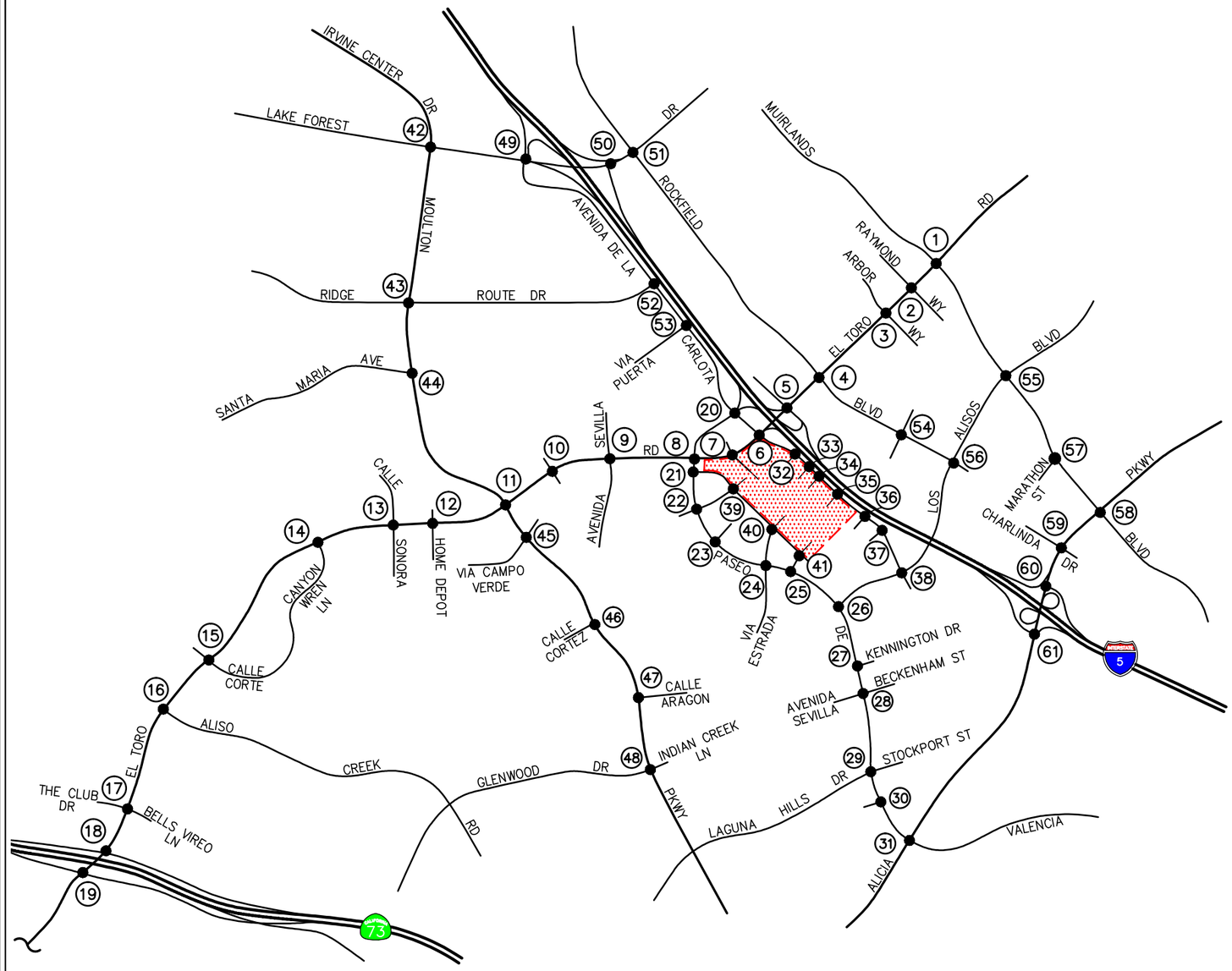
(#) = STUDY INTERSECTION

= PROJECT SITE

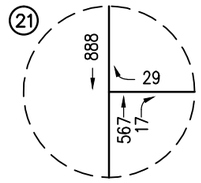
FIGURE 4A

EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

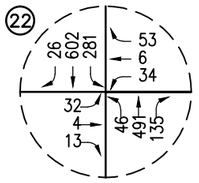
VILLAGE AT LAGUNA HILLS



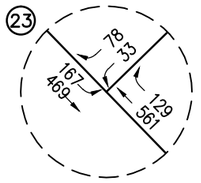
SEE FIGURE 4D FOR INTERSECTIONS #62 – 68



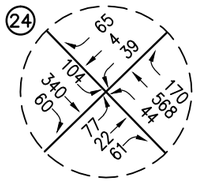
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



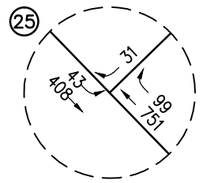
PASEO DE VALENCIA @ CALLE DE LA PLATA



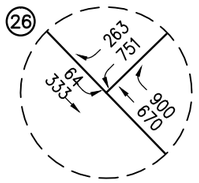
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



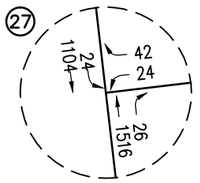
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



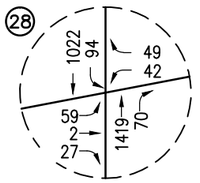
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



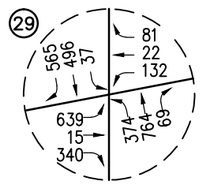
PASEO DE VALENCIA @ LOS ALISOS BLVD



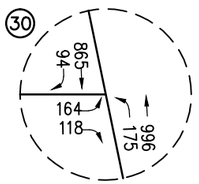
PASEO DE VALENCIA @ KENNINGTON DR



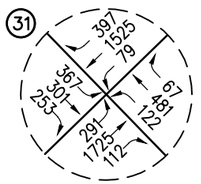
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



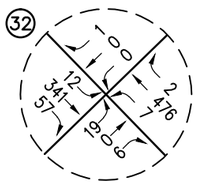
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



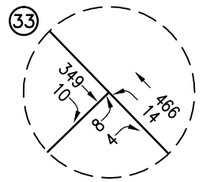
PASEO DE VALENCIA@ HAWK HWY



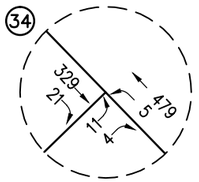
PASEO DE VALENCIA @ ALICIA PKWY



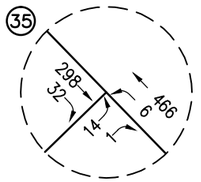
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



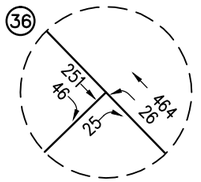
AVENIDA DE LA CARLOTA @ MALL DWY 1



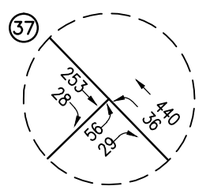
AVENIDA DE LA CARLOTA @ MALL DWY 2



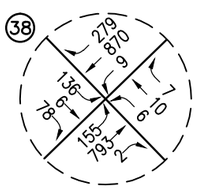
AVENIDA DE LA CARLOTA @ MALL DWY 3



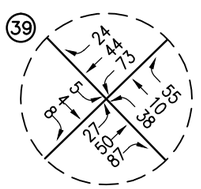
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



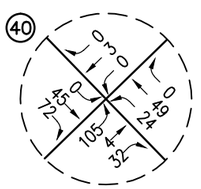
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

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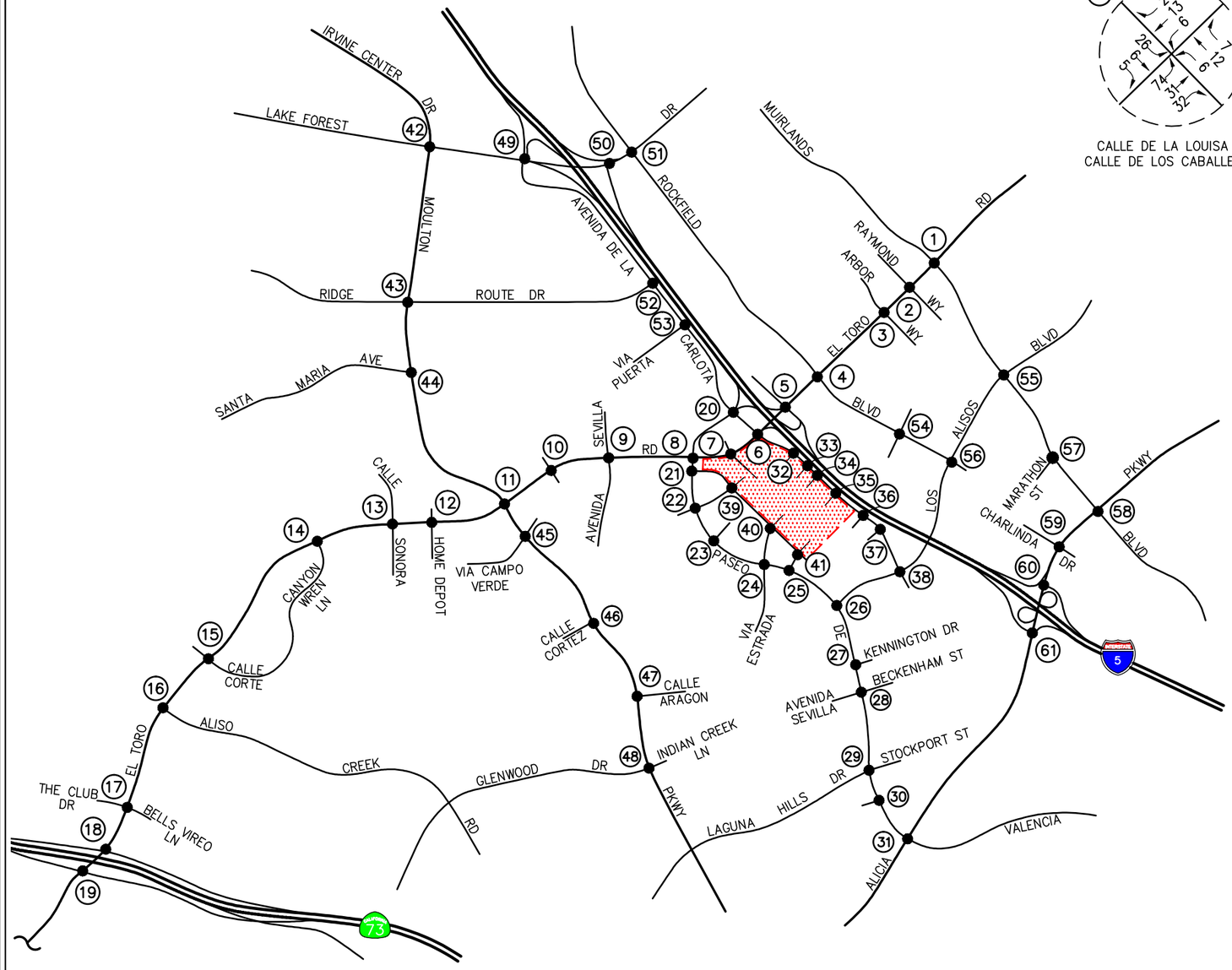
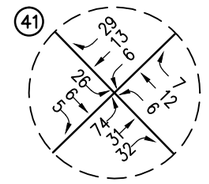
= PROJECT SITE

FIGURE 4B

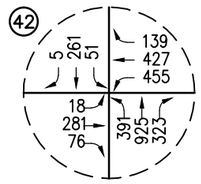
EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

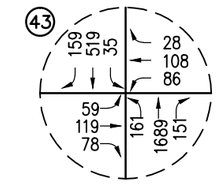




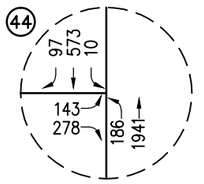
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



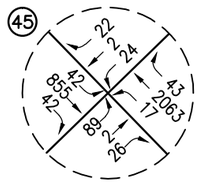
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



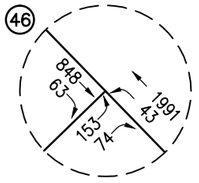
MOULTON PKWY @
RIDGE ROUTE DR



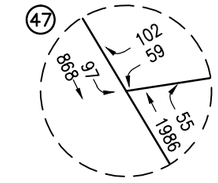
MOULTON PKWY @
SANTA MARIA AVE



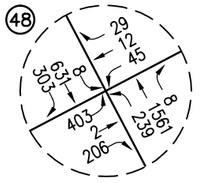
MOULTON PKWY @
VIA CAMPO VERDE



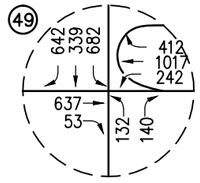
MOULTON PKWY @
CALLE CORTEZ



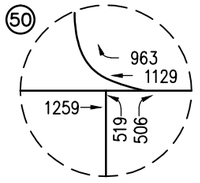
MOULTON PKWY @
CALLE ARAGON



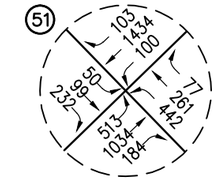
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



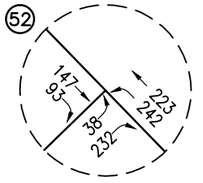
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



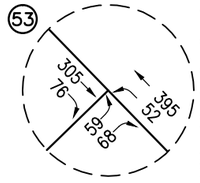
I-5 NB RAMPS @
LAKE FOREST DR



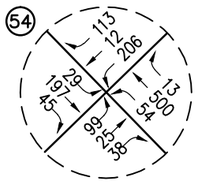
ROCKFIELD BLVD @
LAKE FOREST DR



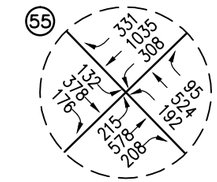
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



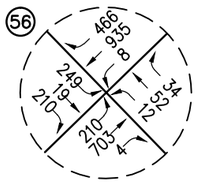
AVENIDA DE LA CARLOTA @
VIA PUERTA



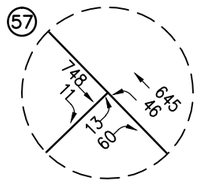
ROCKFIELD BLVD @
LANDISVIEW AVE



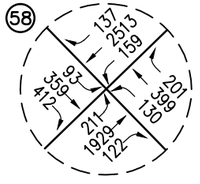
MUIRLANDS BLVD @
LOS ALISOS BLVD



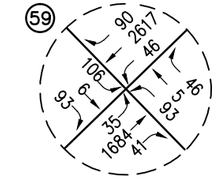
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



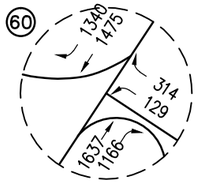
MUIRLANDS BLVD @
MARATHON ST



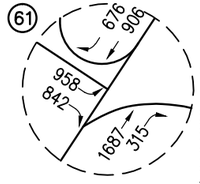
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f4-c.dwg LDP 10:24:59 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

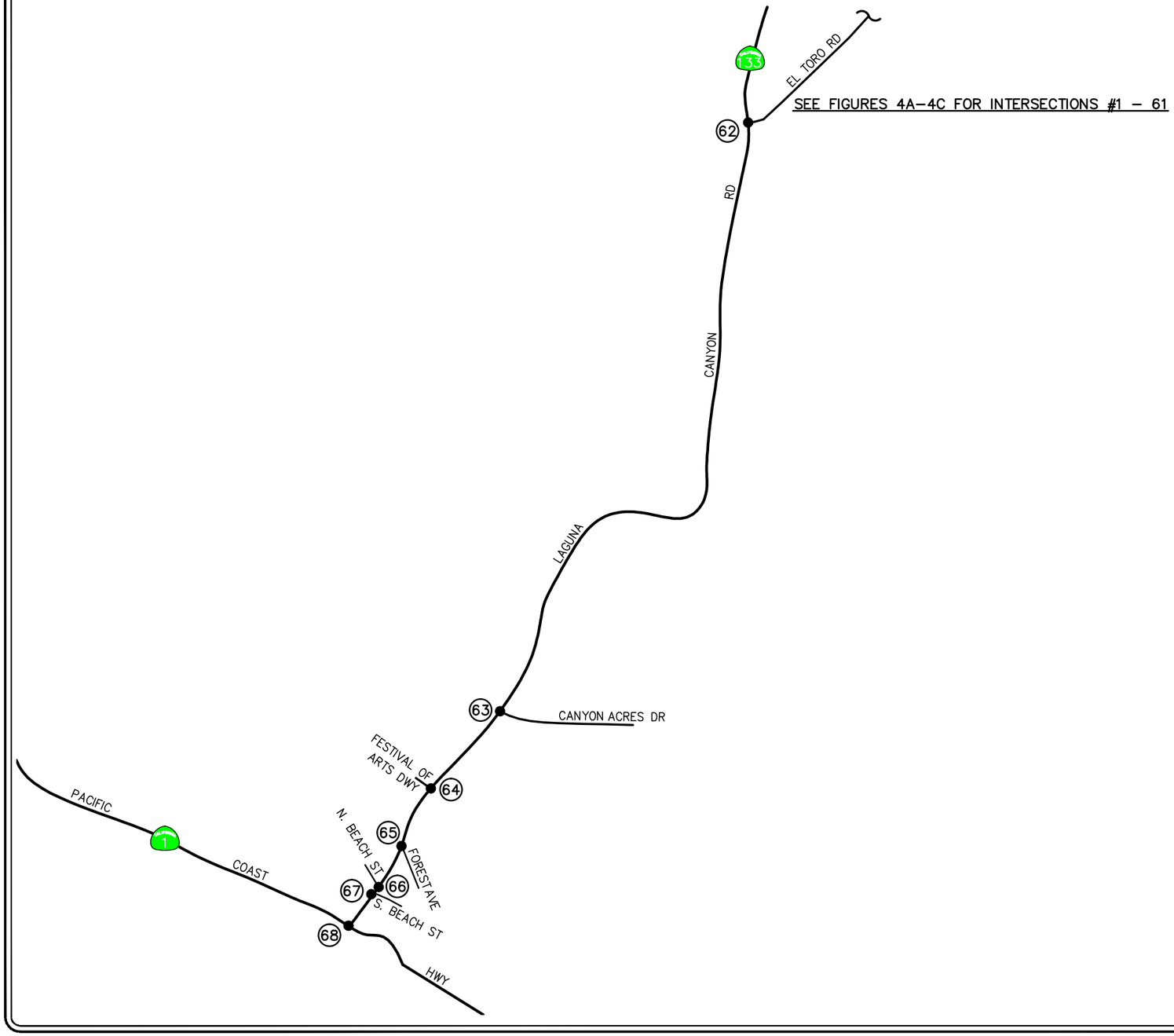
(#) = STUDY INTERSECTION

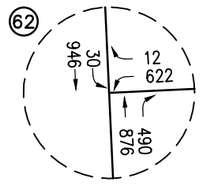
= PROJECT SITE

FIGURE 4C

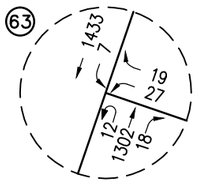
EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

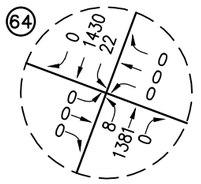




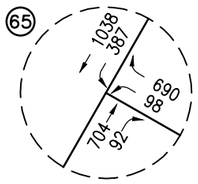
LAGUNA CANYON RD @
EL TORO RD



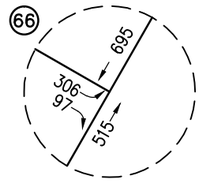
LAGUNA CANYON RD @
CANYON ACRES DR



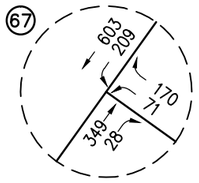
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



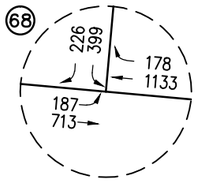
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

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N NO SCALE

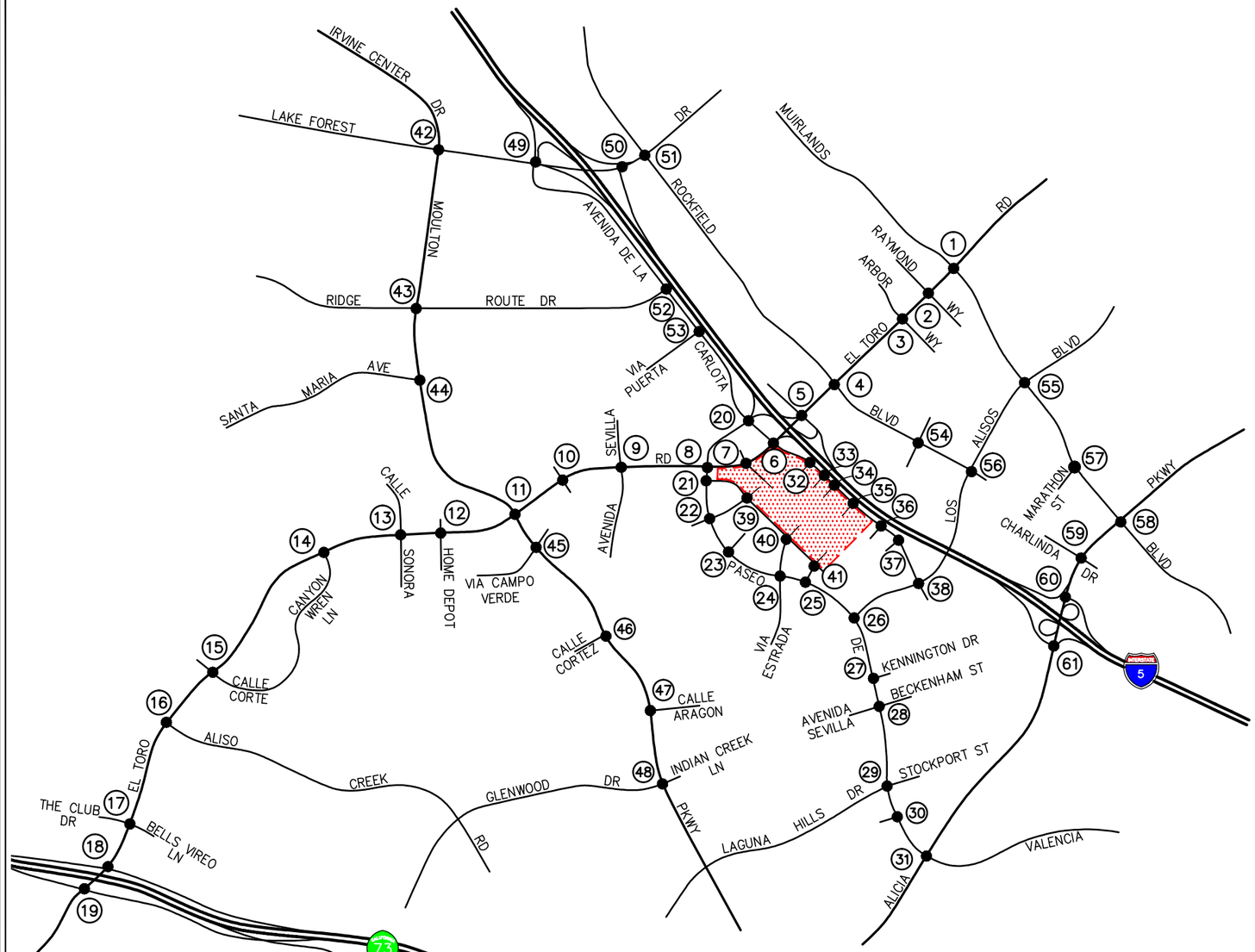
KEY

(#) = STUDY INTERSECTION

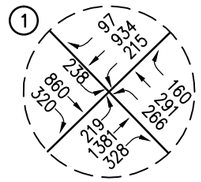
FIGURE 4D

EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

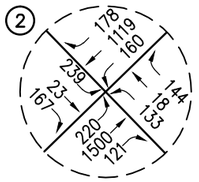
VILLAGE AT LAGUNA HILLS



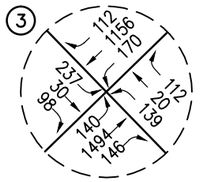
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



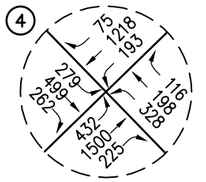
MUIRLANDS BLVD @
EL TORO RD



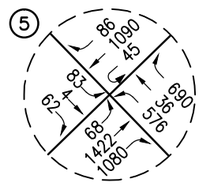
RAYMOND WY @
EL TORO RD



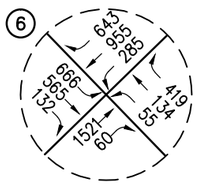
ARBOR WY @
EL TORO RD



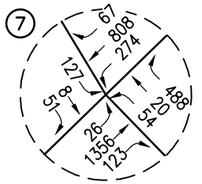
ROCKFIELD BLVD @
EL TORO RD



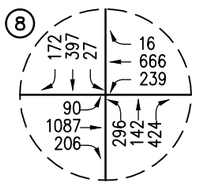
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



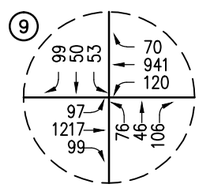
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



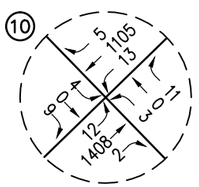
REGIONAL CENTER DR @
EL TORO RD



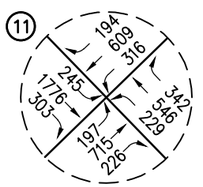
PASEO DE VALENCIA @
EL TORO RD



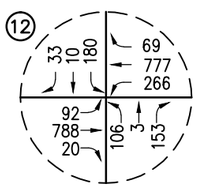
AVENIDA SEVILLA @
EL TORO RD



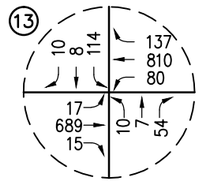
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



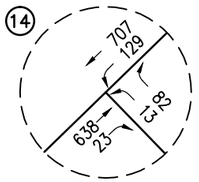
MOULTON PKWY @
EL TORO RD



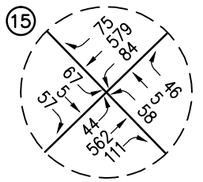
HOME DEPOT/TOWN CENTRE @
EL TORO RD



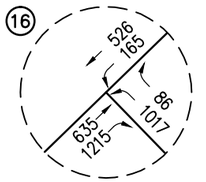
CALLE SONORA @
EL TORO RD



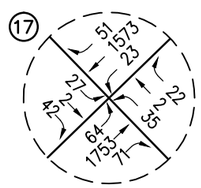
CANYON WREN LN @
EL TORO RD



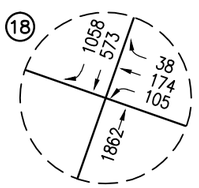
CALLE CORTA @
EL TORO RD



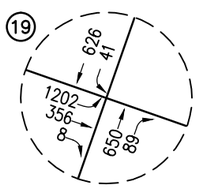
ALISO CREEK RD @
EL TORO RD



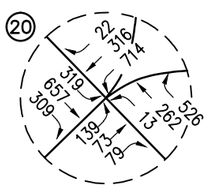
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

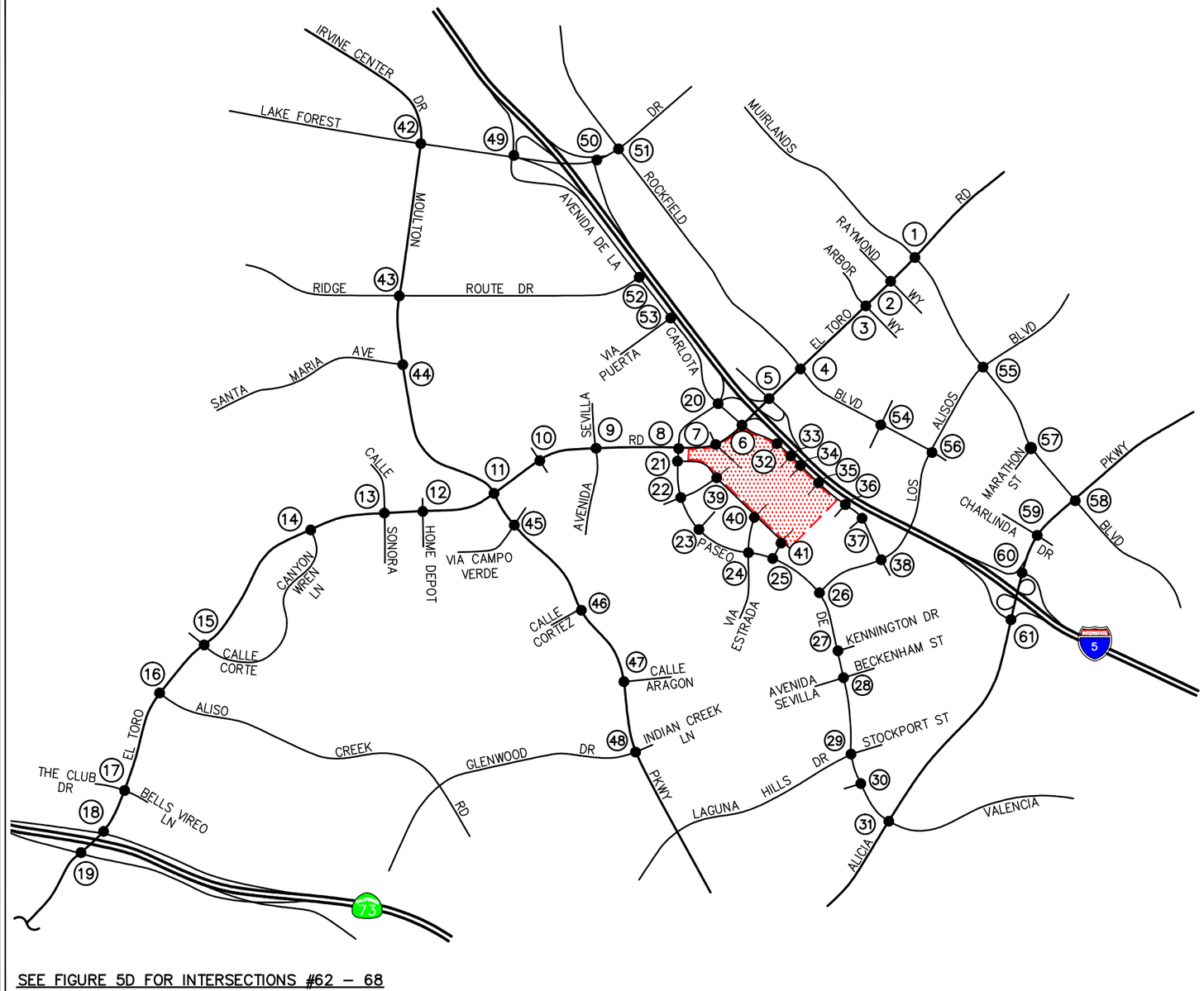
(#) = STUDY INTERSECTION

= PROJECT SITE

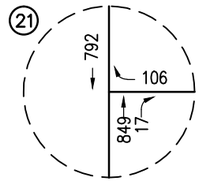
FIGURE 5A

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

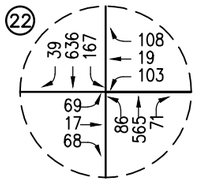
VILLAGE AT LAGUNA HILLS



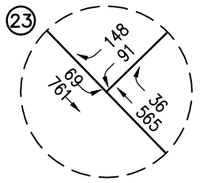
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



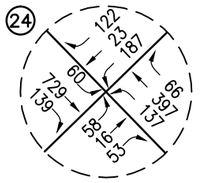
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



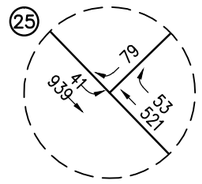
PASEO DE VALENCIA @ CALLE DE LA PLATA



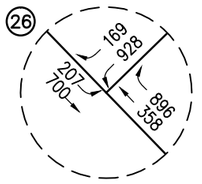
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



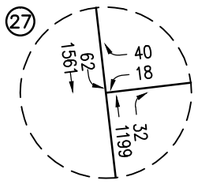
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



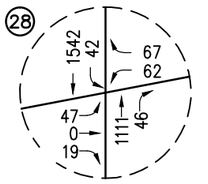
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



PASEO DE VALENCIA @ LOS ALISOS BLVD



PASEO DE VALENCIA @ KENNINGTON DR



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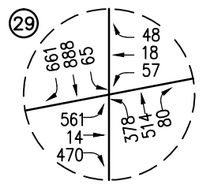
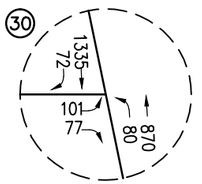


PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



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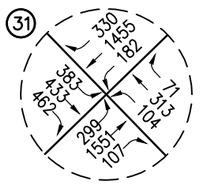
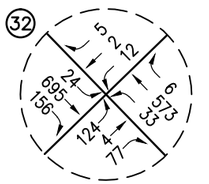
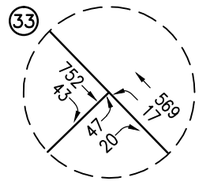


PASEO DE VALENCIA @ ALICIA PKWY



AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



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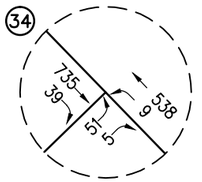

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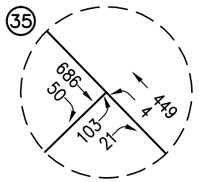

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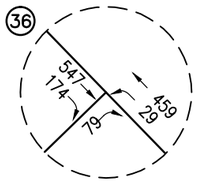
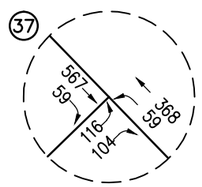


AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



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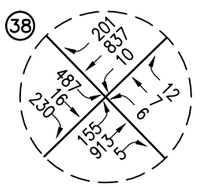
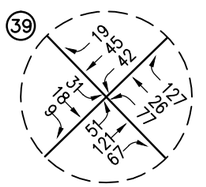
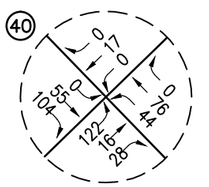


AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

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KEY

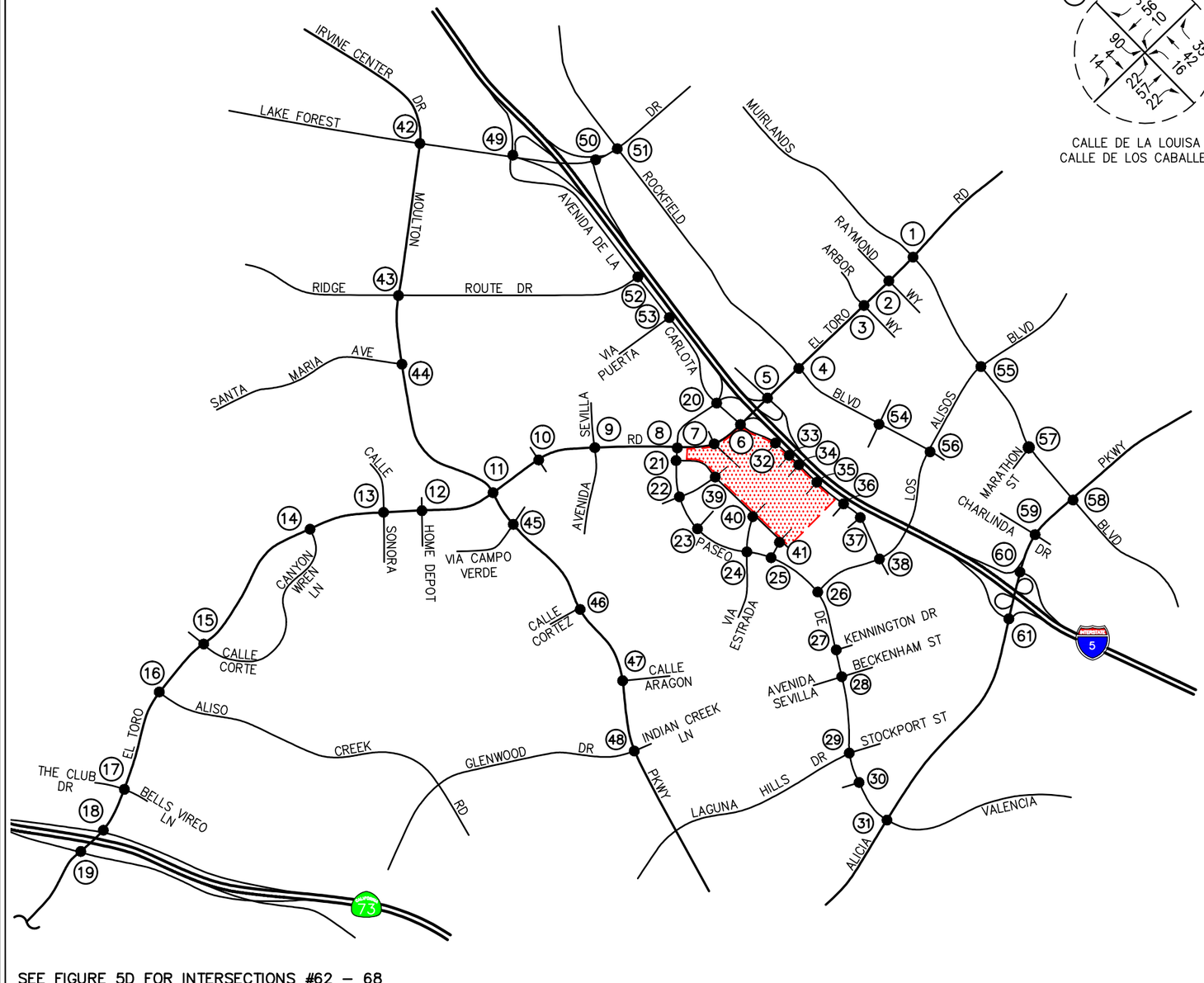
(#) = STUDY INTERSECTION

= PROJECT SITE

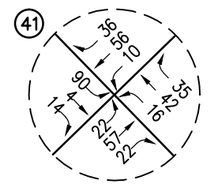
FIGURE 5B

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

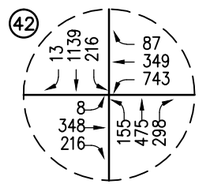
VILLAGE AT LAGUNA HILLS



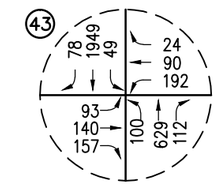
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



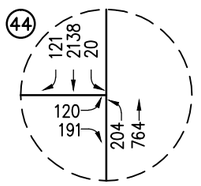
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



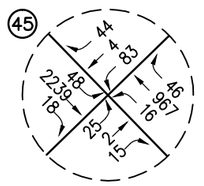
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



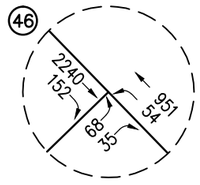
MOULTON PKWY @
RIDGE ROUTE DR



MOULTON PKWY @
SANTA MARIA AVE



MOULTON PKWY @
VIA CAMPO VERDE



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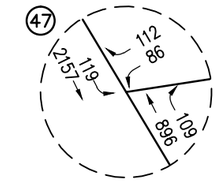
CALLE CORTEZ



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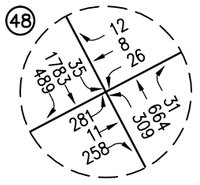

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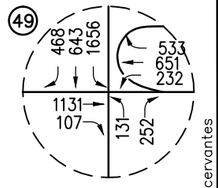
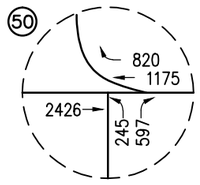
GLENWOOD DR/
INDIAN CREEK LN



AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



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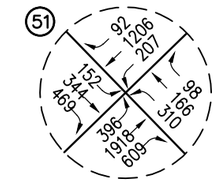
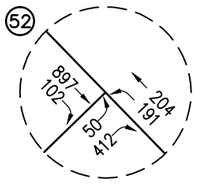
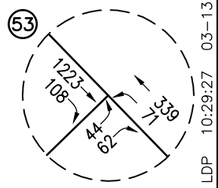
LAKE FOREST DR



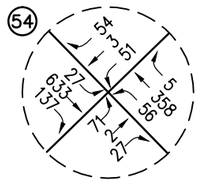
ROCKFIELD BLVD @
LAKE FOREST DR



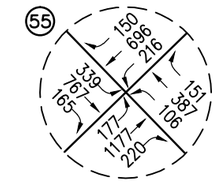
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



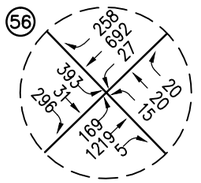
AVENIDA DE LA CARLOTA @
VIA PUERTA



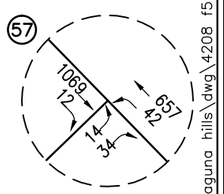
ROCKFIELD BLVD @
LANDISVIEW AVE



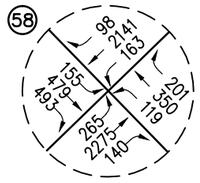
MUIRLANDS BLVD @
LOS ALISOS BLVD



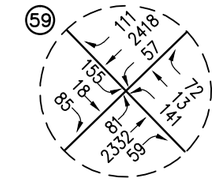
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



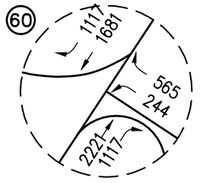
MUIRLANDS BLVD @
MARATHON ST



MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
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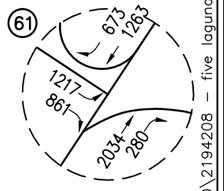

I-5 SB RAMPS @
ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

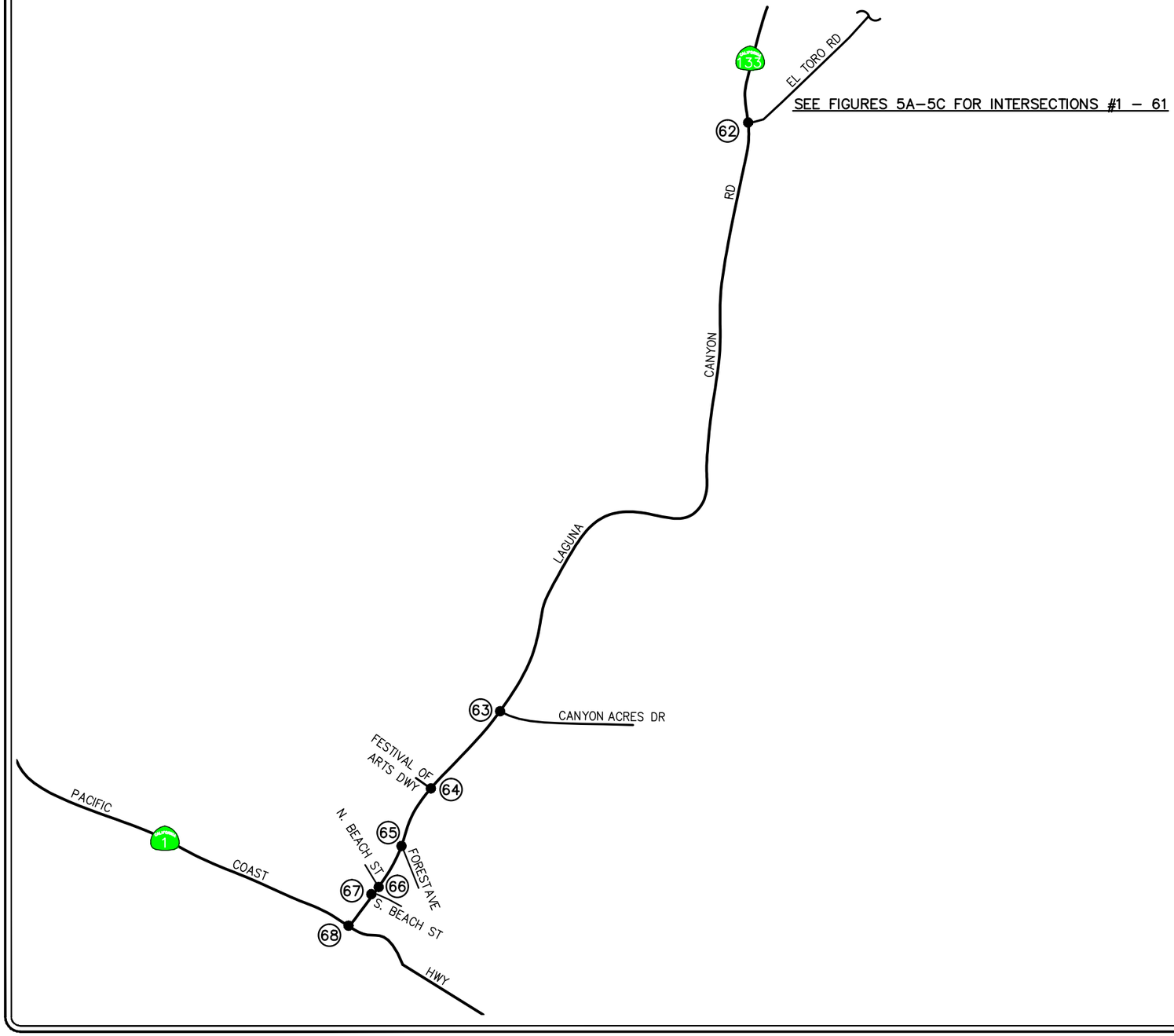
(#) = STUDY INTERSECTION

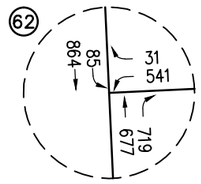
= PROJECT SITE

FIGURE 5C

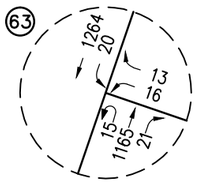
EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

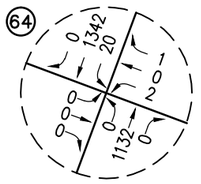




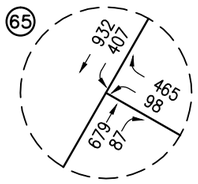
LAGUNA CANYON RD @
EL TORO RD



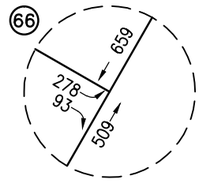
LAGUNA CANYON RD @
CANYON ACRES DR



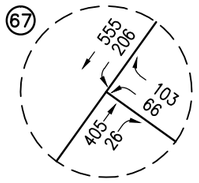
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



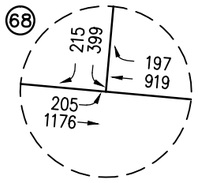
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

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N NO SCALE

KEY

(#) = STUDY INTERSECTION

FIGURE 5D

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

4.0 TRAFFIC FORECASTS

In order to determine potential traffic impacts of the Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is estimated by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation with applicable trip adjustments/credits to account for the existing land uses on site, internal capture, and/or alternative modes of transportation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic 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 project traffic assignments developed, the impact of the proposed project is isolated by comparing levels of service at selected key intersections using expected future traffic volumes with and without project-generated traffic. The significance of the Project's impacts, and the need for site-specific and/or cumulative local area traffic improvements, can then be determined.

4.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 10th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2017]. The trip rates for ITE Land Use 820: Shopping Center, 720: General Office Building, 221: Multifamily (Mid-Rise), and 310: Hotel were applied to the Project.

Since the Project is comprised of a mix of uses (including retail, restaurant, cinema, health club, office, and residential), it was appropriate to account for "internal" tripmaking/interactions that will occur between the various land uses on site, and will not occur by traveling on the external street system. ITE trip generation rates and equations are derived from single-use, stand-alone sites, and do not reflect the potential for interaction among uses in a mixed-use setting. The methodology used in estimating internal trips for the project is well documented in the Third Edition of ITE's *Trip Generation Handbook* [Washington, D.C., August 2014].

Additionally, because of the retail component of the Project, "pass-by" reductions were applied to retail-generated trips (after accounting for internal trip reductions). This is typically done to account

for conditions when the total number of trips generated by a retail-oriented development is not entirely new to the external street system. Retail-oriented developments such as shopping centers and restaurants, which are located along major/busy roadways, attract a portion of their trips from traffic already on the street system for a different purpose (i.e., the retail site is not the primary or ultimate destination). These retail trips do not add new traffic to the surrounding street system. The methodology used in estimating pass-by trips is also contained in ITE's *Trip Generation Handbook*.

Modest internal capture and pass-by trip reductions were applied (despite the vast majority of uses surrounding the site that could realistically result in greater interactions with the Project than assumed), which are appropriate for application based on the Project setting and ITE-recommended methodology, and are allowed per the City's traffic study guidelines for LOS analysis. It should be noted that internal tripmaking within the mall is inherent in the ITE Shopping Center rates/equations; therefore, internal trip reductions were not applied to shopping center trips, and only applied to the residential, hotel, and office trips in this study. As a conservative measure, no further trip reductions to account for alternative modes of travel (despite the Project's proximity to the Laguna Hills Transportation Center) have been applied.

As shown in ***Table 6***, the net Project trips are estimated to be 9,970 fewer than for Five Lagunas on a typical weekday. During the AM peak hour, weekday trips would be 119 more than for Five Lagunas. During the PM peak hour, weekday trips would be 910 fewer than for Five Lagunas.

On Saturdays, the net Project trips are estimated to be 15,542 fewer than for Five Lagunas. During the Saturday midday peak hour, net Project trips would be 1,704 fewer than for Five Lagunas.

The reductions in all trip generation categories other than the weekday AM peak is explained by the Project's substantial rebalancing of square footage, creating more residential and less retail use than Five Lagunas.

The potential impact of any added/incremental trips generated by the Project (Village at Laguna Hills) are assessed in this report as compared to background conditions that include the previously approved Five Lagunas; specifically, the incremental trips assigned to the street system within the study area and evaluated in this traffic impact analysis correspond to the "Project versus Five Lagunas" line item on *Table 6* (highlighted in blue), which indicates a reduction of 9,970 weekday daily trips, an increase of 119 AM peak hour trips, and reduction of 910, 15,542, and 1,704 trips during the PM peak hour. Saturday daily, and Saturday midday peak hour, respectively.

Table 6 also presents a trip budget assessment for the Project, given its location within the UVSP area. As described in the UVSP, the Program EIR, and the 2016 Addendum, development intensity within the UVSP is regulated by trip budget limits that correlate with LOS D (except with regard to CMP intersections), and the "anticipated" land uses referenced in the Program EIR and UVSP do not function as development limits.

City staff identified development projects that have been assigned UVSP trips subsequent to the certification of the Program EIR. After deducting the assigned UVSP trips (including Five Lagunas),

335 AM peak hour trips and 1,680 PM peak hour trips remain unassigned and available for redevelopment in the UVSP. Deducting the incremental trips between the Project and Five Lagunas from the unassigned UVSP trips results in 216 AM peak hour trips and 2,590 PM peak hour trips remaining in the UVSP budget.

TABLE 6
PROJECT TRIP GENERATION

LAND USE	Unit / Size	Typical Weekday Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Saturday Daily	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total
ITE TRIP RATES												
Shopping Ctr	trips/KSF GLA	[a]	62%	38%	[a]	48%	52%	[a]	[a]	52%	48%	[a]
General Office	trips/KSF GFA	[b]	86%	14%	[b]	16%	84%	[b]	2.21	54%	46%	0.53
Multifamily (Mid-Rise)	trips/DU	5.44	26%	74%	0.36	61%	39%	0.44	4.91	49%	51%	0.44
Hotel	trips/Room	8.36	59%	41%	0.47	51%	49%	0.60	8.19	56%	44%	0.72
PROPOSED PROJECT												
Mall [c]	**250,000 SF GLA**	11,210	172	105	277	514	556	1,070	15,730	664	613	1,277
Retail (99,305 SF GLA)												
Restaurants (60,695 SF GLA)												
Health Club (40,000 SF GLA)												
Cinema (50,000 SF GLA)												
Hotel	**150 RM**	1,254	42	29	71	46	44	90	1,229	60	48	108
General Office	**465,000 SF GFA**	4,712	399	65	464	78	412	490	1,028	133	113	246
Multifamily	**1,500 DU**	8,160	140	400	540	403	257	660	7,365	323	337	660
FUTURE (Gross Project Trips)		**25,336**	**753**	**599**	**1,352**	**1,041**	**1,269**	**2,310**	**25,352**	**1,180**	**1,111**	**2,291**
Internal Trip Reduction [d]		(2,825)	(58)	(49)	(107)	(105)	(143)	(248)	(1,924)	(103)	(100)	(203)
	Sub-Total	22,511	695	550	1,245	936	1,126	2,062	23,428	1,077	1,011	2,088
Pass-By Trip Reduction [e]		(1,121)	(9)	(5)	(14)	(51)	(56)	(107)	(1,573)	(66)	(61)	(127)
	Net Future Trips	**21,390**	**686**	**545**	**1,231**	**885**	**1,070**	**1,955**	**21,855**	**1,011**	**950**	**1,961**
FIVE LAGUNAS Net Future Trips [f]		**31,360**	**505**	**607**	**1,112**	**1,437**	**1,428**	**2,865**	**37,397**	**1,780**	**1,885**	**3,665**
PROJECT VS. FIVE LAGUNAS (Project minus Five Lagunas)		**(9,970)**	**181**	**(62)**	**119**	**(552)**	**(358)**	**(910)**	**(15,542)**	**(769)**	**(935)**	**(1,704)**

TABLE 6 (CONTINUED)
PROJECT TRIP GENERATION

LAND USE	Unit / Size	Typical Weekday Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Saturday Daily	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total
UVSP TRIP BUDGETS Per June 2009 GP Update EIR		--	--	--	**1,243**	--	--	**2,272**	--	--	--	--
Less Chevron (approved 5/11)		--	--	--	0	--	--	27	--	--	--	--
Less Taj Mahal (approved 6/11)		--	--	--	(12)	--	--	(49)	--	--	--	--
Less Ash./ChickFilA (approved 7/11)		--	--	--	(128)	--	--	(12)	--	--	--	--
Less Oakbrook Vill. (approved 11/12)		--	--	--	(129)	--	--	33	--	--	--	--
Less Raising Cane's (approved 4/15)		--	--	--	(32)	--	--	3	--	--	--	--
Less Five Lagunas (approved 3/16) [f]		--	--	--	(558)	--	--	(569)	--	--	--	--
Remaining UVSP Trip Budgets (w/ Five Lagunas, w/out Project)		--	--	--	**384**	--	--	**1,705**	--	--	--	--
Less Farmer Boys (approved 9/16)		--	--	--	**(49)**	--	--	**(25)**	--	--	--	--
Remaining UVSP Trip Budgets (Before Project Credits/Debits)		--	--	--	**335**	--	--	**1,680**	--	--	--	--
Less Project vs. Five Lagunas		--	--	--	**(119)**	--	--	**910**	--	--	--	--
Unused UVSP Trip Budgets (After Project Credits/Debits)		--	--	--	**216**	--	--	**2,590**	--	--	--	--

Notes:

[a] Trip generation for shopping centers/retail uses were calculated using the following equations:
Weekday Daily Rate: Ln(T) = 0.68Ln(X) + 5.57
AM Commuter Peak Hour Rate: Ln(T) = 0.50(X) + 151.78
PM Commuter Peak Hour Rate: Ln(T) = 0.74Ln(X) + 2.89
Saturday Daily Rate: Ln(T) = 0.62Ln(X) + 6.24
Saturday Peak Hour of the Generator: Ln(T) = 0.79Ln(X) + 2.79
Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
X = Area in 1,000 gross square feet of leasable area

[b] Trip generation for the general office land use was calculated using the following equations:
Weekday Daily Rate: Ln(T) = 0.97Ln(X) + 2.50
AM Commuter Peak Hour Rate: Ln(T) = 0.94(X) + 26.49
PM Commuter Peak Hour Rate: Ln(T) = 0.95Ln(X) + 0.36
Saturday Daily Rate: Not Given
Saturday Peak Hour of the Generator: Not Given
Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
X = Area in 1,000 gross square feet of leasable area

[c] Per City staff direction and ITE's definition of Land Use: 820 (Shopping Center), the health club SF is included in the Shopping Center SF.

[d] The internal trip reductions correspond to approximately 7% to 12% of total future trips.

[e] The pass-by trip reductions applied to retail trips are 10% for daily, 5% for AM peak hour, and 10% for PM and Saturday midday peak hours.

[f] Source: *Traffic Impact Analysis for the Five Lagunas Project*, prepared by LLG, November 13, 2015.

TABLE 7
LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS[4]

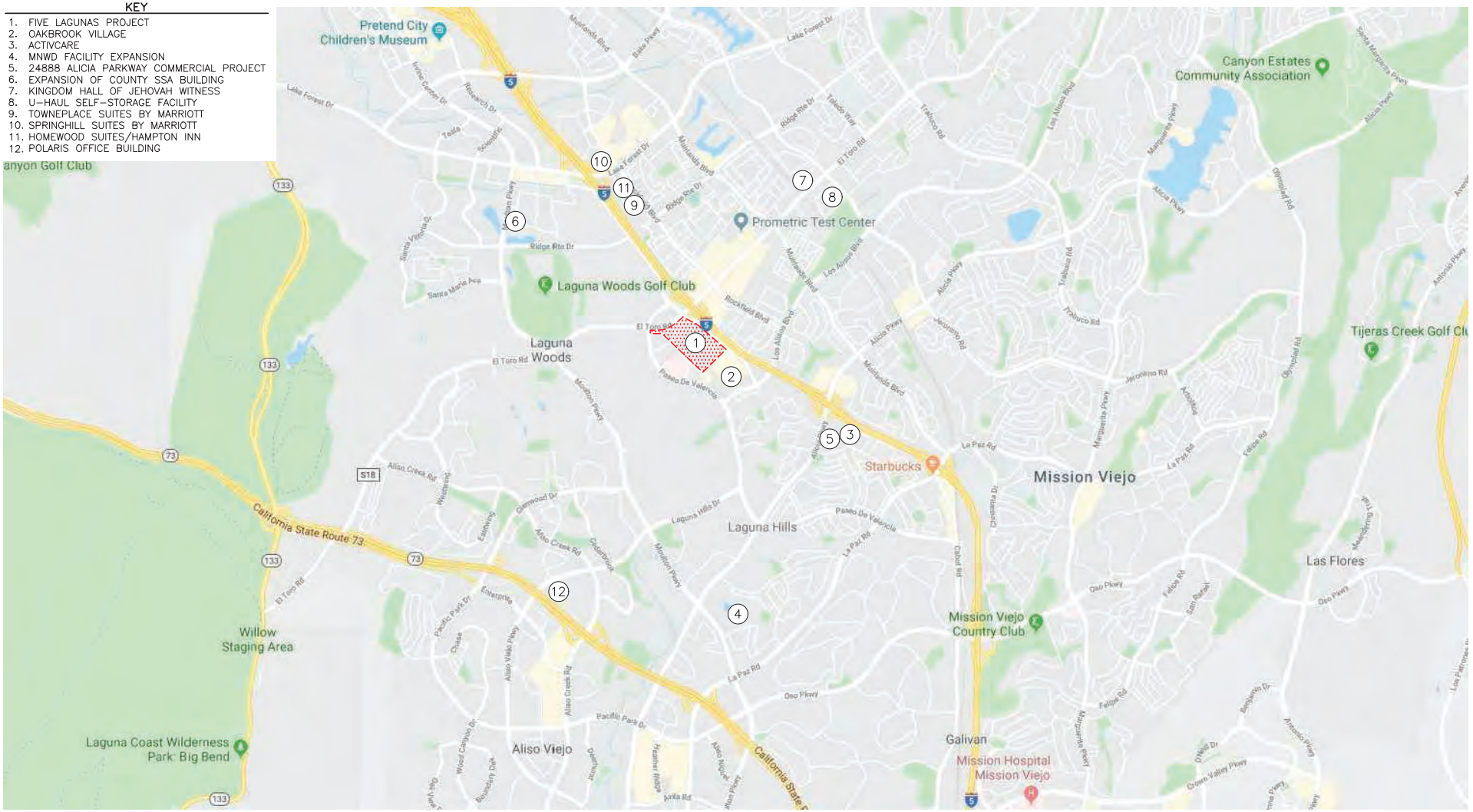
No.	Cumulative Project	Location/Address	Description
City of Laguna Hills			
1.	Five Lagunas	Bound by El Toro Road on the northwest, Avenida de la Carlota on the northeast, Calle de la Louisa on the southwest, and Calle de los Caballeros on the southeast	834,706 Shopping Center 45,890 SF Medical Office 988 DU Multifamily
2.	Oakbrook Village	Avenida de la Carlota, north of Los Alisos Boulevard	200 DU Multi-Family (Mid-Rise) 7,476 SF Retail
3.	ActivCare	24888 Alicia Parkway	72 Bed Elderly Care Housing
4.	MNWD Facility Expansion	26161 Gordon Road	64,000 SF MNWD Facility Expansion
5.	24888 Alicia Pkwy Commercial Project	24888 Alicia Parkway	2,500 SF Taco Bell Restaurant w/ Drive-Thru 2,175 SF Starbucks with Drive-Thru 2,507 SF Plant Power w/ Drive-Thru
6.	Expansion of County SSA Building	23330 Moulton Parkway	12,176 SF Office Expansion (52,212 SF Total)
City of Lake Forest			
7.	Kingdom Hall of Jehovah Witness	23061 & 23071 El Toro Road	Two 3,312 SF (6,624 SF) Religion Institution
8.	U-Haul Self-Storage Facility	Orange Avenue and Jeronimo Road	120,172 SF Storage Building 5,350 SF General Warehouse Building
9.	TownePlace Suites by Marriott	23150 Lake Center Drive	112 Room Hotel
10.	Springhill Suites by Marriott	23600 Rockfield Boulevard	102 Room Hotel
11.	Homewood Suites/Hampton Inn	23021 Lake Center Drive	208 Room Hotel
City of Aliso Viejo			
12.	Polaris Office Building	6 Polaris	42,400 SF Office

[4] Source: City of Laguna Hills, Lake Forest, Aliso Viejo, and Mission Viejo Planning Departments.

TABLE 8
CUMULATIVE PROJECTS TRIP GENERATION FORECAST[5]

	Weekday							Saturday			
	Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
Cumulative Project Description	**2-Way**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**2-Way**	**In**	**Out**	**Total**
1. Five Lagunas[6]	6,434	162	396	558	335	234	569	4,919	240	216	456
2. Oakbrook Village	1,342	22	56	78	62	44	106	1,292	56	57	113
3. ActivCare[7]	187	9	5	14	7	12	19	211	9	10	19
4. MNWD Facility Expansion[8]	288	19	7	26	12	24	36	141	18	16	34
5. 24888 Alicia Pkwy Commercial Project[9]	3,107	102	98	200	77	75	152	3,632	142	138	280
6. Expansion of County SSA Building	119	12	2	14	2	12	14	27	3	3	119
7. Kingdom Hall of Jehovah Witness	46	1	1	2	1	2	3	40	11	7	18
8. U-Haul Self-Storage Facility	190	8	5	13	9	12	21	235	22	15	37
9. TownePlace Suites by Marriott	936	31	22	53	34	33	67	917	45	36	81
10. Springhill Suites by Marriott	853	28	20	48	31	30	61	835	41	32	73
11. Homewood Suites/Hampton Inn	1,739	58	40	98	64	61	125	1,704	84	66	150
12. Polaris Office Building	413	42	7	49	8	41	49	94	12	10	22
Cumulative Projects Trip Generation Forecast	**15,654**	**494**	**659**	**1,153**	**642**	**580**	**1,222**	**14,047**	**683**	**606**	**1,289**

[5] Unless otherwise noted, Source: *Trip Generation*, 10th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2017).
[6] Source: *Traffic Impact Analysis Report for the Addendum to the City of Laguna Hills General Plan Program Environmental Impact Report for Five Lagunas*, prepared by LLG Engineers, dated November 13, 2015.
[7] Source: *ActivCare Laguna Hills Trip Generation Evaluation*, prepared by Urban Crossroads, Inc., dated January 4, 2019.
[8] Source: *Traffic Impact Study Moulton Niguel Water District Site Consolidation*, prepared by LSA, dated May 2017.
[9] Source: *Traffic Impact Analysis for Five Lagunas*, prepared by LLG, November 13, 2015.



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KEY

(#) = CUMULATIVE PROJECT LOCATION

= PROJECT SITE

N NO SCALE

FIGURE 11

LOCATION OF CUMULATIVE PROJECTS

VILLAGE AT LAGUNA HILLS

Attachment B

VMT Screening Form for Residential Portion

CITY OF LAGUNA HILLS
VMT SCREENING FORM FOR LAND USE PROJECTS

This Screening Form acknowledges the City of Laguna Hills requirements for the evaluation of vehicle miles traveled (VMT) under CEQA. The analysis provided in this form should follow the City of Laguna Hills approved VMT Guidelines, dated July 9, 2020.

I. Project Description

Case Number:

Project Name: 24422 Avenida De La Carlota Mixed-Use Project

Project Location: 24422 Avenida De La Carlota, City of Laguna Hills, CA

Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 240 DU senior housing).

(Please attach a copy of the project Site Plan)

Current GP Land Use: Village Commerical **Proposed GP Land Use:** Village Commerical

Current Zoning: Urban Village Specific Plan **Proposed Zoning:** Urban Village Specific Plan

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RTP/SCS Strategies and RHNA Allocation Plan.

II. VMT Screening Criteria

	YES		NO		Attachments:
A. Is the Project 100% affordable housing?	YES		NO	X	
B. Is the Project within 1/2 mile of qualifying transit?	YES		NO	X	
C. Is the Project a local serving land use?	YES		NO	X	
D. Is the Project in a low VMT area?	YES	X	NO		
E. Are the Project's Net Daily Trips less than 500 ADT?	YES		NO	X	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	21.6	VMT/Capita
Citywide Employment VMT =	25.1	VMT/Employee

Project TAZ	VMT Rate for Project TAZ[1]		Type of Project	
1450	18.0	VMT/Capita	Residential:	X
	22.7	VMT/Employee	Non-Residential:	

[1] Base year (2016) projections from OCTAM.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: 778 Average Daily Trips (ADT)

Internal Trip Credit:	YES		NO	X	% Trip Credit:
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:
Affordable Housing Credit:	YES		NO	X	% Trip Credit:
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:

Net Project Trip Generation: 778 Average Daily Trips (ADT) Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?	YES	X	NO	

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?
A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?
If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X

If the Project does not satisfy at least one (1) of the VMT screening criteria AND generates 2,400 or more net daily trips, then additional VMT modeling using OCTAM is required. If the project generates less than 2,400 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	**N/A**	**N/A**
B. Unmitigated Project TAZ VMT Rate:	**N/A**	**N/A**
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	**N/A**	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	**N/A**	**N/A**

F. Is the project presumed to have a less than significant impact with mitigation?

N/A

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	RK Engineering Group Inc.	**Company:**	BSP Oakbrook, LLC
Contact:	Justin Tucker, P.E.	**Contact:**	Matthew Haugen
Address:	1401 Dove Street, Suite 540, Newport Beach, CA	**Address:**	3501 Jamboree Road, Suite 4200, Newport Beach, CA
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Email:	jt@rkengineer.com	**Email:**	mhaugen@buchananstreet.com
Date:	3/2/2023	**Date:**	3/2/2023

Approved by:

Laguna Hills Community Development Dept. Date	**Laguna Hills Public Services Dept. Date**

Attachment C

VMT Screening Form for Non-Residential Portion

CITY OF LAGUNA HILLS
VMT SCREENING FORM FOR LAND USE PROJECTS

This Screening Form acknowledges the City of Laguna Hills requirements for the evaluation of vehicle miles traveled (VMT) under CEQA. The analysis provided in this form should follow the City of Laguna Hills approved VMT Guidelines, dated July 9, 2020.

I. Project Description

Case Number:

Project Name: 24422 Avenida De La Carlota Mixed-Use Project

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Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 240 DU senior housing).

(Please attach a copy of the project Site Plan)

Current GP Land Use: Village Commerical **Proposed GP Land Use:** Village Commerical

Current Zoning: Urban Village Specific Plan **Proposed Zoning:** Urban Village Specific Plan

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RTP/SCS Strategies and RHNA Allocation Plan.

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**	**X**	Attachments:	
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**	**X**	Attachments:	
C. Is the Project a local serving land use?	**YES**		**NO**	**X**	Attachments:	
D. Is the Project in a low VMT area?	**YES**	**X**	**NO**		Attachments:	
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**		**NO**	**X**	Attachments:	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	21.6	VMT/Capita
Citywide Employment VMT =	25.1	VMT/Employee

Project TAZ	**VMT Rate for Project TAZ[1]**		**Type of Project**	
1450	**18.0**	VMT/Capita	Residential:	
	22.7	VMT/Employee	Non-Residential:	**X**

[1] Base year (2016) projections from OCTAM.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: **4,356** **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	**X**	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	**X**	% Trip Credit:	
Affordable Housing Credit:	YES		NO	**X**	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	**X**	Trip Credit:	

Net Project Trip Generation: **4,356** **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?	**YES**	**X**	**NO**	

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?
A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?
If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X

If the Project does not satisfy at least one (1) of the VMT screening criteria AND generates 2,400 or more net daily trips, then additional VMT modeling using OCTAM is required. If the project generates less than 2,400 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	**N/A**	**N/A**
B. Unmitigated Project TAZ VMT Rate:	**N/A**	**N/A**

C. Percentage Reduction Required to Achieve the Citywide Average VMT: **N/A**

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	**N/A**	**N/A**

F. Is the project presumed to have a less than significant impact with mitigation? **N/A**

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	RK Engineering Group Inc.	**Company:**	BSP Oakbrook, LLC
Contact:	Justin Tucker, P.E.	**Contact:**	Matthew Haugen
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Phone:	(949) 474-0810	**Phone:**	(949) 219-2329
Email:	jt@rkengineer.com	**Email:**	mhaugen@buchananstreet.com
Date:	3/2/2023	**Date:**	3/2/2023

Approved by:

Laguna Hills Community Development Dept. **Date**	**Laguna Hills Public Services Dept.** **Date**

Appendix B

The Village at Laguna Hills Traffic Impact Analysis,
Dated September 1, 2020,
Prepared by Linscott, Law & Greenspan (LLG) Engineers

RK19036.2
JN: 2939-2022-01

LINSCOTT LAW & GREENSPAN engineers

TRAFFIC IMPACT ANALYSIS FOR THE VILLAGE AT LAGUNA HILLS PROJECT

Laguna Hills, California
September 1, 2020

Prepared for:

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TRAFFIC IMPACT ANALYSIS FOR THE
VILLAGE AT LAGUNA HILLS PROJECT

LAGUNA HILLS, CALIFORNIA
SEPTEMBER 1, 2020

1.0 INTRODUCTION

This Traffic Impact Analysis was conducted by Linscott, Law & Greenspan, Engineers (LLG) to evaluate potential traffic congestion impacts resulting from the modifications to the previously-approved Five Lagunas (2016), which modifications are referred to as the Village at Laguna Hills ("Project"), relating to the redevelopment of the Laguna Hills Mall property.

This report presents an inventory of existing characteristics and traffic volumes at key locations within the study area, forecasts vehicular traffic anticipated to be generated by the Project, and evaluates potential impacts of these project-generated trips on the surrounding street system compared to those that were identified for Five Lagunas. Additionally, site access/internal circulation aspects, and freeway mainline segments, are evaluated.

2.0 PROJECT SCOPE

2.1 Project Description

The Project includes modifications to the 2016 Five Lagunas approvals. As contemplated by the Project, the existing central mall facility would be demolished. The project applicant would reconstruct new facilities in what is currently the southern portion of the central mall building, along with new commercial spaces in the out lots and the development of high-density multi-family dwelling units, as further described below:

- 250,000 SF GLA of shopping center/mall uses, consisting of:
  - 99,305 SF GLA of retail
  - 60,695 SF GLA of restaurants
  - 40,000 SF GLA for a health club
  - 50,000 SF GLA for a 1,200-seat cinema
- 150-room hotel
- 465,000 SF GFA of general office
- 1,500 DU multifamily (mid-rise)

Five Lagunas as approved in 2016 consisted of the following:

- 834,706 SF GLA of shopping center/mall uses, consisting of:
  - 570,180 SF GLA of retail
  - 115,354 SF GLA of restaurants
  - 40,102 SF GLA for a health club
  - 109,070 SF GLA for a 2,068-seat cinema
- 45,890 SF GFA of medical office (presumed as medical office, but could be retail)
- 988 DU of apartments

The mall as it existed in 2015 included 869,352 entitled SF GLA of shopping center/mall uses consisting of:

777,391 SF GLA of retail
78,795 SF GLA of restaurants
13,166 SF GLA for a 1,020-seat cinema

As with any regional shopping center, the mall experiences periodic transitions in tenants and occupancy. Historically, and including between the years 2008 and 2014, the mall's occupancy remained at a level consistent with that of a fully-occupied shopping center for purposes of ITE trip generation rate projections and site selection (page 17, *Trip Generation Handbook*, *Second Edition*, ITE, June 2004). The former Sears space, was vacated in August 2014. Since that time, the space has been used by temporary seasonal retailers, and not leased to a new anchor tenant, due to the impending demolition and reconstruction. Additional space was vacated by the movie theater, food court, and small shops, and with the Sears space, totaled approximately 309,000 SF GLA.

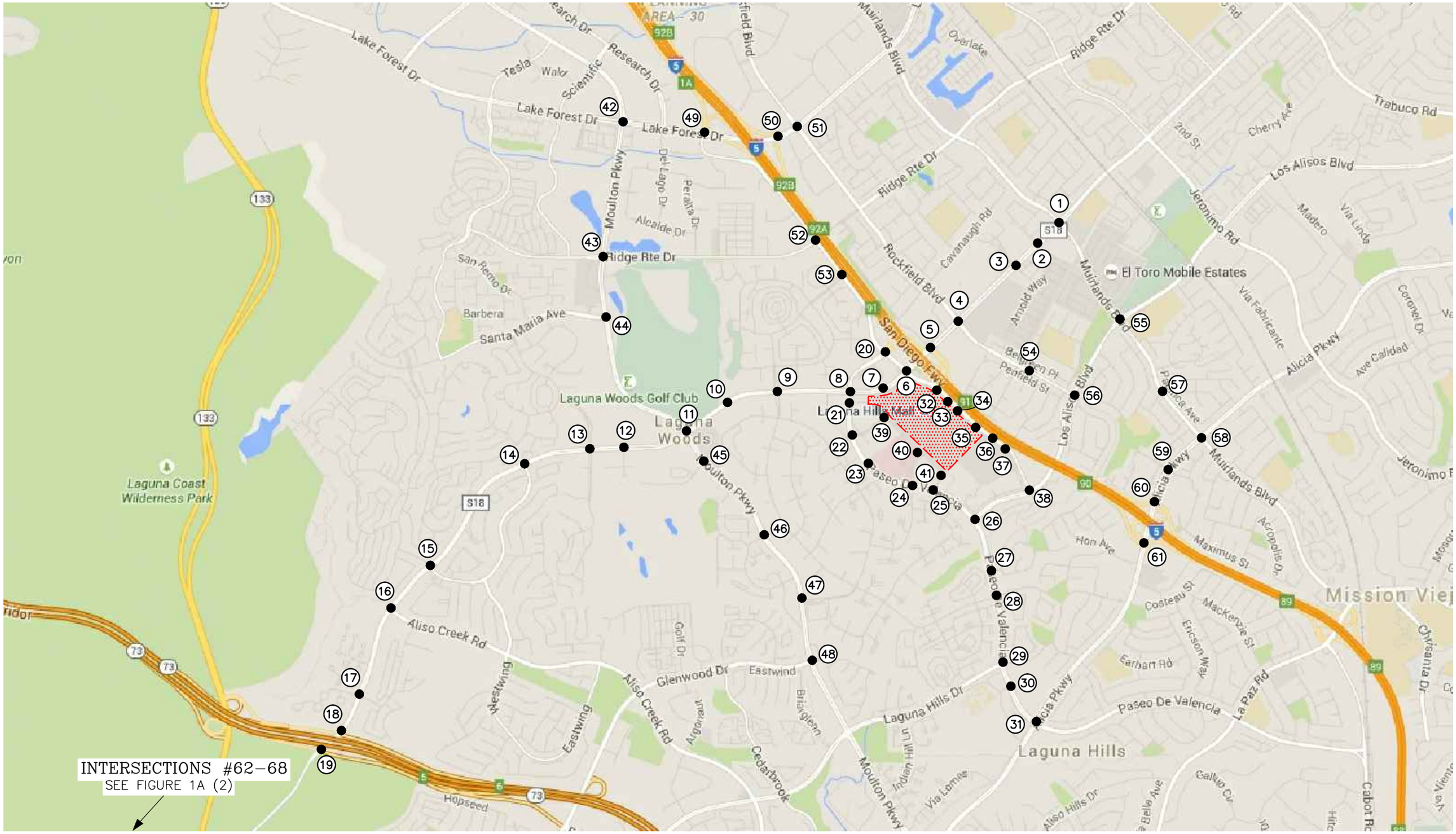
As the above-described space was not occupied on the dates that traffic counts were conducted for this study (i.e., September 2019), and to maintain consistency with the Five Lagunas analysis for comparison, trip generation for the 309,000 SF GLA was estimated based on the application of ITE rates/equations, and resulting trips were then assigned and added to the raw traffic counts collected at study intersections.

The 68-acre project is located within the 240-acre Urban Village Specific Plan ("UVSP") area of the City of Laguna Hills. ***Figure 1A*** presents a vicinity map and study area. The Project site is bound by El Toro Road on the northwest, Avenida de la Carlota on the northeast, Calle de la Louisa on the southwest, and Calle de los Caballeros on the southeast.

The Oakbrook Village Shopping Center, Villa Valencia Health Center (a senior care facility), and the Laguna Hills Transportation Center (a public transit hub that serves 7 OCTA bus routes, paratransit service as part of OCTA's Senior Mobility Program, the Laguna Woods Village shuttle service, and provides 180 parking spaces in a park-and-ride lot), lie to the southeast of the Project site across Calle de los Caballeros. Saddleback Memorial Medical Center and several medical/general office buildings exist immediately to the southwest of the Project site across Calle de la Louisa. The Laguna Hills Civic Center, Laguna Hills Lodge, and various commercial uses lie to the northwest of the Project site across El Toro Road. Residential uses exist across Paseo de Valencia, Los Alisos Boulevard, and the I-5 Freeway.

2.2 Study Scope

The work scope for this traffic impact study, including the base assumptions, technical methodologies, and geographic coverage, were developed in conjunction with City staff, and are in accordance with the Orange County Congestion Management Program (CMP), and the City's traffic study guidelines (dated August 31, 2010). All intersections identified by the Cities of Lake Forest and Mission Viejo located within their respective jurisdictions (considered to be within the Project's influence area) were included in this study, in addition to CMP intersections, I-5 Freeway and SR-



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N NO SCALE

KEY

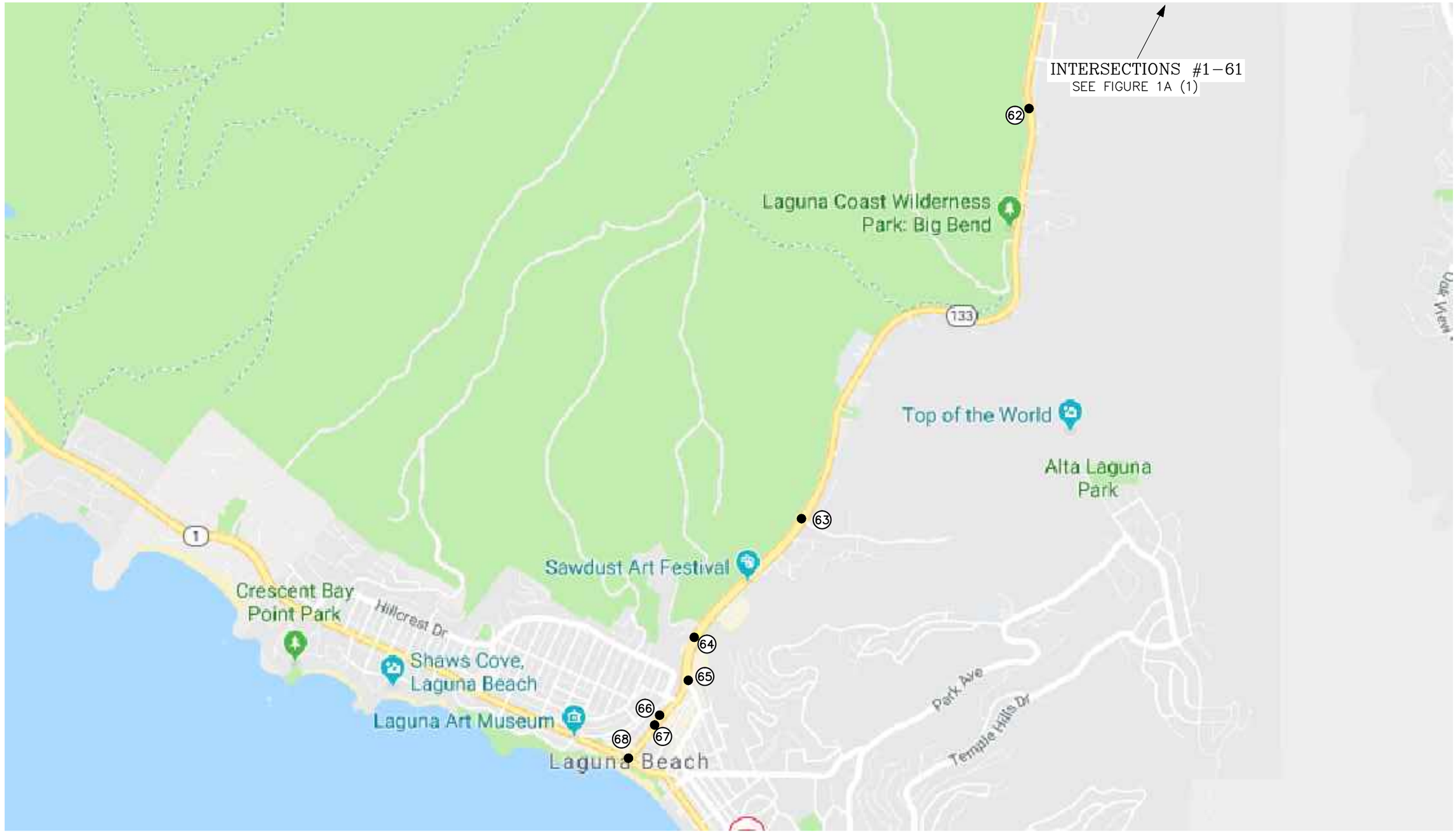
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 1A (1)

STUDY AREA

VILLAGE AT LAGUNA HILLS



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KEY

(#) = STUDY INTERSECTION

FIGURE 1A (2)

STUDY AREA

VILLAGE AT LAGUNA HILLS

73/San Joaquin Hills Transportation Corridor ramp intersections, and I-5 Freeway mainline segments.

Consistent with the 2015 Traffic Impact Analysis prepared for Five Lagunas (approved by the City in 2016), and as illustrated on *Figure 1A* and ***Figure 1B***, a total of 68 key intersections were selected for detailed peak hour traffic impact/level of service analysis during the weekday AM and PM, and Saturday midday, peak hours under each of the three traffic scenarios described below. This is an ultra-conservative approach because only 17 out of the 68 intersections analyzed met the City's 50 peak-hour trip threshold for detailed traffic evaluation (shown in yellow on *Figure 1B*) as described in the traffic study guidelines. The 68 study intersections are located in Laguna Hills, Laguna Woods, Lake Forest, Mission Viejo, Aliso Viejo, and Laguna Beach. Seven of the 68 intersections analyzed are CMP monitoring stations (encircled in blue on *Figure 1B*), and nine are freeway ramp intersections under Caltrans' jurisdiction (encircled in orange on *Figure 1B*).

Traffic impact analyses are typically focused on evaluating traffic operations during the morning and evening commute peak hours (7:00 to 9:00 AM, and 4:00 to 6:00 PM) on a typical weekday because these are generally when the busiest traffic conditions occur. As a conservative measure in assessing potential traffic impacts of the Project, Saturday midday conditions were also analyzed (with the peak expected to occur between 12:00 PM and 2:00 PM).

Figure 2 presents the proposed site plan, and shows all project driveways. Driveways' intersections with adjoining public street have all been included in the list of 68 study intersections, with the exception of two future, limited/delivery access driveways along Avenida de la Carlota that were presumed not to serve a measurable number of Project trips in this study. *Figure 2* also shows the internal circulation system, parking lots and structures, and project components (commercial and residential). *Figure 2* also depicts the proximity of the Project site to the I-5 Freeway via the I-5 Freeway/El Toro Road interchange (all I-5 Freeway on- and off-ramp intersections at the Lake Forest Drive, El Toro Road, and Alicia Parkway interchanges were analyzed).

The following three traffic scenarios are addressed in the study:

- **Existing (2019)** - The analysis of existing traffic conditions is intended to provide a base of analysis for the remainder of the study. The existing conditions analysis includes an assessment of the streets in the area, current traffic volumes, and operating conditions.
- **Year 2024 Cumulative Base** - This phase of analysis projects future traffic growth and operating conditions in the Year 2024 (conservatively assumed completion year for the Project) which could be expected to result from regional growth and related projects (including the previously approved Five Lagunas) without the addition of project traffic.
- **Year 2024 Cumulative plus Project** - This is an analysis of future traffic conditions in the Year 2024 (conservatively assumed completion year for the Project) with the addition of project-generated traffic (i.e. differential trips between those generated by Village at Laguna Hills versus Five Lagunas).

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N NO SCALE

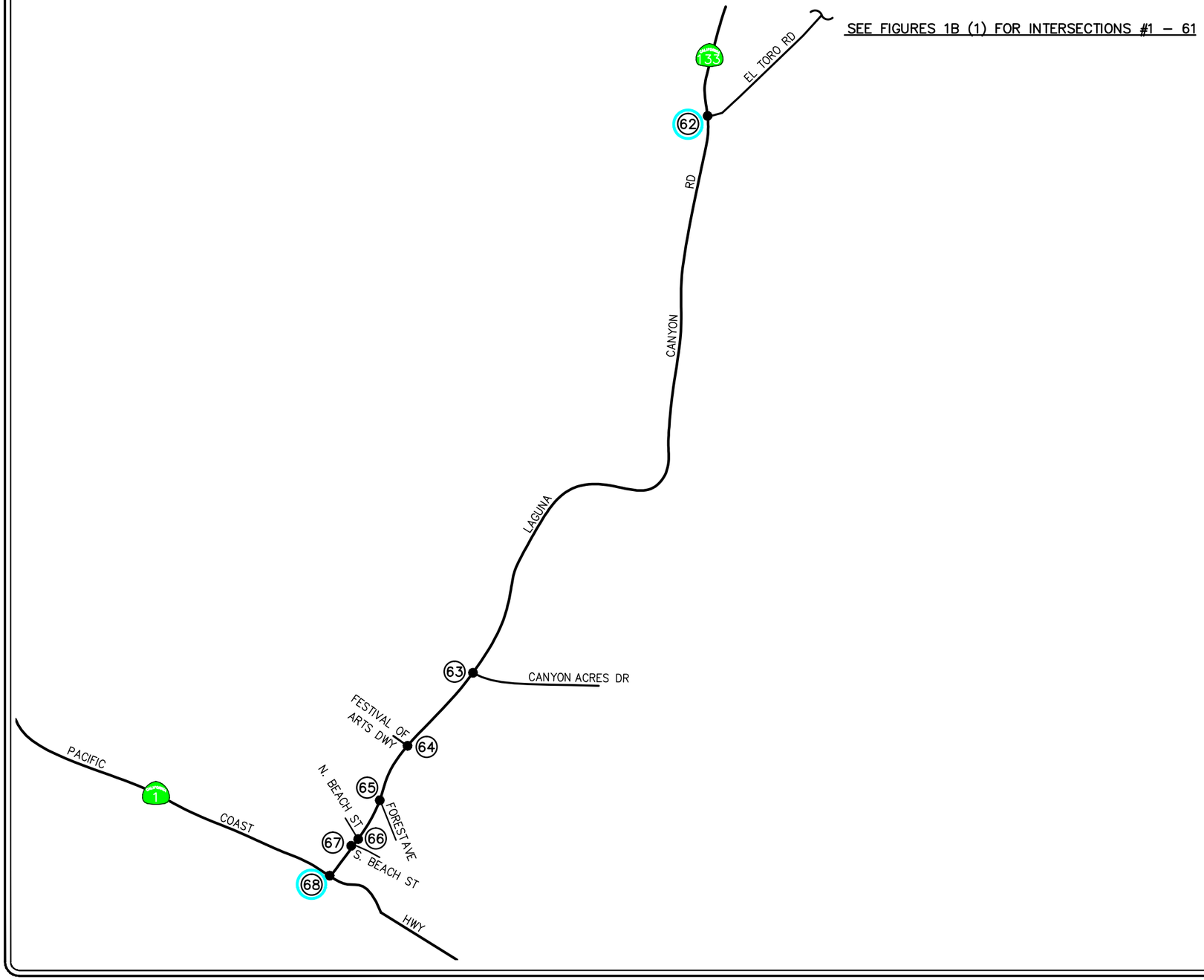
KEY

- (#) = INTERSECTION MEETS 50 PEAK-HOUR TRIP THRESHOLD
- (#) = INTERSECTION DOES NOT MEET 50 PEAK-HOUR TRIP THRESHOLD, BUT ANALYZED ANYWAY
- = PROJECT SITE
- (#) = CMP INTERSECTION
- (#) = CALTRANS INTERSECTION

FIGURE 1B (1)

INTERSECTIONS MEETING STUDY CRITERIA

VILLAGE AT LAGUNA HILLS



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = INTERSECTION MEETS 50 PEAK-HOUR TRIP THRESHOLD

(#) = INTERSECTION DOES NOT MEET 50 PEAK-HOUR TRIP THRESHOLD, BUT ANALYZED ANYWAY

= PROJECT SITE

(#) = CMP INTERSECTION

(#) = CALTRANS INTERSECTION

FIGURE 1B (2)

INTERSECTIONS MEETING STUDY CRITERIA

VILLAGE AT LAGUNA HILLS

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SOURCE: MERLONE GEIER PARTNERS

KEY

(#) = STUDY INTERSECTION

FIGURE 2

PROJECT SITE PLAN

VILLAGE AT LAGUNA HILLS

3.0 EXISTING CONDITIONS

3.1 Existing Street System

A comprehensive inventory of the street system within the study area was undertaken to develop a detailed description of existing traffic conditions.

Figures 3A through ***3C*** illustrate the existing physical characteristics of the key intersections and streets, including intersection geometry and traffic control, number of travel lanes, median type, parking designations, and posted speed limits.

3.2 Existing Volumes

Traffic counts were conducted at the 68 key intersections during the weekday AM and PM peak period while school was still in session (7:00 to 9:00 AM, 4:00 to 6:00 PM), and Saturday midday peak period (12:00 to 2:00 PM) in September 2019.

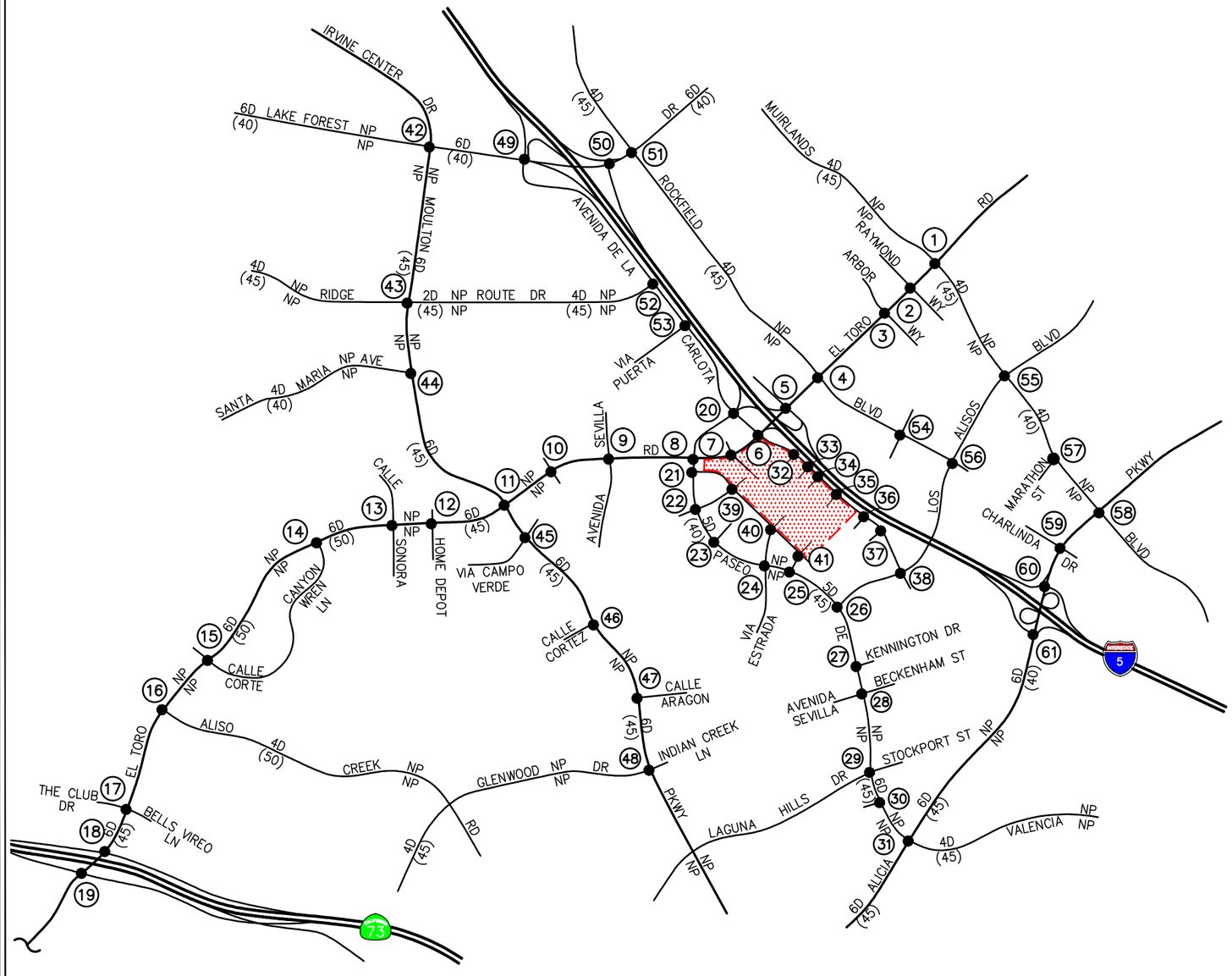
As discussed previously, approximately 309,000 SF GLA of mall space was not occupied on the dates that traffic counts were conducted. To address this, and to account for trips corresponding with the mall's entitled and historically occupied square footage, trip generation for the 309,000 SF GLA was estimated based on the application of ITE rates/equations, and resulting trips were then assigned to the street system and added to the raw traffic counts collected at the 68 key intersections.

Figures 4A through ***6D*** illustrate the existing weekday AM, weekday PM, and Saturday midday peak hour traffic volumes at the 68 key intersections, respectively.

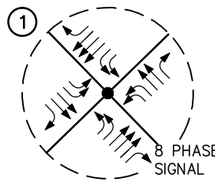
3.3 Existing Public Transit

Public transit bus service is provided in the Project area by OCTA. Seven OCTA bus routes serve the Project site via El Toro Road, Calle de la Louisa, and Avenida de la Carlota, and the nearby Laguna Hills Transportation Center (with 180 park-and-ride spaces). The bus routes are described below:

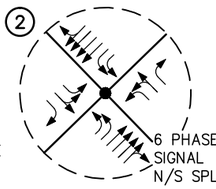
1. OCTA Route 83: provides service from Anaheim to Laguna Hills; via the 5 Freeway to Main Street.
2. OCTA Route 87: provides service from Rancho Santa Margarita to Laguna Niguel; via Alicia Parkway.
3. OCTA Route 89: provides service from Mission Viejo to Laguna Beach; via El Toro Road to Laguna Canyon Road.
4. OCTA Route 90: provides service from Tustin to Dana Point; via Irvine Center Drive to Moulton Parkway to Golden Lantern Street.
5. OCTA Route 91: provides service from Laguna Hills to San Clemente; via Paseo de Valencia to Camino Capistrano to Del Obispo Street.
6. OCTA Route 177: provides service from Foothill Ranch to Laguna Hills; via Lake Forest Drive to Muirlands Boulevard to Los Alisos Boulevard.



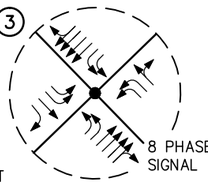
SEE FIGURE 3D FOR INTERSECTIONS #62 – 68



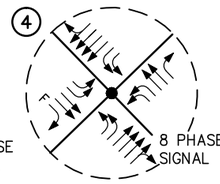
MUIRLANDS BLVD @ EL TORO RD



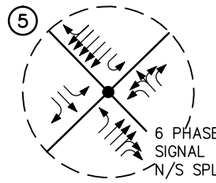
RAYMOND WY @ EL TORO RD



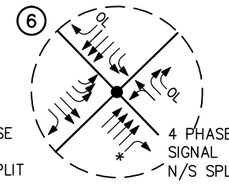
ARBOR WY @ EL TORO RD



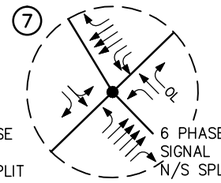
ROCKFIELD BLVD @ EL TORO RD



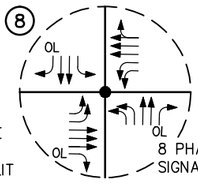
BRIDGER RD/ I-5 NB RAMPS @ EL TORO RD



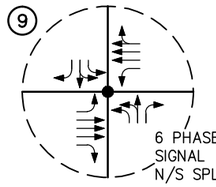
AVENIDA DE LA CARLOTA/ I-5 SB ON-RAMP @ EL TORO RD



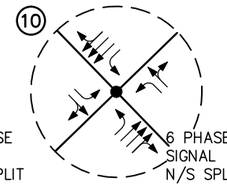
REGIONAL CENTER DR @ EL TORO RD



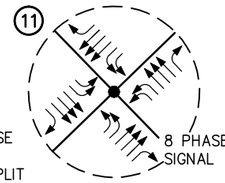
PASEO DE VALENCIA @ EL TORO RD



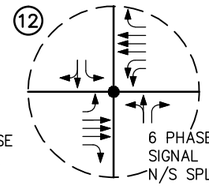
AVENIDA SEVILLA @ EL TORO RD



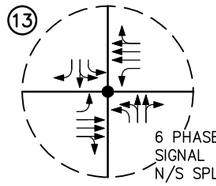
CATHOLIC CHURCH/ LUTHERAN CHURCH @ EL TORO RD



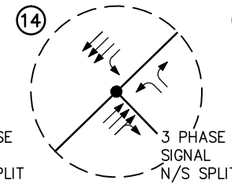
MOULTON PKWY @ EL TORO RD



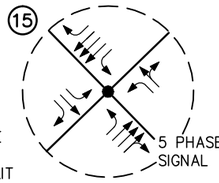
HOME DEPOT/TOWN CENTRE @ EL TORO RD



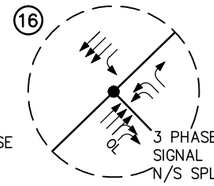
CALLE SONORA @ EL TORO RD



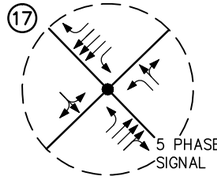
CANYON WREN LN @ EL TORO RD



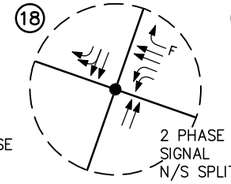
CALLE CORTA @ EL TORO RD



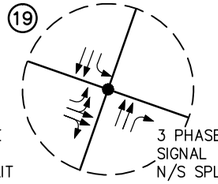
ALISO CREEK RD @ EL TORO RD



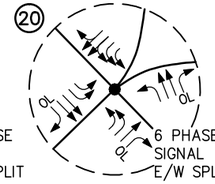
THE CLUB DR/ BELLS VIREO LN @ EL TORO RD



SR-73 NB RAMPS @ EL TORO RD



SR-73 SB RAMPS @ EL TORO RD



AVENIDA DE LA CARLOTA @ PASEO DE VALENCIA/ I-5 SB RAMPS

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N NO SCALE

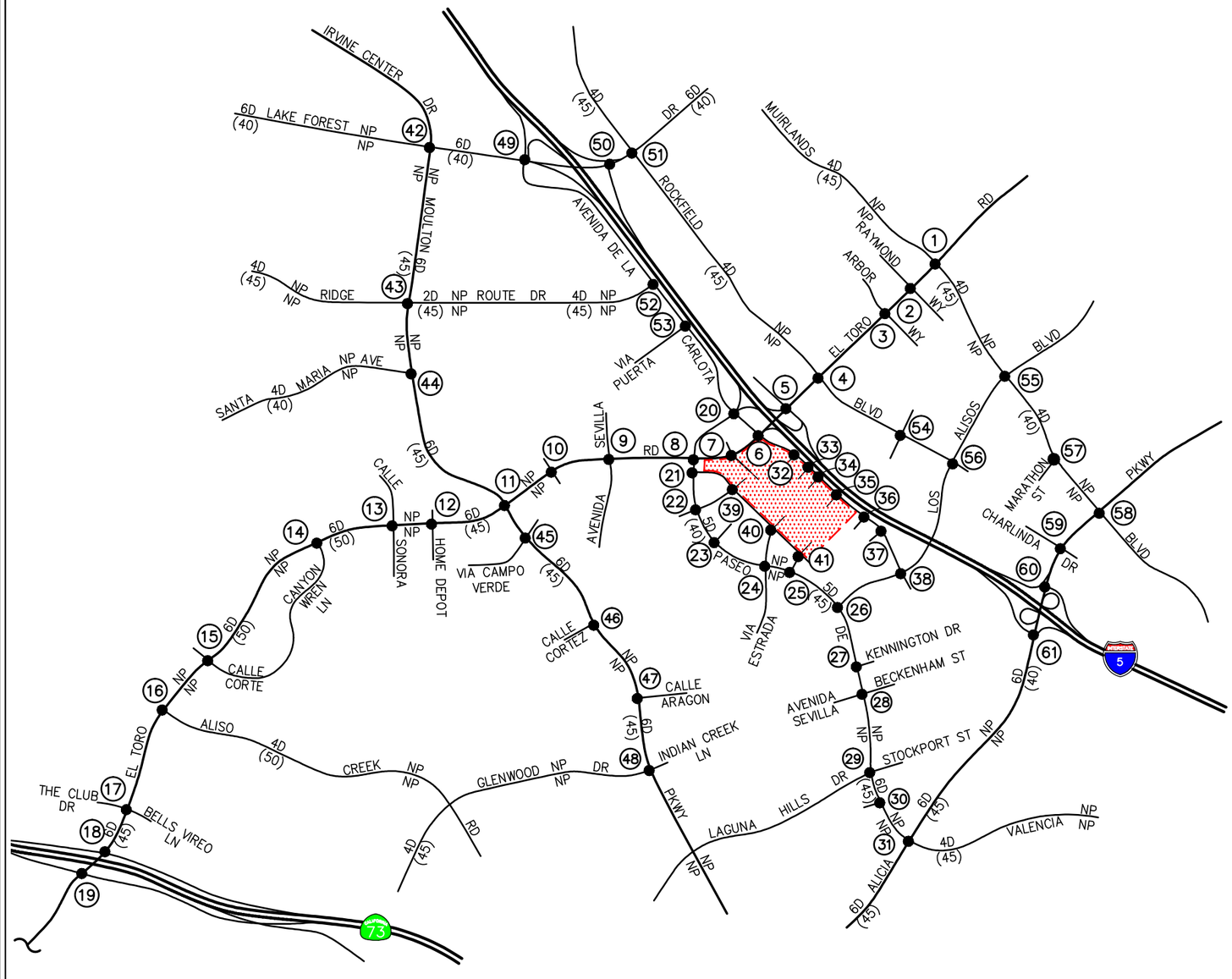
KEY

- ◄— = APPROACH LANE ASSIGNMENT
- ● = TRAFFIC SIGNAL, ☛ = STOP SIGN
- P = PARKING, NP = NO PARKING
- U = UNDIVIDED, D = DIVIDED
- 2 = NUMBER OF TRAVEL LANES
- (XX)= POSTED SPEED LIMIT (MPH)
- F = FREE RIGHT, OL = OVERLAP
- * = FUNCTIONS AS A SEPARATE RIGHT-TURN LANE, HOWEVER IS NOT STRIPED AS SUCH (I.E. MINIMUM LANE WIDTH OF 22' AND AT LEAST 100' CLEARANCE ALONG CURB)
- = PROJECT SITE

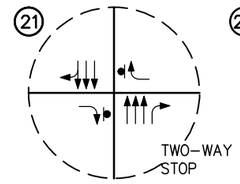
FIGURE 3A

EXISTING ROADWAY AND INTERSECTION PHYSICAL CHARACTERISTICS

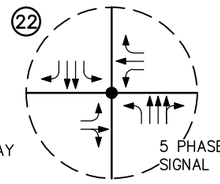
VILLAGE AT LAGUNA HILLS



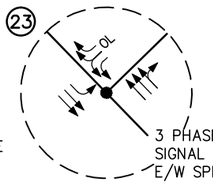
SEE FIGURE 3D FOR INTERSECTIONS #62 – 68



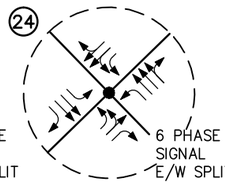
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



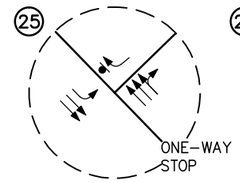
PASEO DE VALENCIA @ CALLE DE LA PLATA



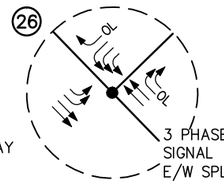
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



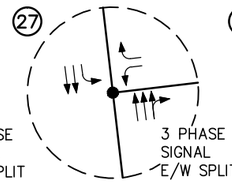
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



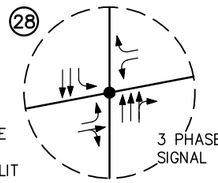
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



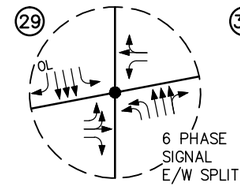
PASEO DE VALENCIA @ LOS ALISOS BLVD



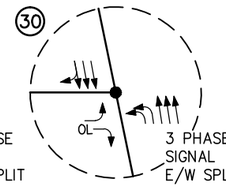
PASEO DE VALENCIA @ KENNINGTON DR



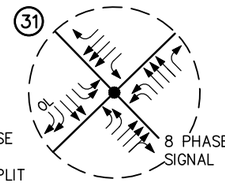
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



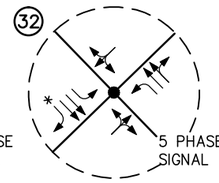
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



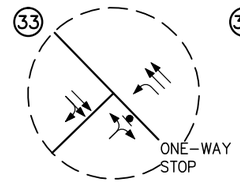
PASEO DE VALENCIA@ HAWK HWY



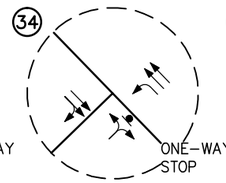
PASEO DE VALENCIA @ ALICIA PKWY



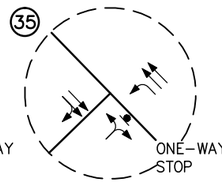
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



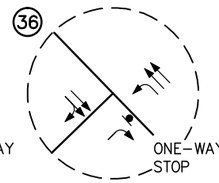
AVENIDA DE LA CARLOTA @ MALL DWY 1



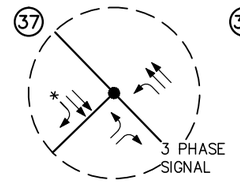
AVENIDA DE LA CARLOTA @ MALL DWY 2



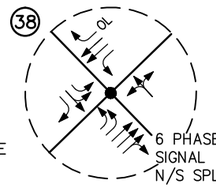
AVENIDA DE LA CARLOTA @ MALL DWY 3



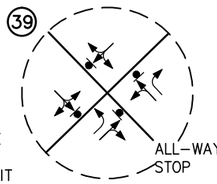
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



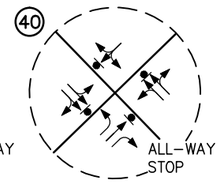
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

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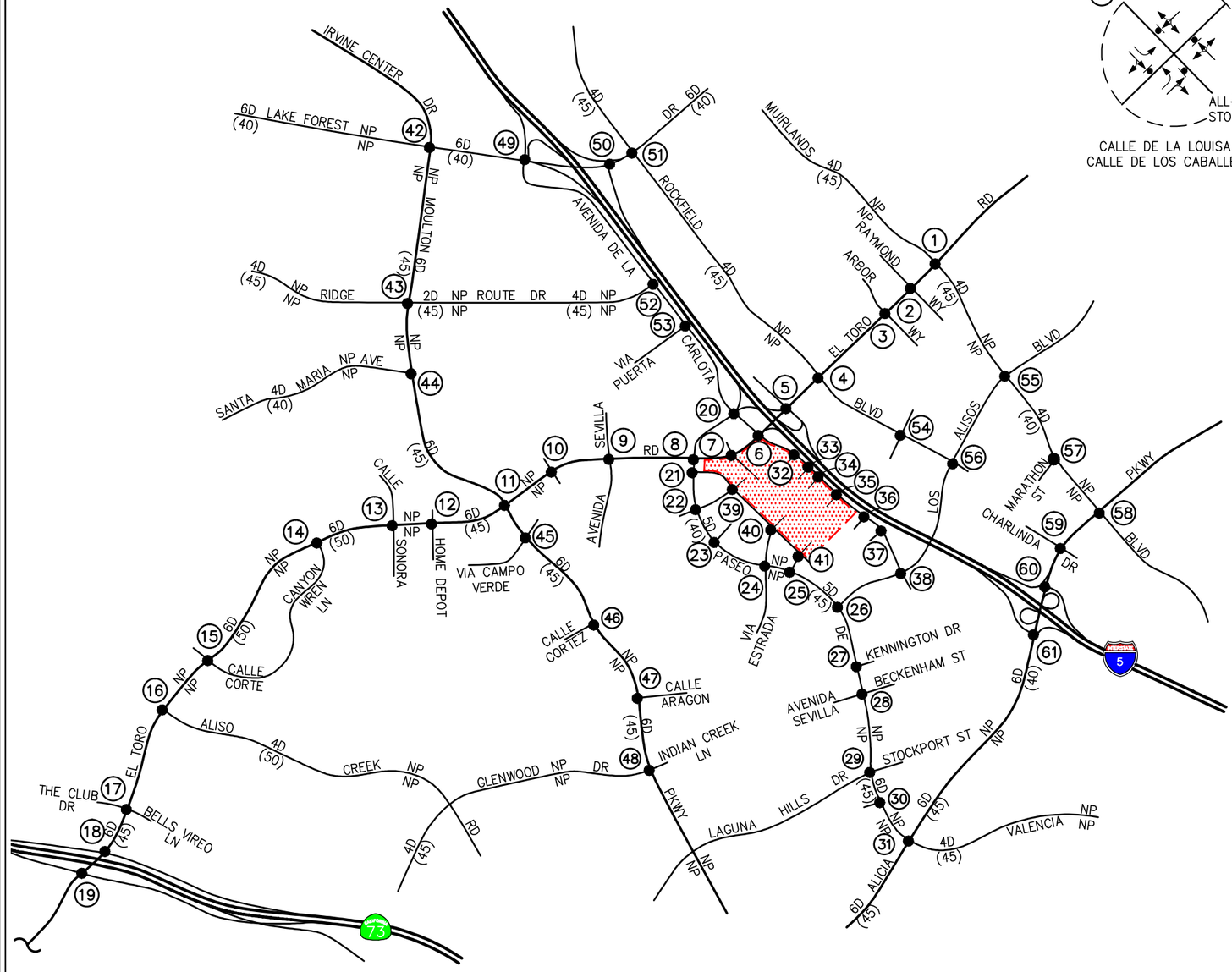
- * = FUNCTIONS AS A SEPARATE RIGHT-TURN LANE, HOWEVER IS NOT STRIPED AS SUCH (I.E. MINIMUM LANE WIDTH OF 22' AND AT LEAST 100' CLEARANCE ALONG CURB)
- = PROJECT SITE

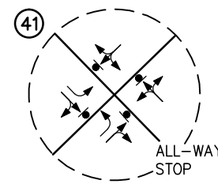
FIGURE 3B

EXISTING ROADWAY AND INTERSECTION PHYSICAL CHARACTERISTICS

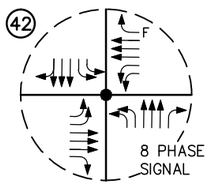
VILLAGE AT LAGUNA HILLS



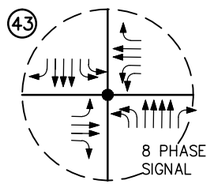
SEE FIGURE 3D FOR INTERSECTIONS #62 – 68



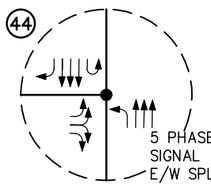
CALLE DE LA LOUISA @ CALLE DE LOS CABALLEROS



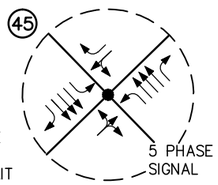
IRVINE CENTER DR/ MOULTON PKWY @ LAKE FOREST DR



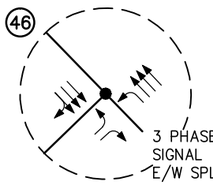
MOULTON PKWY @ RIDGE ROUTE DR



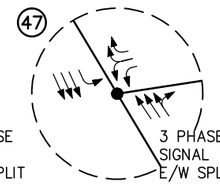
MOULTON PKWY @ SANTA MARIA AVE



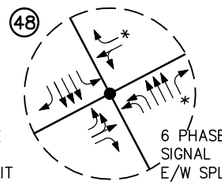
MOULTON PKWY @ VIA CAMPO VERDE



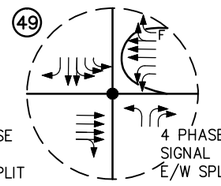
MOULTON PKWY @ CALLE CORTEZ



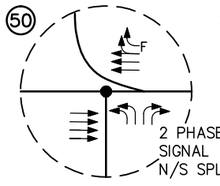
MOULTON PKWY @ CALLE ARAGON



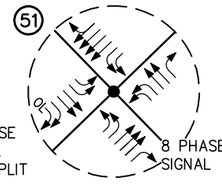
MOULTON PKWY @ GLENWOOD DR/ INDIAN CREEK LN



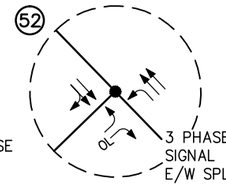
AVENIDA DE LA CARLOTA/ I-5 SB RAMPS @ LAKE FOREST DR



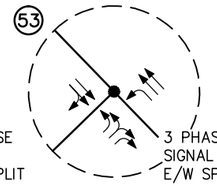
I-5 NB RAMPS @ LAKE FOREST DR



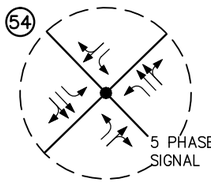
ROCKFIELD BLVD @ LAKE FOREST DR



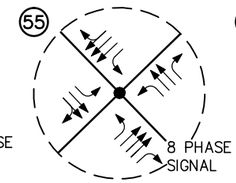
AVENIDA DE LA CARLOTA @ RIDGE ROUTE DR



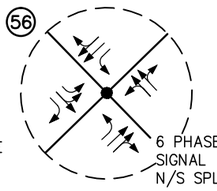
AVENIDA DE LA CARLOTA @ VIA PUERTA



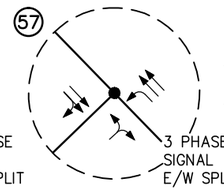
ROCKFIELD BLVD @ LANDISVIEW AVE



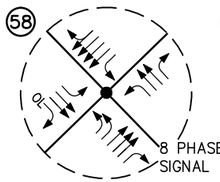
MUIRLANDS BLVD @ LOS ALISOS BLVD



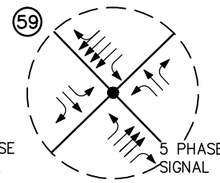
ROCKFIELD BLVD/FORDVIEW @ LOS ALISOS BLVD



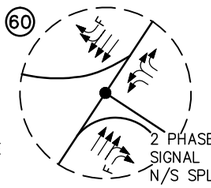
MUIRLANDS BLVD @ MARATHON ST



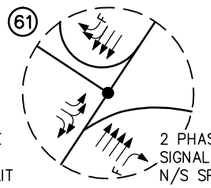
MUIRLANDS BLVD @ ALICIA PKWY



CHARLINDA DR @ ALICIA PKWY



I-5 NB RAMPS @ ALICIA PKWY



I-5 SB RAMPS @ ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

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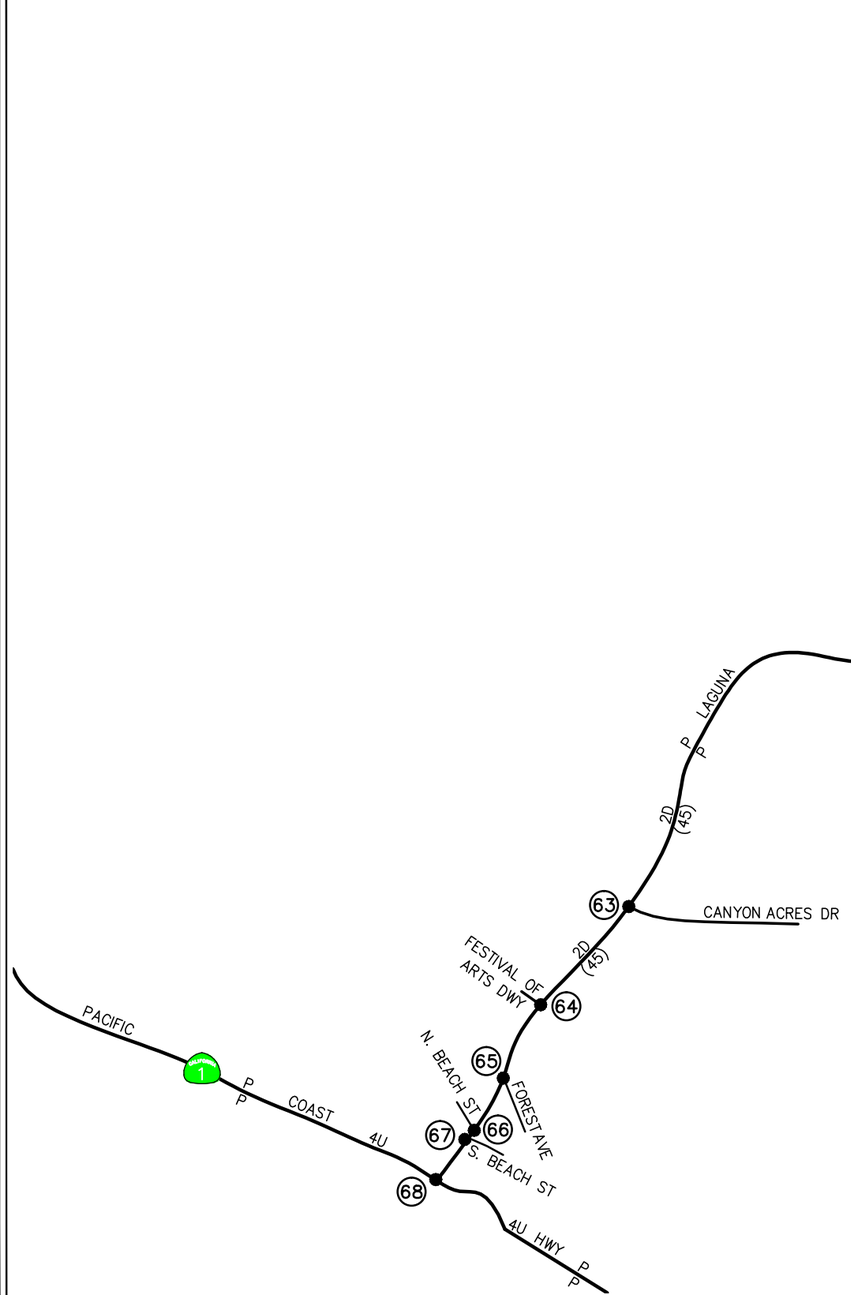
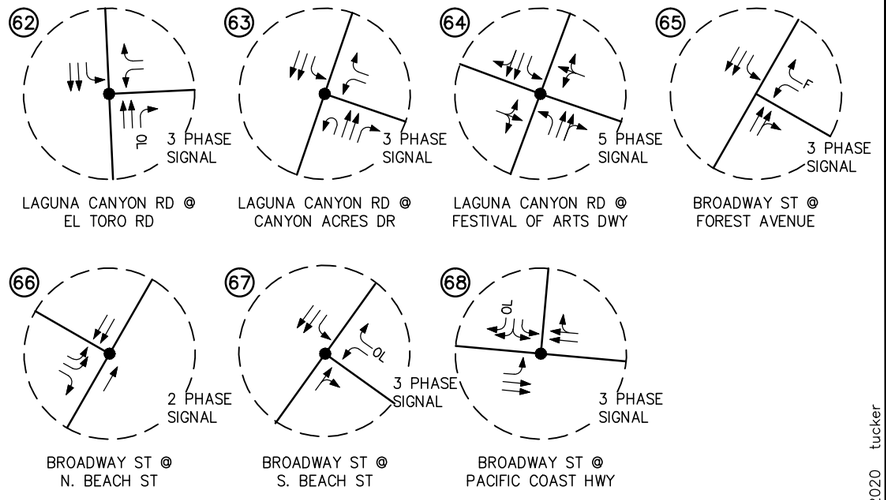
- = PROJECT SITE

FIGURE 3C

EXISTING ROADWAY AND INTERSECTION PHYSICAL CHARACTERISTICS

VILLAGE AT LAGUNA HILLS





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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

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- (XX)= POSTED SPEED LIMIT (MPH)
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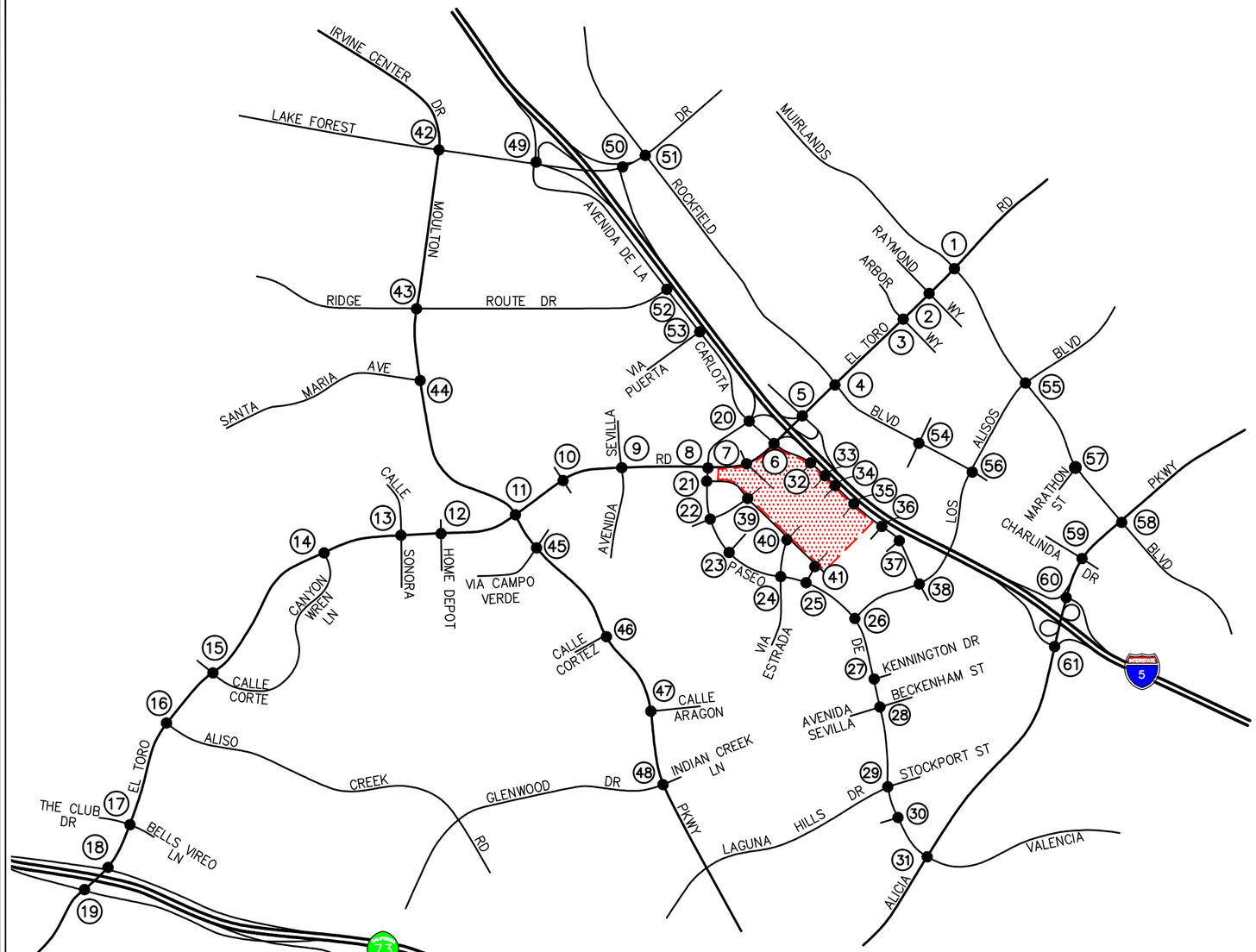
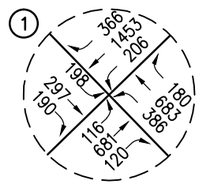
- = PROJECT SITE

FIGURE 3D

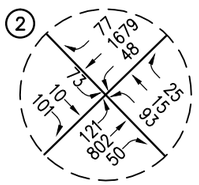
EXISTING ROADWAY AND INTERSECTION PHYSICAL CHARACTERISTICS

VILLAGE AT LAGUNA HILLS

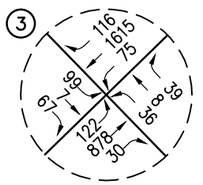




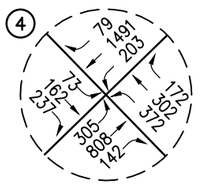
MUIRLANDS BLVD @
EL TORO RD



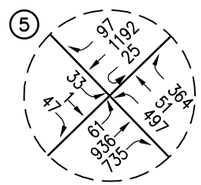
RAYMOND WY @
EL TORO RD



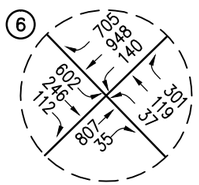
ARBOR WY @
EL TORO RD



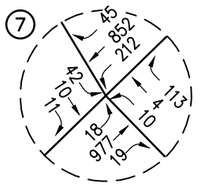
ROCKFIELD BLVD @
EL TORO RD



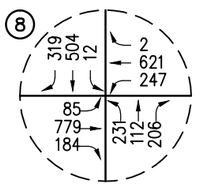
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



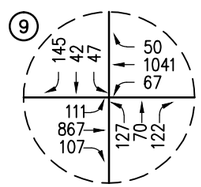
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



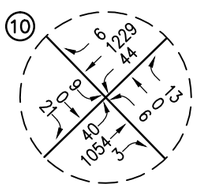
REGIONAL CENTER DR @
EL TORO RD



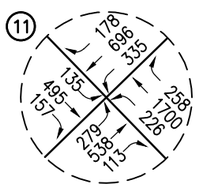
PASEO DE VALENCIA @
EL TORO RD



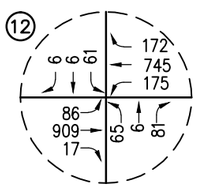
AVENIDA SEVILLA @
EL TORO RD



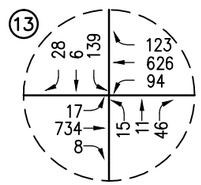
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



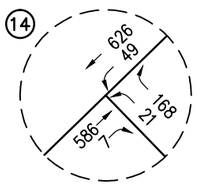
MOULTON PKWY @
EL TORO RD



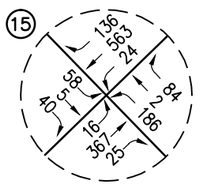
HOME DEPOT/TOWN CENTRE @
EL TORO RD



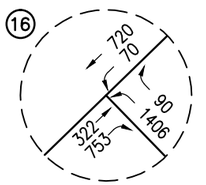
CALLE SONORA @
EL TORO RD



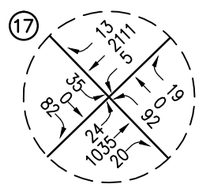
CANYON WREN LN @
EL TORO RD



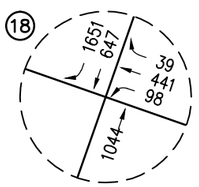
CALLE CORTA @
EL TORO RD



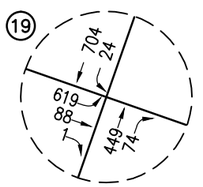
ALISO CREEK RD @
EL TORO RD



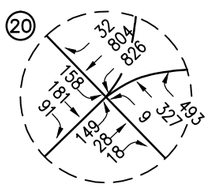
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

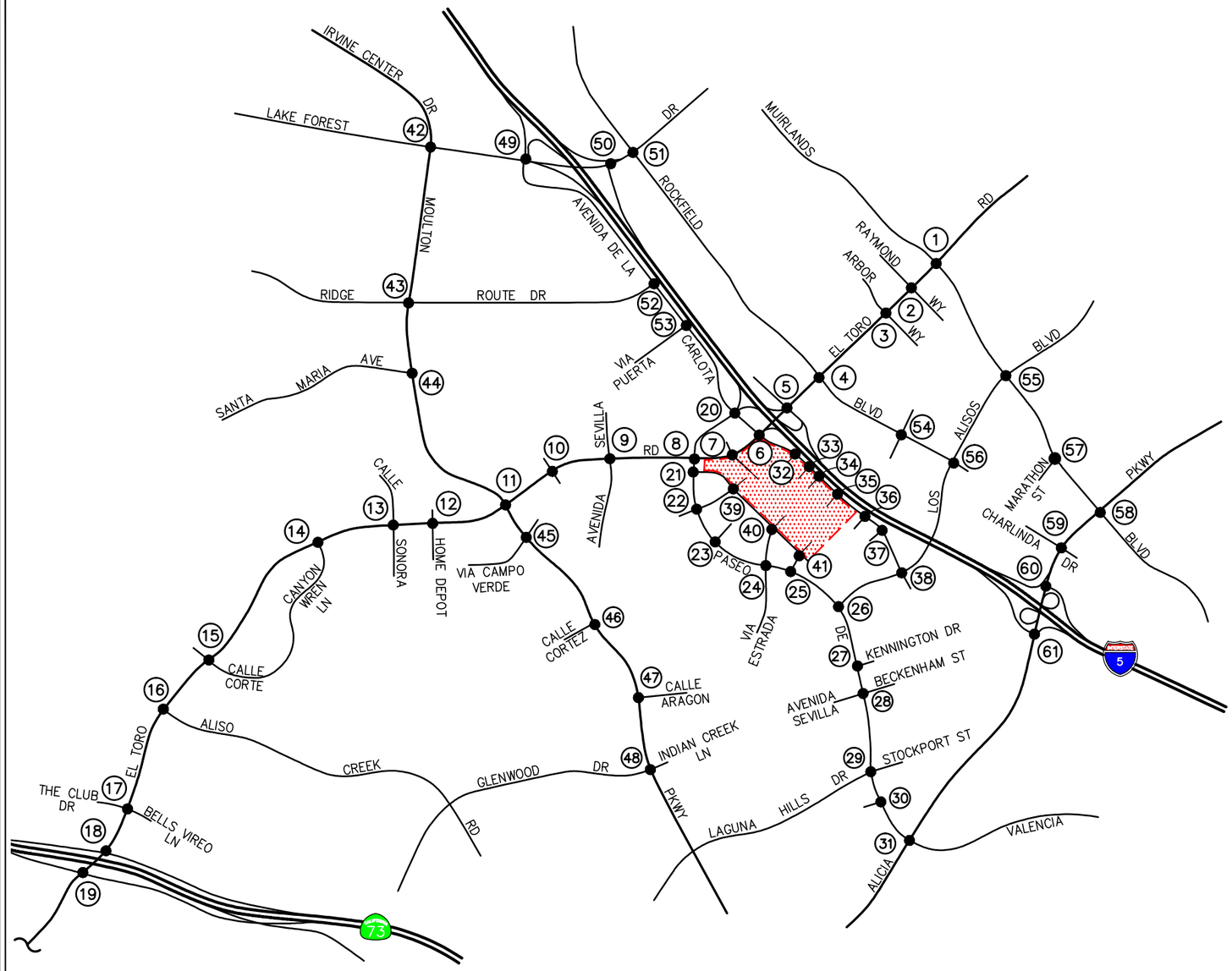
(#) = STUDY INTERSECTION

= PROJECT SITE

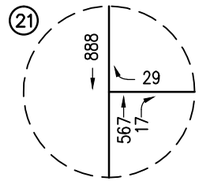
FIGURE 4A

EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

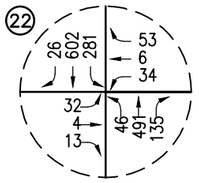
VILLAGE AT LAGUNA HILLS



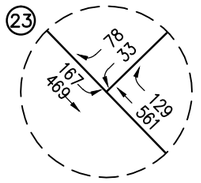
SEE FIGURE 4D FOR INTERSECTIONS #62 – 68



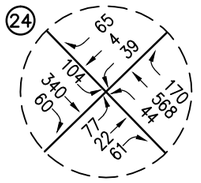
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



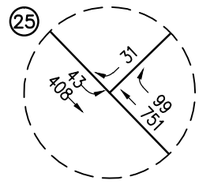
PASEO DE VALENCIA @ CALLE DE LA PLATA



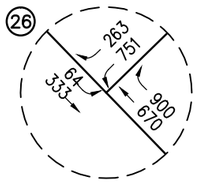
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



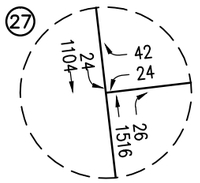
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



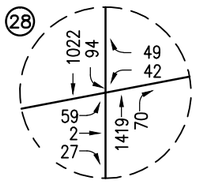
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



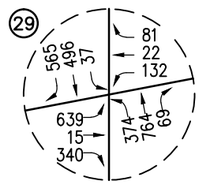
PASEO DE VALENCIA @ LOS ALISOS BLVD



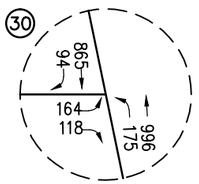
PASEO DE VALENCIA @ KENNINGTON DR



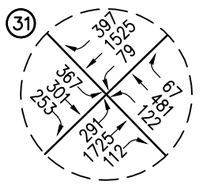
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



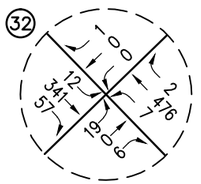
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



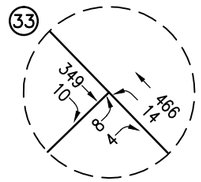
PASEO DE VALENCIA@ HAWK HWY



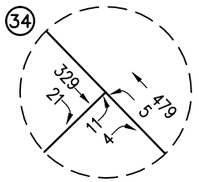
PASEO DE VALENCIA @ ALICIA PKWY



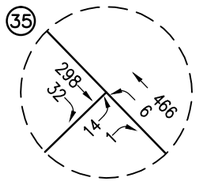
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



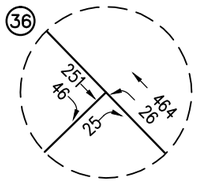
AVENIDA DE LA CARLOTA @ MALL DWY 1



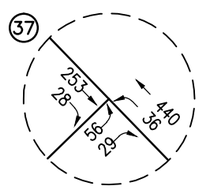
AVENIDA DE LA CARLOTA @ MALL DWY 2



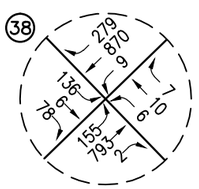
AVENIDA DE LA CARLOTA @ MALL DWY 3



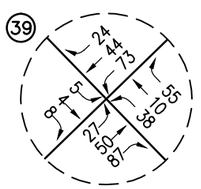
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



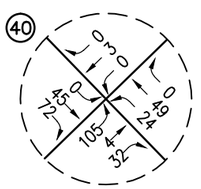
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

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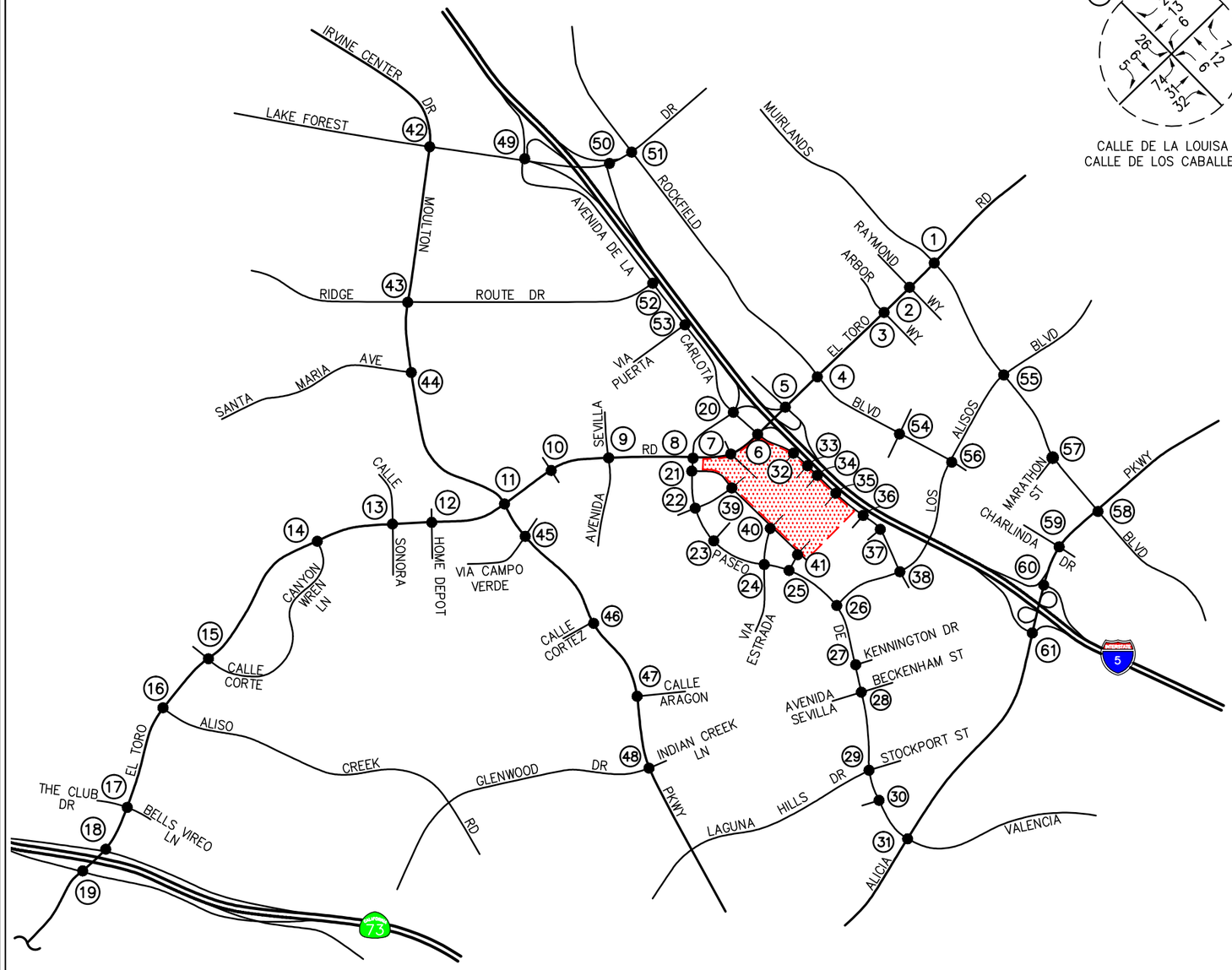
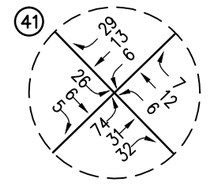
FIGURE 4B

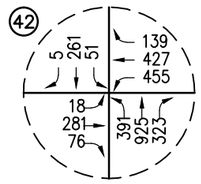
EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

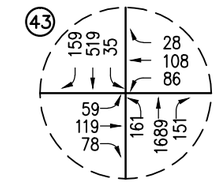




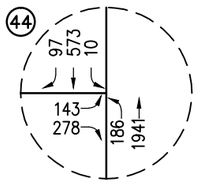
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



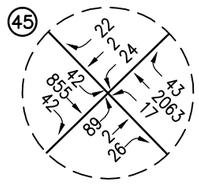
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



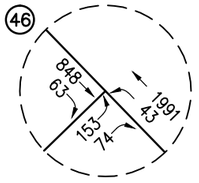
MOULTON PKWY @
RIDGE ROUTE DR



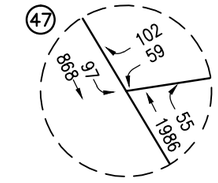
MOULTON PKWY @
SANTA MARIA AVE



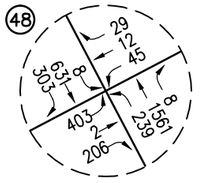
MOULTON PKWY @
VIA CAMPO VERDE



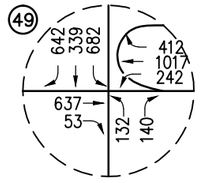
MOULTON PKWY @
CALLE CORTEZ



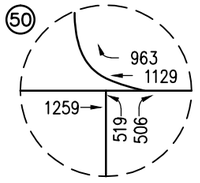
MOULTON PKWY @
CALLE ARAGON



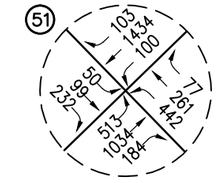
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



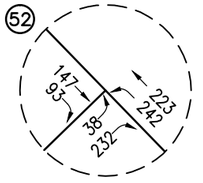
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



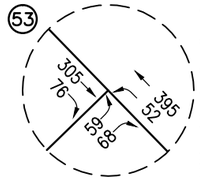
I-5 NB RAMPS @
LAKE FOREST DR



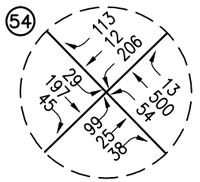
ROCKFIELD BLVD @
LAKE FOREST DR



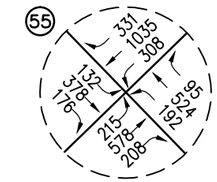
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



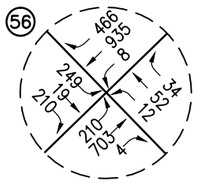
AVENIDA DE LA CARLOTA @
VIA PUERTA



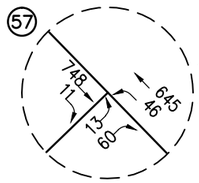
ROCKFIELD BLVD @
LANDISVIEW AVE



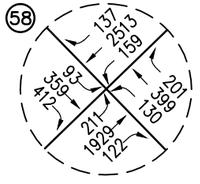
MUIRLANDS BLVD @
LOS ALISOS BLVD



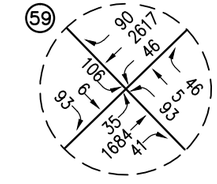
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



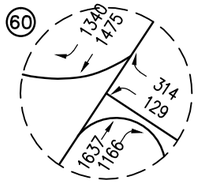
MUIRLANDS BLVD @
MARATHON ST



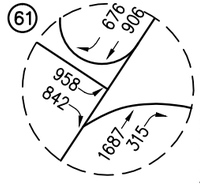
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

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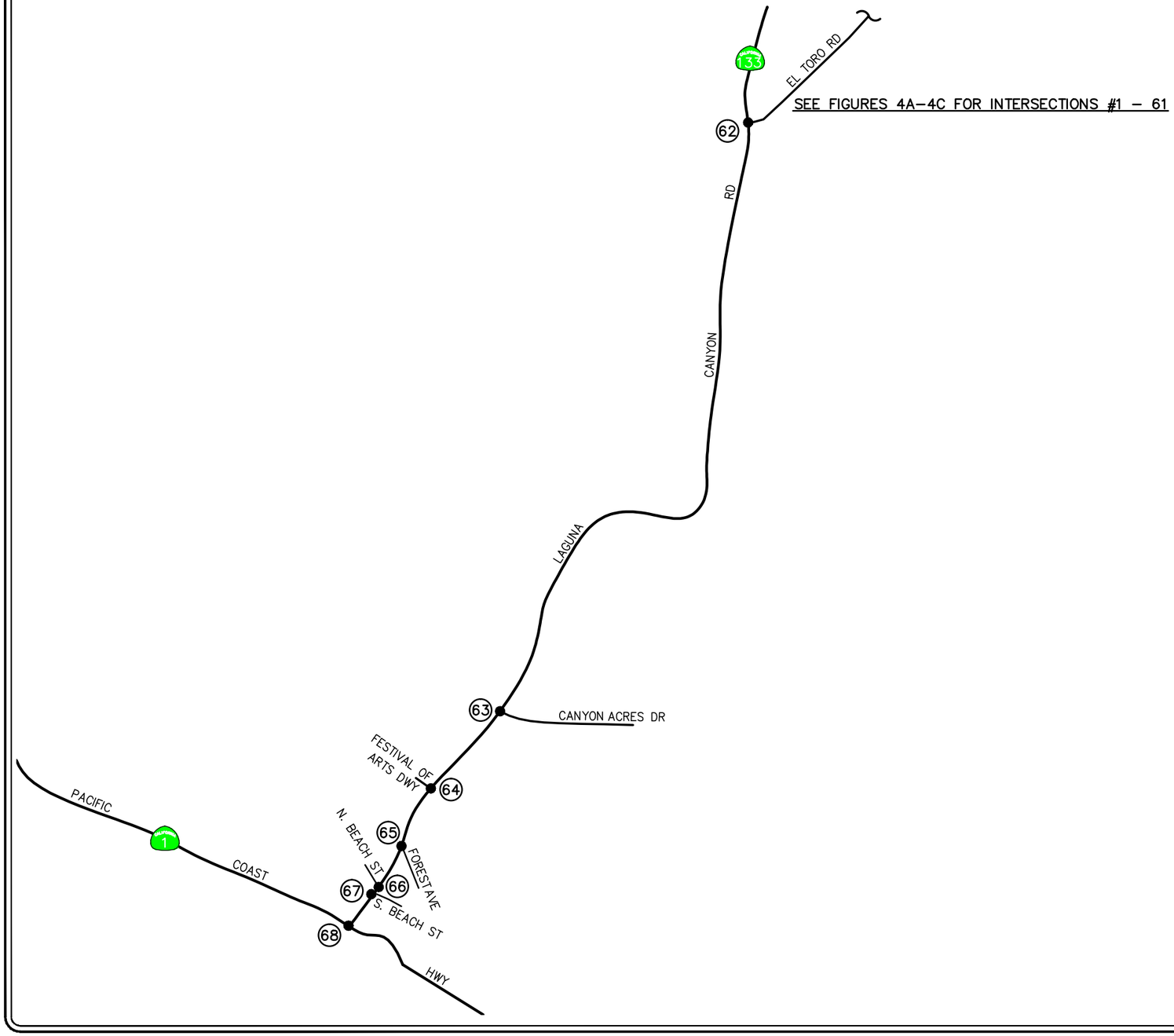
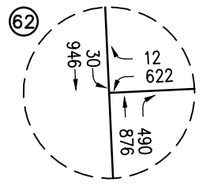
FIGURE 4C

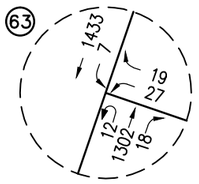
EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

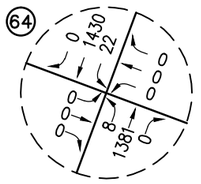




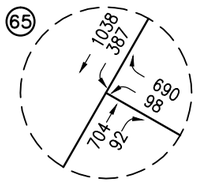
LAGUNA CANYON RD @
EL TORO RD



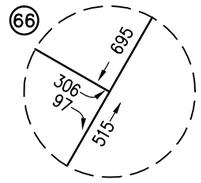
LAGUNA CANYON RD @
CANYON ACRES DR



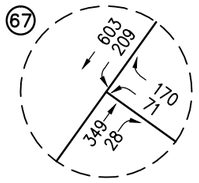
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



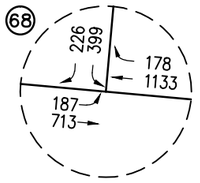
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

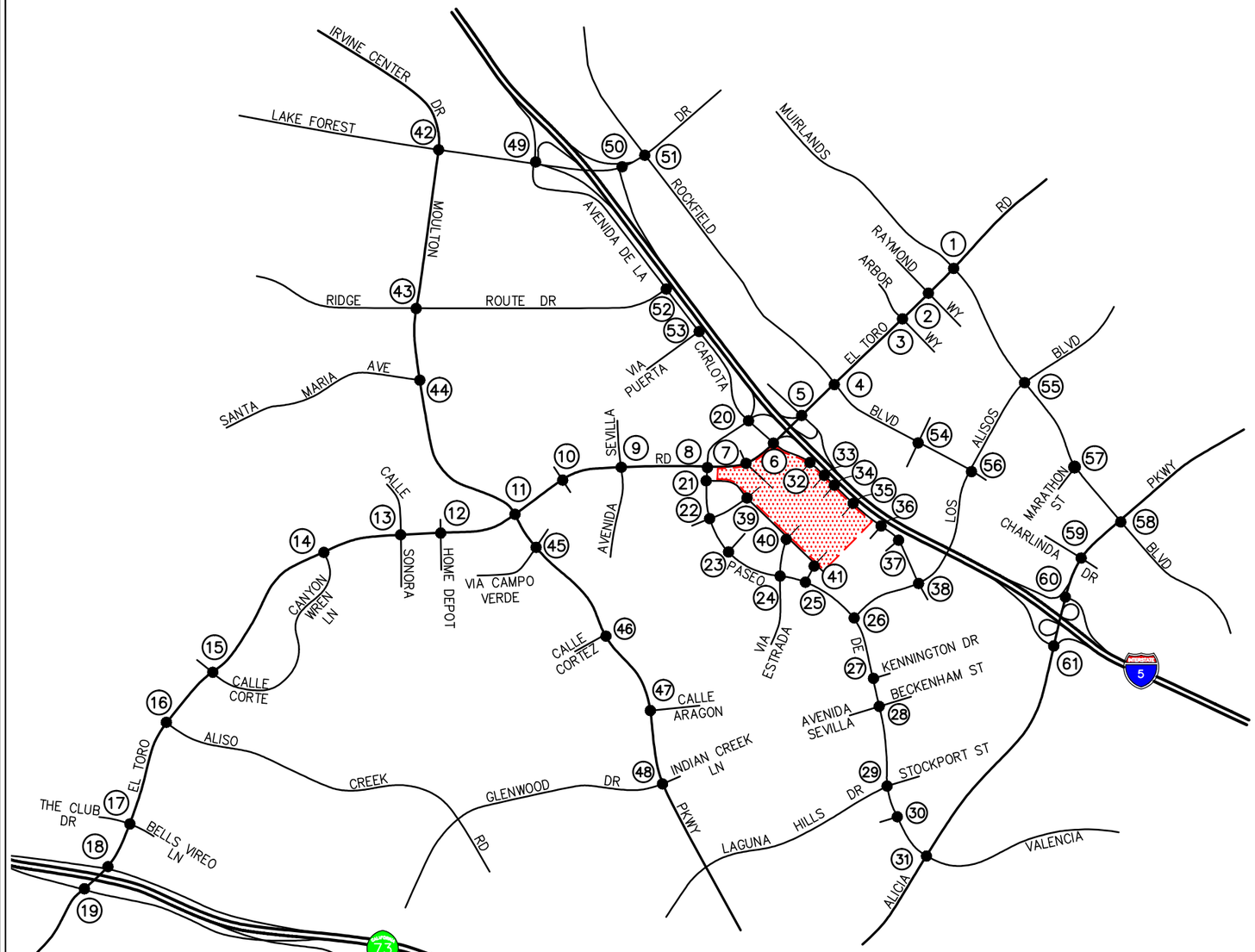
KEY

(#) = STUDY INTERSECTION

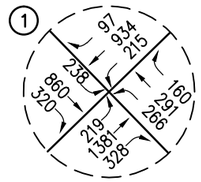
FIGURE 4D

EXISTING (2019) AM PEAK HOUR TRAFFIC VOLUMES

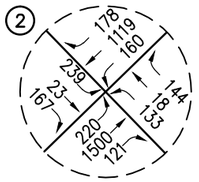
VILLAGE AT LAGUNA HILLS



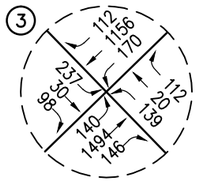
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



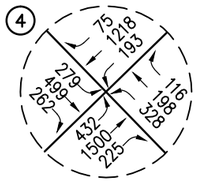
MUIRLANDS BLVD @
EL TORO RD



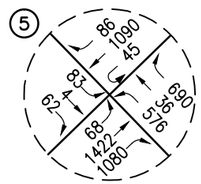
RAYMOND WY @
EL TORO RD



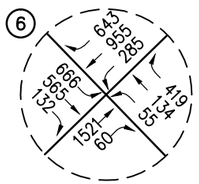
ARBOR WY @
EL TORO RD



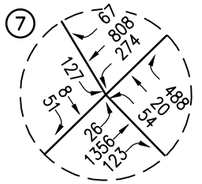
ROCKFIELD BLVD @
EL TORO RD



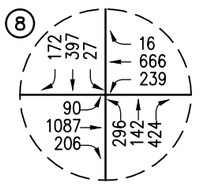
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



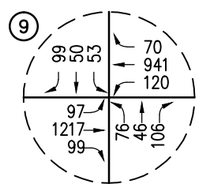
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



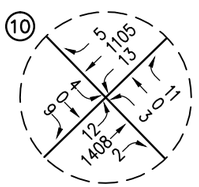
REGIONAL CENTER DR @
EL TORO RD



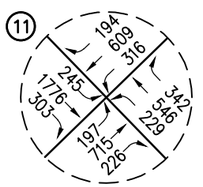
PASEO DE VALENCIA @
EL TORO RD



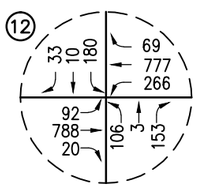
AVENIDA SEVILLA @
EL TORO RD



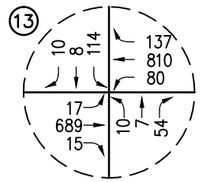
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



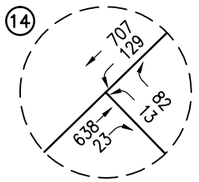
MOULTON PKWY @
EL TORO RD



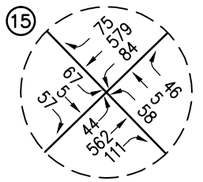
HOME DEPOT/TOWN CENTRE @
EL TORO RD



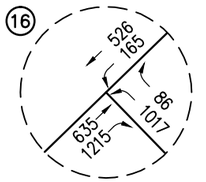
CALLE SONORA @
EL TORO RD



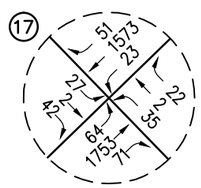
CANYON WREN LN @
EL TORO RD



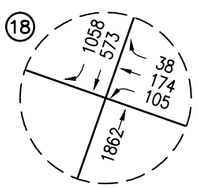
CALLE CORTA @
EL TORO RD



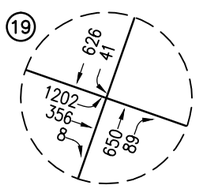
ALISO CREEK RD @
EL TORO RD



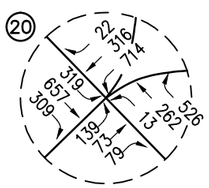
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f5-a.dwg LDP 10:27:53 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

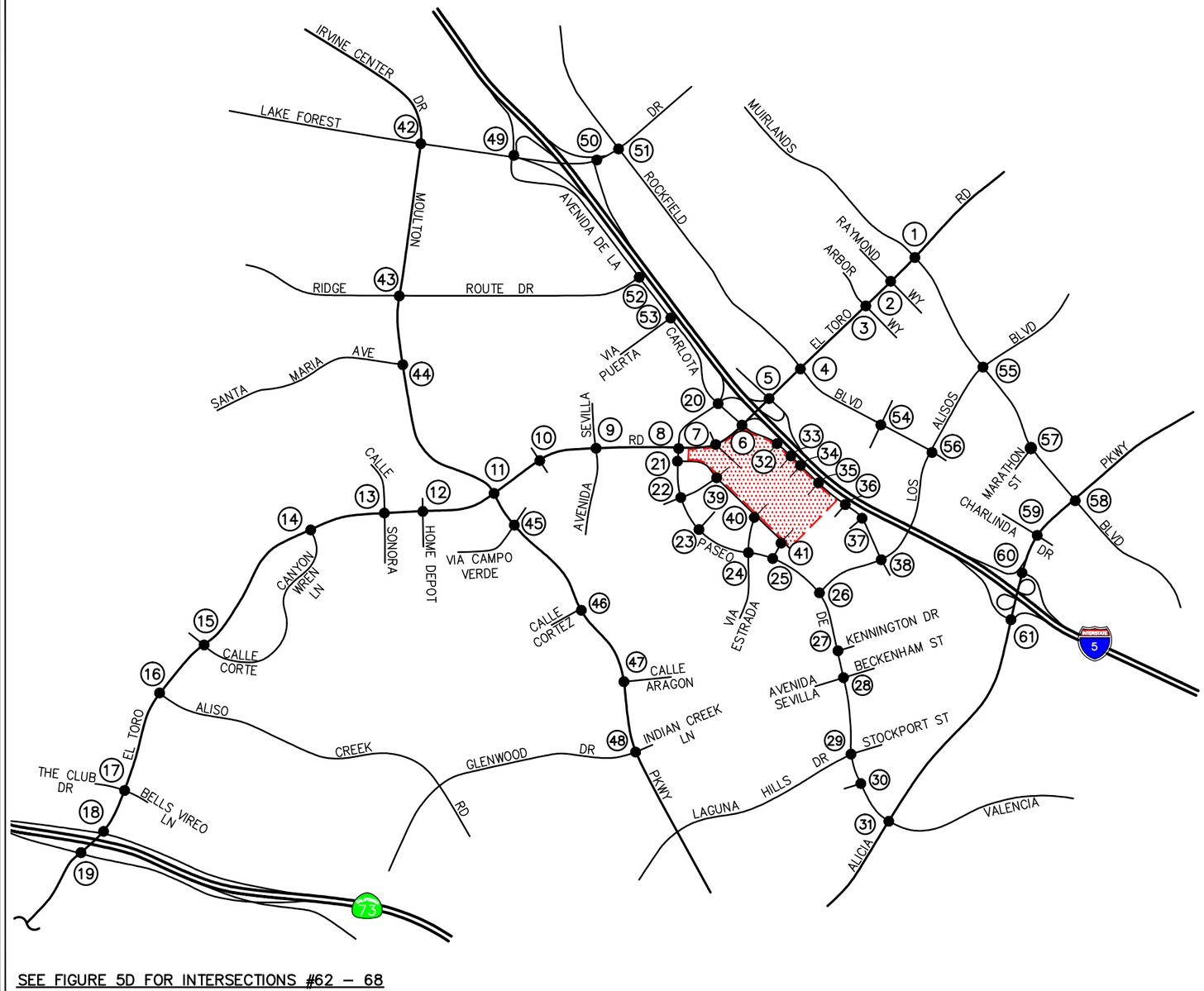
(#) = STUDY INTERSECTION

= PROJECT SITE

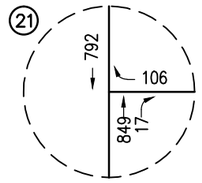
FIGURE 5A

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

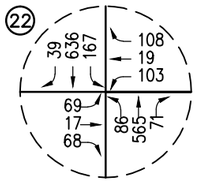
VILLAGE AT LAGUNA HILLS



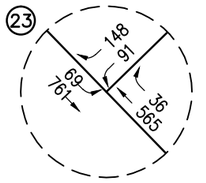
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



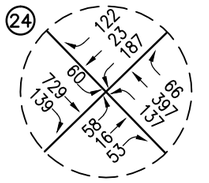
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



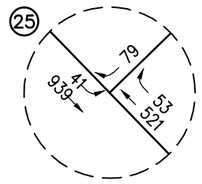
PASEO DE VALENCIA @ CALLE DE LA PLATA



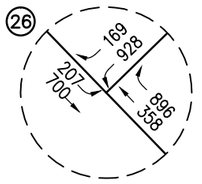
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



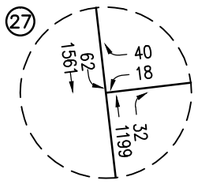
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



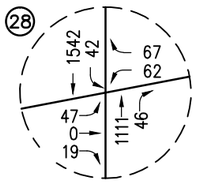
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



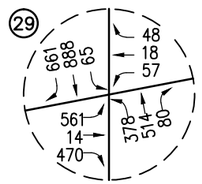
PASEO DE VALENCIA @ LOS ALISOS BLVD



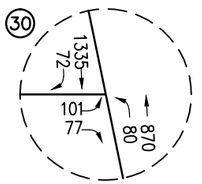
PASEO DE VALENCIA @ KENNINGTON DR



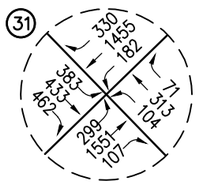
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



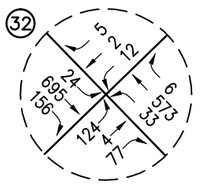
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



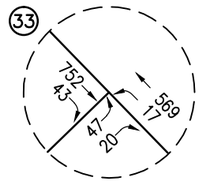
PASEO DE VALENCIA@ HAWK HWY



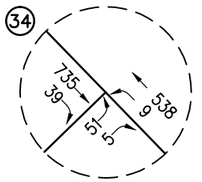
PASEO DE VALENCIA @ ALICIA PKWY



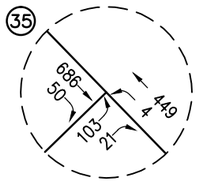
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



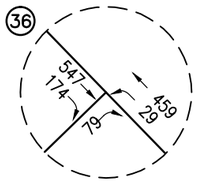
AVENIDA DE LA CARLOTA @ MALL DWY 1



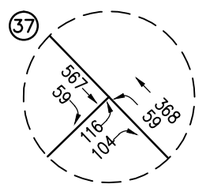
AVENIDA DE LA CARLOTA @ MALL DWY 2



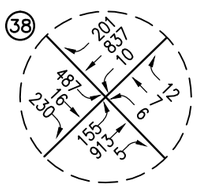
AVENIDA DE LA CARLOTA @ MALL DWY 3



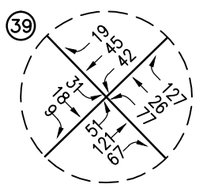
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



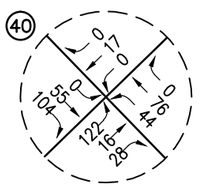
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f5-b.dwg LDP 10:28:43 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

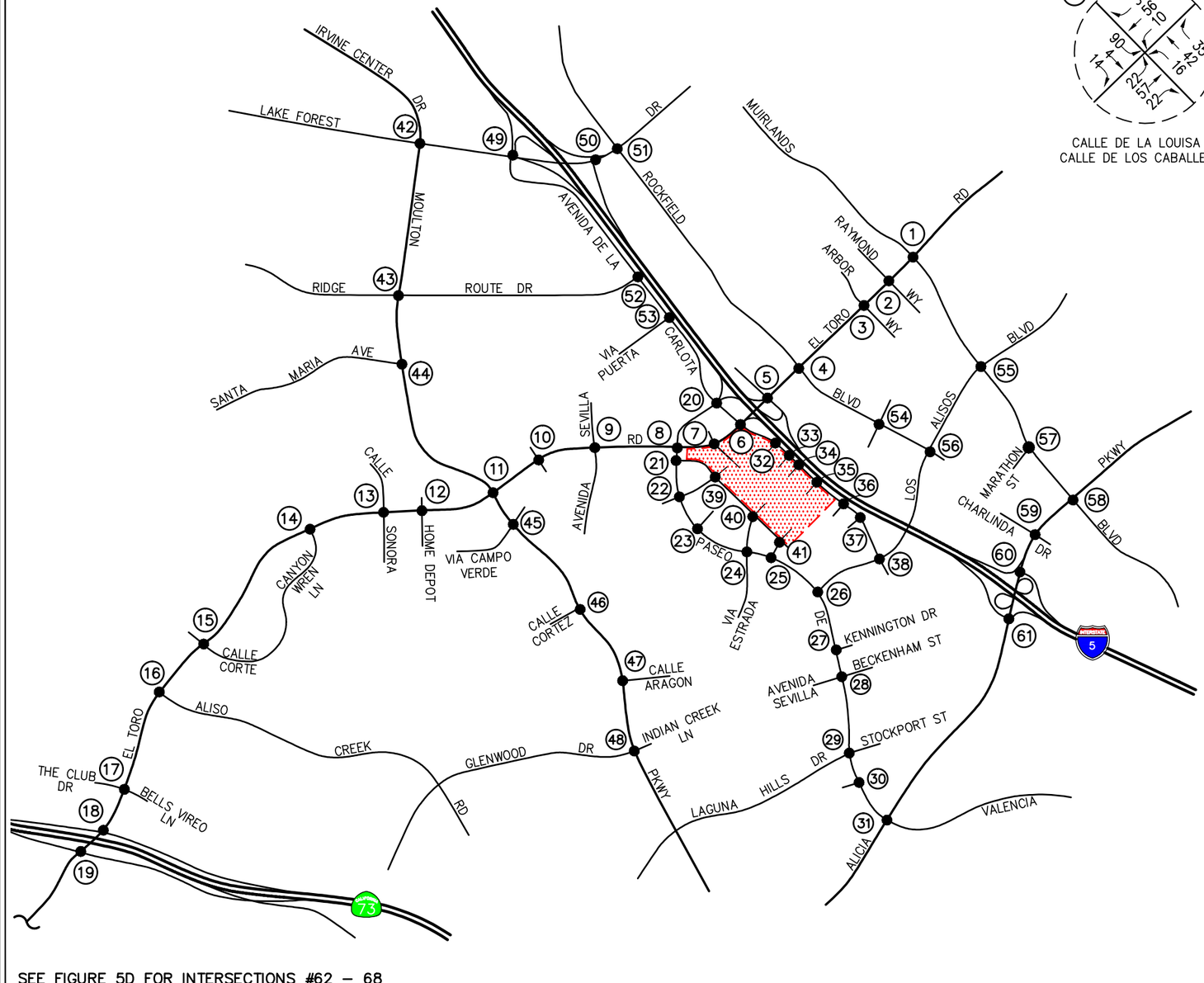
(#) = STUDY INTERSECTION

= PROJECT SITE

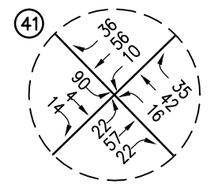
FIGURE 5B

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

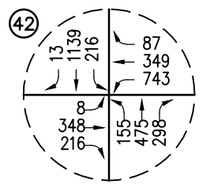
VILLAGE AT LAGUNA HILLS



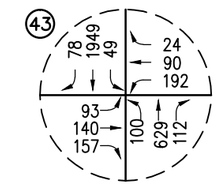
SEE FIGURE 5D FOR INTERSECTIONS #62 – 68



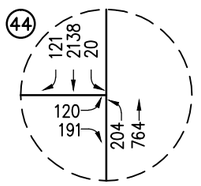
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



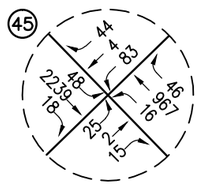
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



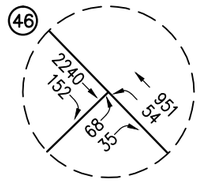
MOULTON PKWY @
RIDGE ROUTE DR



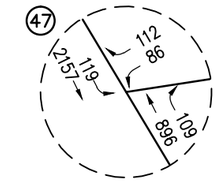
MOULTON PKWY @
SANTA MARIA AVE



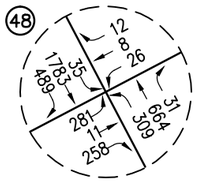
MOULTON PKWY @
VIA CAMPO VERDE



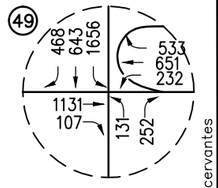
MOULTON PKWY @
CALLE CORTEZ



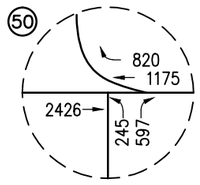
MOULTON PKWY @
CALLE ARAGON



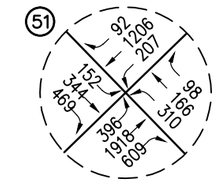
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



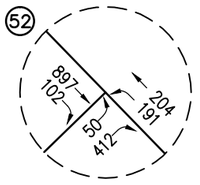
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



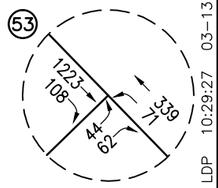
I-5 NB RAMPS @
LAKE FOREST DR



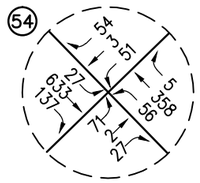
ROCKFIELD BLVD @
LAKE FOREST DR



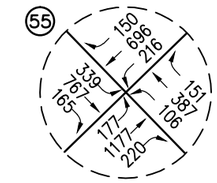
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



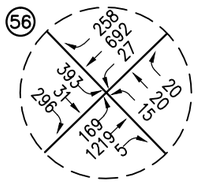
AVENIDA DE LA CARLOTA @
VIA PUERTA



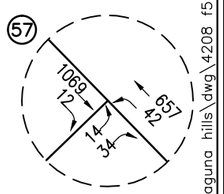
ROCKFIELD BLVD @
LANDISVIEW AVE



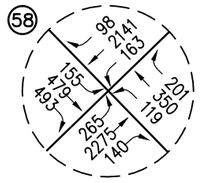
MUIRLANDS BLVD @
LOS ALISOS BLVD



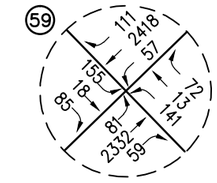
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



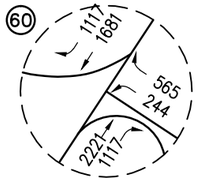
MUIRLANDS BLVD @
MARATHON ST



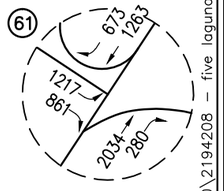
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

n:\4200\2194208 - five lagunas seir, laguna hills\dwg\4208 f5-c.dwg LDP 10:29:27 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

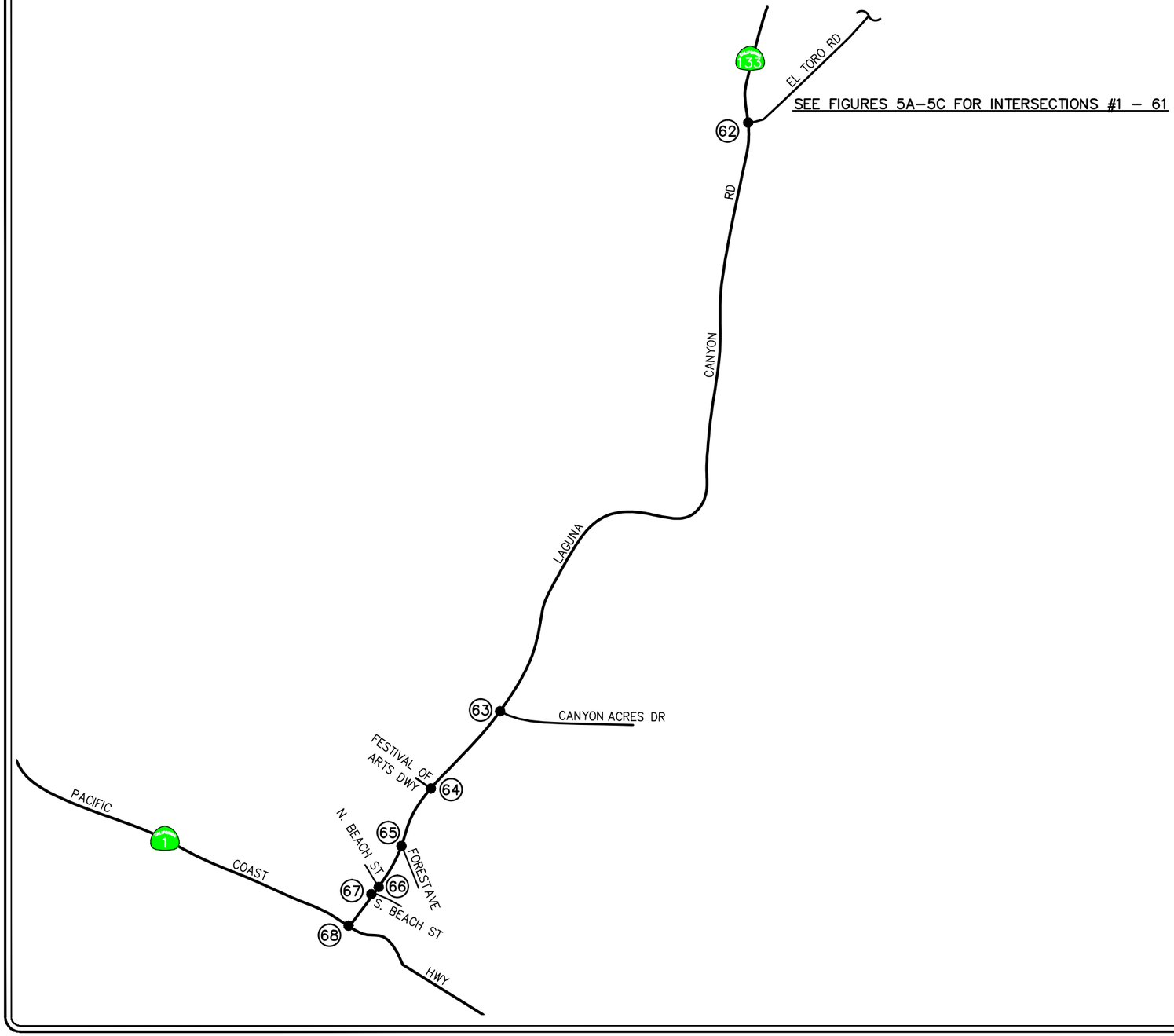
(#) = STUDY INTERSECTION

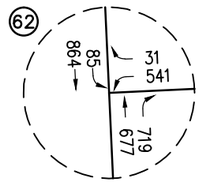
= PROJECT SITE

FIGURE 5C

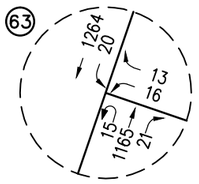
EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

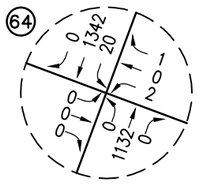




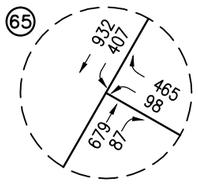
LAGUNA CANYON RD @
EL TORO RD



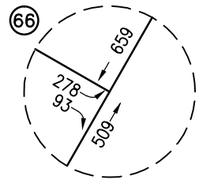
LAGUNA CANYON RD @
CANYON ACRES DR



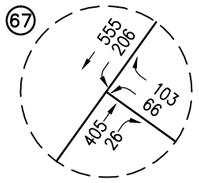
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



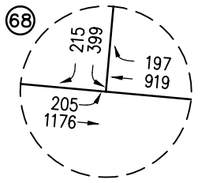
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

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N NO SCALE

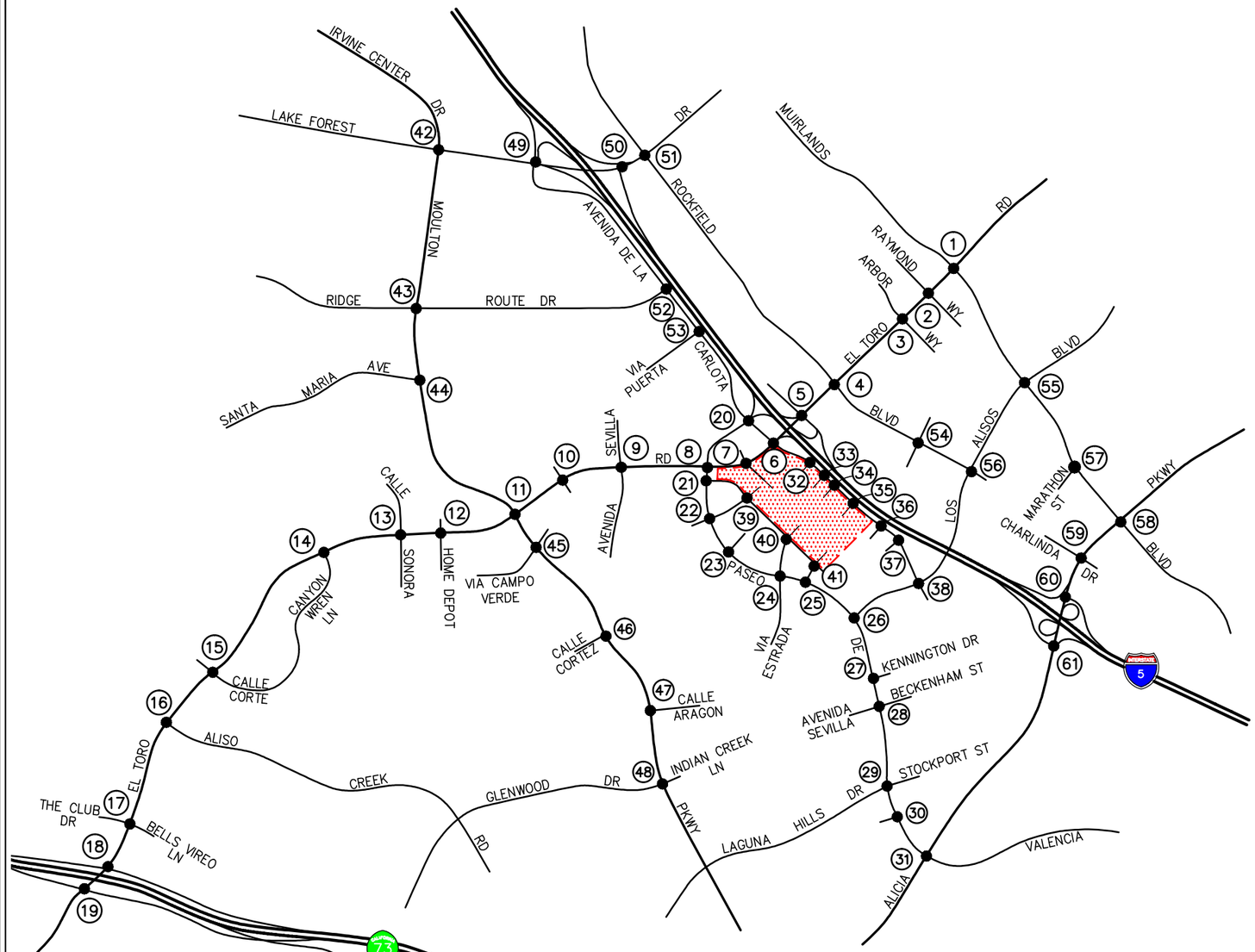
KEY

(#) = STUDY INTERSECTION

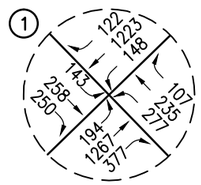
FIGURE 5D

EXISTING (2019) PM PEAK HOUR TRAFFIC VOLUMES

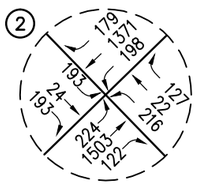
VILLAGE AT LAGUNA HILLS



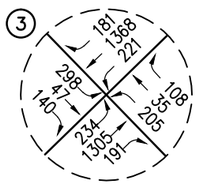
SEE FIGURE 6D FOR INTERSECTIONS #62 – 68



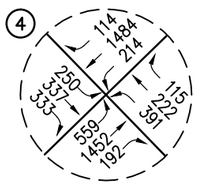
MUIRLANDS BLVD @
EL TORO RD



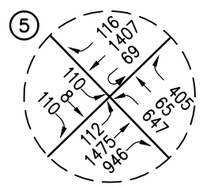
RAYMOND WY @
EL TORO RD



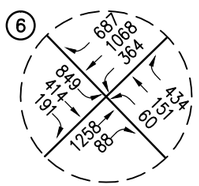
ARBOR WY @
EL TORO RD



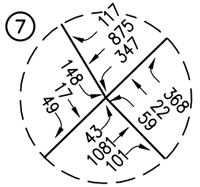
ROCKFIELD BLVD @
EL TORO RD



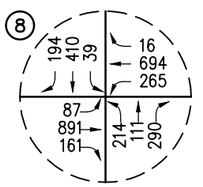
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



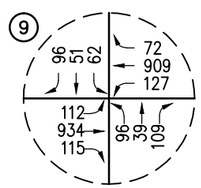
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



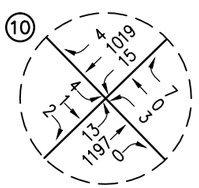
REGIONAL CENTER DR @
EL TORO RD



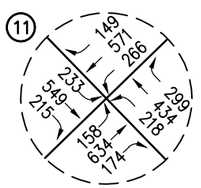
PASEO DE VALENCIA @
EL TORO RD



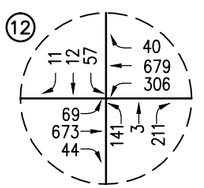
AVENIDA SEVILLA @
EL TORO RD



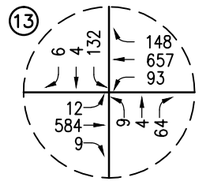
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



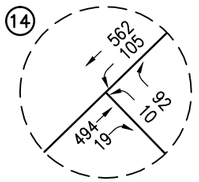
MOULTON PKWY @
EL TORO RD



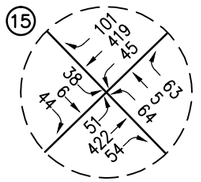
HOME DEPOT/TOWN CENTRE @
EL TORO RD



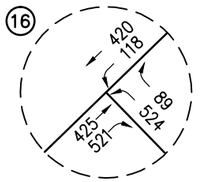
CALLE SONORA @
EL TORO RD



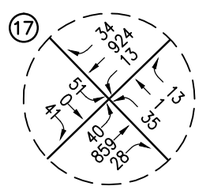
CANYON WREN LN @
EL TORO RD



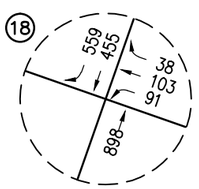
CALLE CORTA @
EL TORO RD



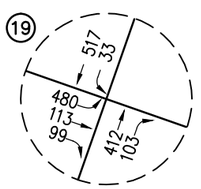
ALISO CREEK RD @
EL TORO RD



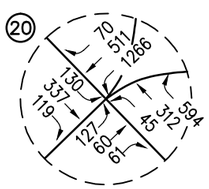
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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N NO SCALE

KEY

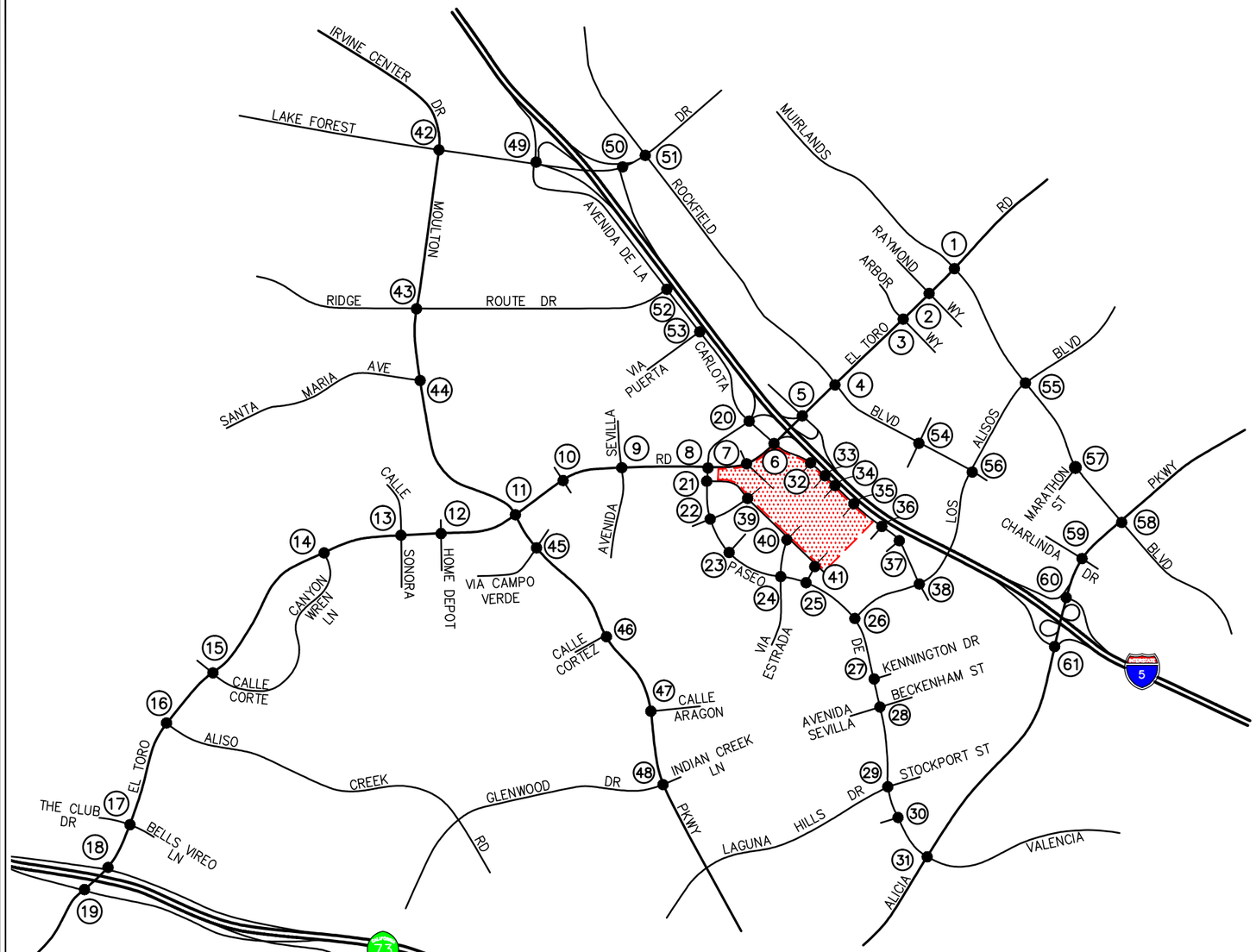
(#) = STUDY INTERSECTION

= PROJECT SITE

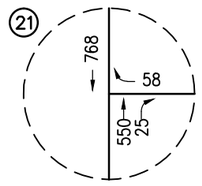
FIGURE 6A

EXISTING (2019) MIDDAY PEAK HOUR TRAFFIC VOLUMES

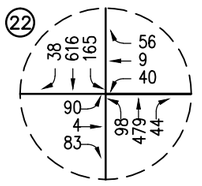
VILLAGE AT LAGUNA HILLS



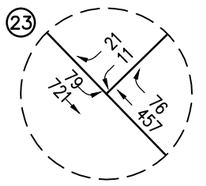
SEE FIGURE 6D FOR INTERSECTIONS #62 – 68



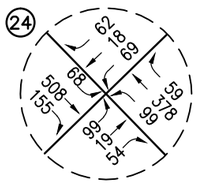
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



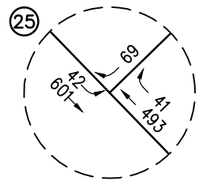
PASEO DE VALENCIA @ CALLE DE LA PLATA



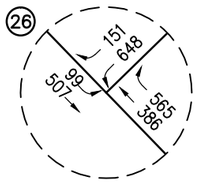
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



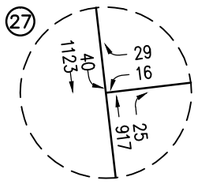
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



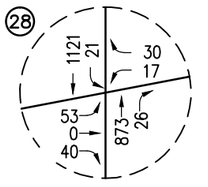
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



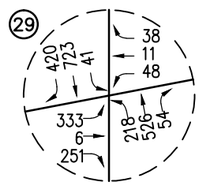
PASEO DE VALENCIA @ LOS ALISOS BLVD



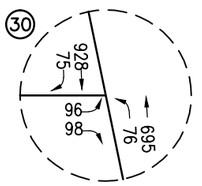
PASEO DE VALENCIA @ KENNINGTON DR



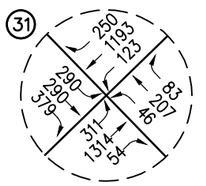
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



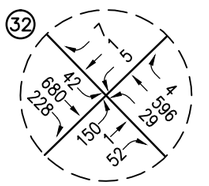
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



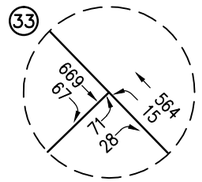
PASEO DE VALENCIA@ HAWK HWY



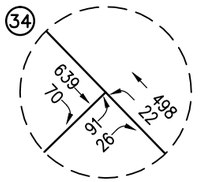
PASEO DE VALENCIA @ ALICIA PKWY



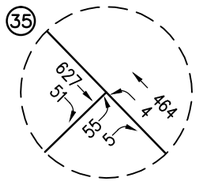
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



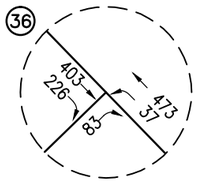
AVENIDA DE LA CARLOTA @ MALL DWY 1



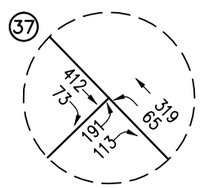
AVENIDA DE LA CARLOTA @ MALL DWY 2



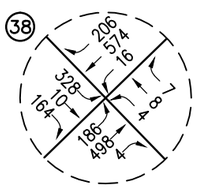
AVENIDA DE LA CARLOTA @ MALL DWY 3



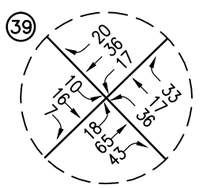
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



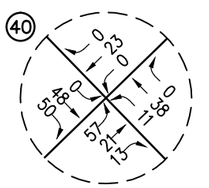
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f6-b.dwg LDP 10:32:26 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

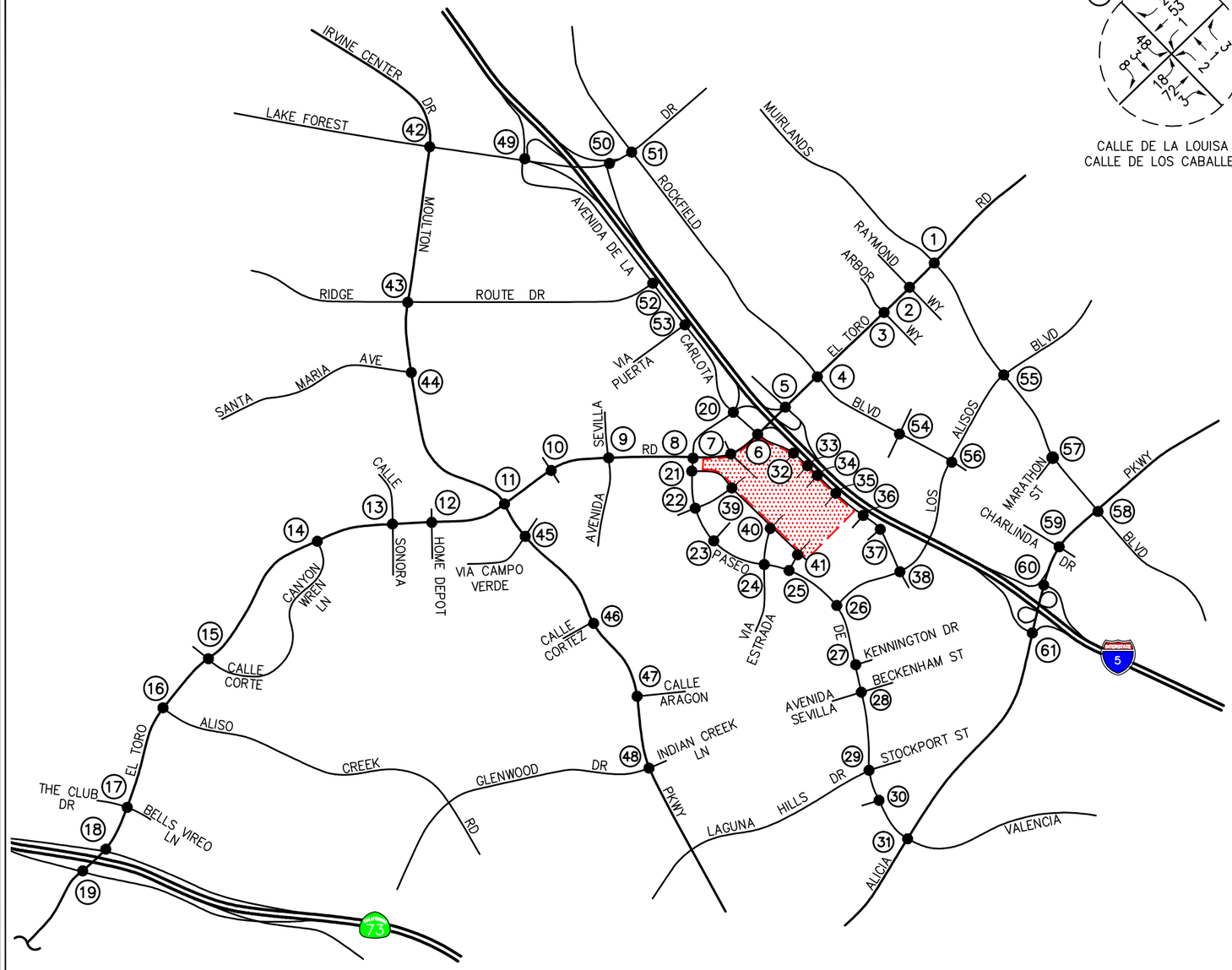
(#) = STUDY INTERSECTION

= PROJECT SITE

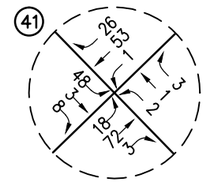
FIGURE 6B

EXISTING (2019) MIDDAY PEAK HOUR TRAFFIC VOLUMES

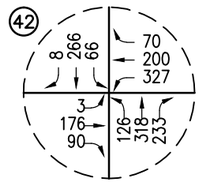
VILLAGE AT LAGUNA HILLS



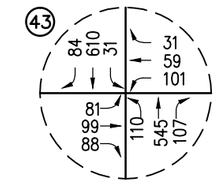
SEE FIGURE 6D FOR INTERSECTIONS #62 – 68



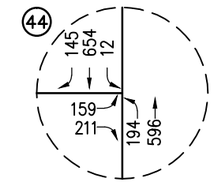
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



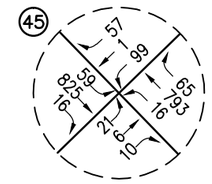
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



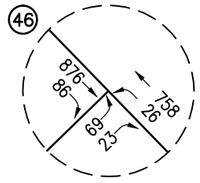
MOULTON PKWY @
RIDGE ROUTE DR



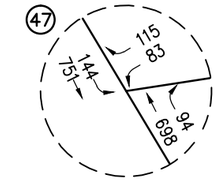
MOULTON PKWY @
SANTA MARIA AVE



MOULTON PKWY @
VIA CAMPO VERDE



MOULTON PKWY @
CALLE CORTEZ



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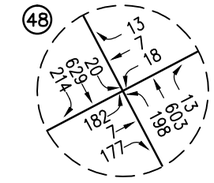
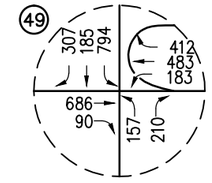
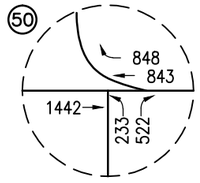
CALLE ARAGON



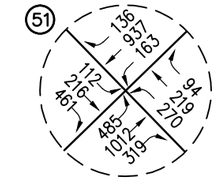
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



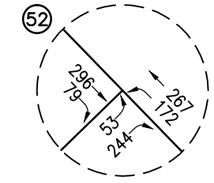
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



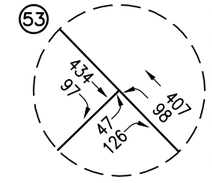
I-5 NB RAMPS @
LAKE FOREST DR



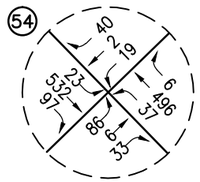
ROCKFIELD BLVD @
LAKE FOREST DR



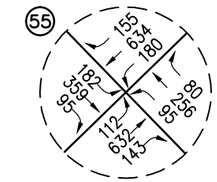
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



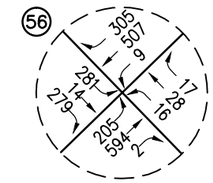
AVENIDA DE LA CARLOTA @
VIA PUERTA



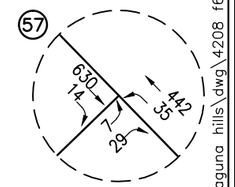
ROCKFIELD BLVD @
LANDISVIEW AVE



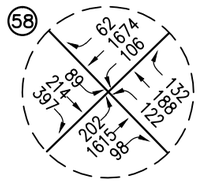
MUIRLANDS BLVD @
LOS ALISOS BLVD



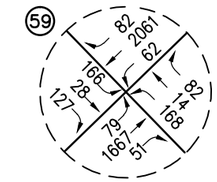
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



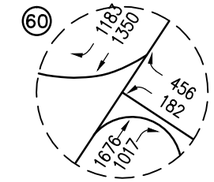
MUIRLANDS BLVD @
MARATHON ST



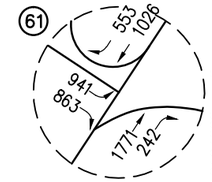
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

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N NO SCALE

KEY

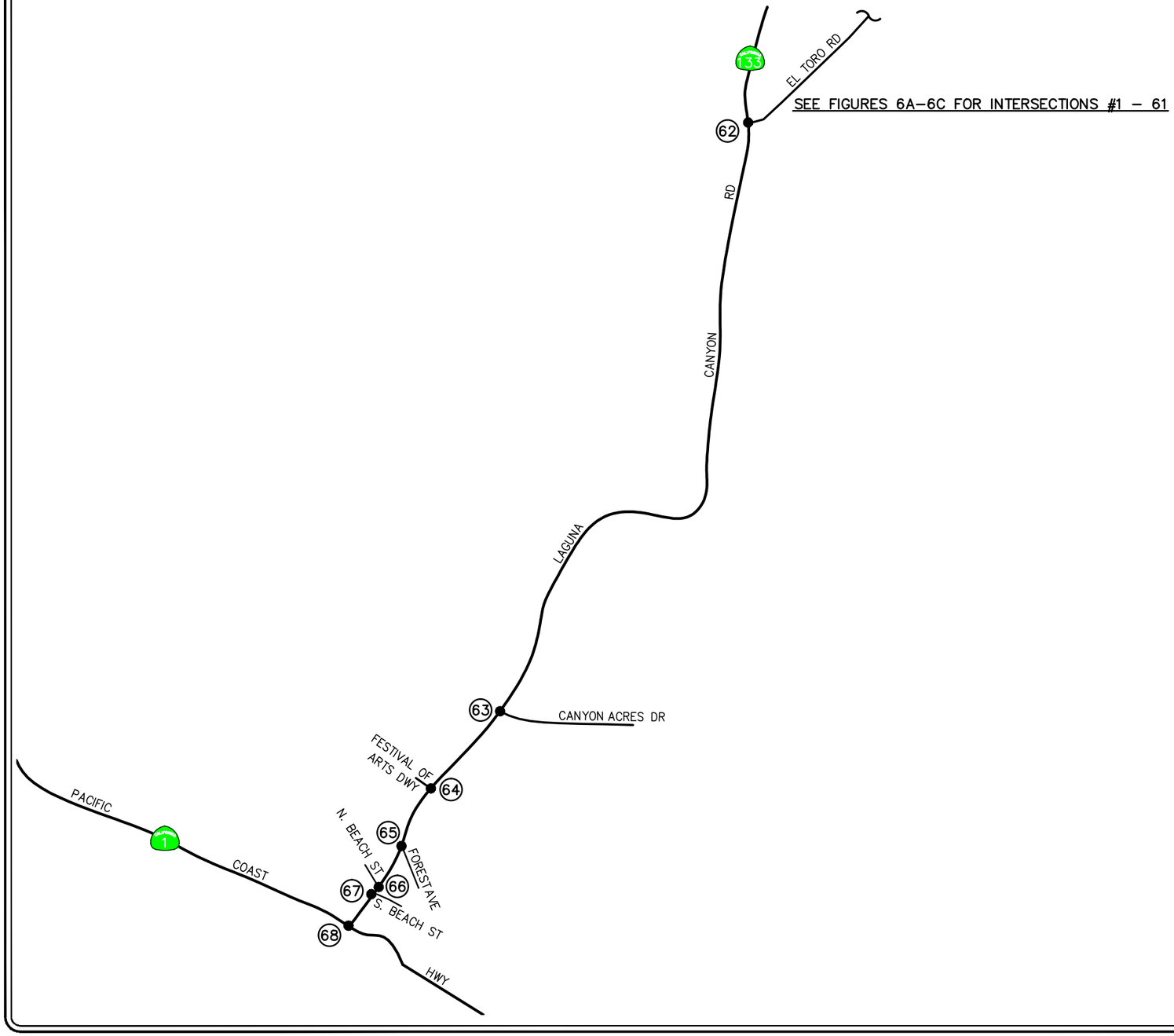
(#) = STUDY INTERSECTION

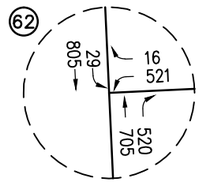
= PROJECT SITE

FIGURE 6C

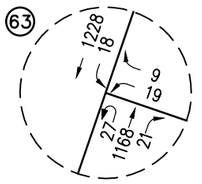
EXISTING (2019) MIDDAY PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

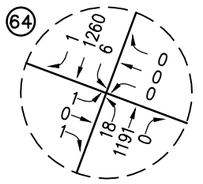




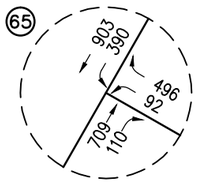
LAGUNA CANYON RD @ EL TORO RD



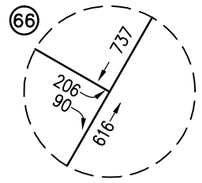
LAGUNA CANYON RD @ CANYON ACRES DR



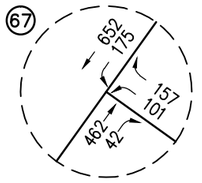
LAGUNA CANYON RD @ FESTIVAL OF ARTS DWY



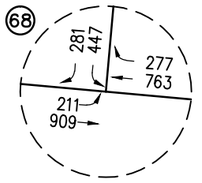
BROADWAY ST @ FOREST AVENUE



BROADWAY ST @ N. BEACH ST



BROADWAY ST @ S. BEACH ST



BROADWAY ST @ PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

FIGURE 6D

EXISTING (2019) MIDDAY PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

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7. OCTA Route 683: provides seasonal service from July to August from the Laguna Hills Transportation Center to the Orange County Fairgrounds; via the 5 Freeway to 405 freeway to 55 Freeway.

The bus stops nearest to the Project site are located along El Toro Road, Avenida de la Carlota, and Calle de la Louisa.

Laguna Woods Village offers a complimentary shuttle service for residents that provides them access to the Project site, Laguna Hills Transportation Center, and nearby medical facilities, commercial uses, restaurants, and houses of worship. This shuttle service is available from 9:00 AM until 5:00 PM Monday through Saturday. An extended, on-demand service (BOOST) is available for residents when the fixed-route system is not in service (i.e. from 8:00 AM until 9:00 AM and 5:00 PM until 10:00 PM Monday through Saturday, and from 8:00 AM until 5:00 PM on Sundays) for residents who specifically reserve a time. A scheduled ride service (Journey) is also available for preapproved riders with medical needs from 8:00 AM until 5:00 PM daily.

OCTA also provides a Senior Mobility Program for residents over the age of 60 which provides a Taxi Voucher Program along with Non-Emergency Medical Transportation. Similarly, OCTA offers a Youth Program which provides discounted fares to children on all fixed-route buses.

3.4 Existing Intersection Peak Hour LOS

Level of Service (LOS) qualitatively measures the operating conditions within a traffic system and how drivers and passengers perceive these conditions. Level of service ranges from LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum satisfactory service level in urban areas. According to CMP traffic impact analysis guidelines, LOS E is the minimum acceptable service level at CMP intersections.

Based upon the City's traffic study guidelines for LOS analysis, the *Intersection Capacity Utilization* (ICU) methodology was used to determine the volume-to-capacity relationship for signalized intersections (based upon the individual volume-to-capacity ratios for key conflicting traffic movements), and corresponding level of service. By assuming 1,700 vehicles per hour per lane (vphpl) as the practical capacity for through lanes, left-turn, and right-turn lanes, the ICU method directly relates traffic demand to the available capacity. The resulting ICU numerical value represents the greatest green time requirements plus a 5% allowance (additional ICU value of 0.05) for clearance intervals for the entire intersection. It should be noted that the ICU methodology assumes uniform traffic distribution per intersection approach lane and optimal signal timing. Level of service definitions for signalized intersections are summarized in ***Table 1***.

Based upon the City's traffic impact study guidelines, the methodology in Chapters 20 and 21 of the *Highway Capacity Manual 6th Edition* [Transportation Research Board, 2016] was applied in the analysis of the unsignalized key intersections. The HCM stop-control methodology determines the delay and level of service of each approach separately. Whereas the ICU methodology for signalized intersections uses capacity to describe total intersection operation, the HCM method for

unsignalized intersections yields a delay value for each intersection approach. The vehicle total delay on any approach is primarily a function of the volume on the subject approach, and secondarily a function of the volume on the opposing and conflicting approaches. Level of service definitions for unsignalized intersections are described in ***Table 2***.

In addition, the *Highway Capacity Manual 6th Edition* (HCM 6) Operations methodology was applied in the analysis of all freeway ramp intersections (to address Caltrans traffic impact study requirements). In Chapter 18 of the HCM 6, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, as indicated in ***Table 3***.

The HCM 6 methodology was also applied in Section 6.0 (Site Access) of this report, for the purposes of evaluating vehicular access and queuing conditions at Project driveway intersections.

Based upon the level of service methodologies described, the existing peak hour traffic volumes presented were used in conjunction with existing lane configurations to determine the current traffic operating conditions at the 68 key intersections.

Appendix A contains the detailed level of service worksheets. ***Appendix B*** contains the raw traffic count data collected.

Tables 4 and ***5*** summarize the existing levels of service for the 68 key intersections during the weekday AM and PM peak hours, and Saturday midday peak hour, respectively.

As *Table 5* indicates, all 68 key intersections currently operate at acceptable LOS D or better (LOS E or better at CMP intersections) during the AM and PM peak hours of a typical weekday.

Table 6 indicates that all 68 key intersections currently operate at acceptable LOS D or better (LOS E or better at CMP intersections) during the Saturday midday peak hour, with the only exception being the key intersection of Avenida de la Carlota at Mall Driveway 1 (i.e. key intersection 34) which currently operates at a LOS E during the Saturday midday peak hour.

The level of service results for existing conditions in this study were compared against those reported in the 2016 Addendum for Five Lagunas, and were determined to be generally consistent with that study.

TABLE 1

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS)	Intersection Capacity Utilization Value (ICU)	Level of Service Description
A	≤ 0.600	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	0.601 – 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 – 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 – 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 – 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

TABLE 2

LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS (HCM 6 METHODOLOGY) [1,2]

Level of Service (LOS)	Highway Capacity Manual (HCM) Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	Little or no delay
B	> 10.0 and ≤ 15.0	Short traffic delays
C	> 15.0 and ≤ 25.0	Average traffic delays
D	> 25.0 and ≤ 35.0	Long traffic delays
E	> 35.0 and ≤ 50.0	Very long traffic delays
F	> 50.0	Severe congestion

[1] Source: *Highway Capacity Manual 6*, Chapter 20: Two-Way Stop-Controlled Intersections. The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

[2] Source: *Highway Capacity Manual 6*, Chapter 21: All-Way Stop-Controlled Intersections. For approaches and intersection-wide assessment, LOS is defined solely by control delay.

TABLE 3

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS (HCM 6 METHODOLOGY)[3]

Level of Service (LOS)	Control Delay Per Vehicle (seconds/vehicle)	Level of Service Description
A	≤ 10.0	This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	> 10.0 and ≤ 20.0	This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.
C	> 20.0 and ≤ 35.0	Average traffic delays. These higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.
D	> 35.0 and ≤ 55.0	Long traffic delays At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high *v/c* ratios. Many vehicles stop and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	> 55.0 and ≤ 80.0	Very long traffic delays This level is considered by many agencies to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths and high *v/c* ratios. Individual cycle failures are frequent occurrences.
F	≥ 80.0	Severe congestion This level, considered to be unacceptable to most drivers, often occurs with over saturation, that is, when arrival flow rates exceed the capacity of the intersection. It may also occur at high *v/c* ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing factors to such delay levels.

[3] Source: *Highway Capacity Manual 6*, Chapter 19: Signalized Intersections.

TABLE 4

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
1) Muirlands Boulevard at	AM	0.628	--	B	No
El Toro Road (LF)	PM	0.715	--	C	No
2) Raymond Way at	AM	0.435	--	A	No
El Toro Road (LF)	PM	0.518	--	A	No
3) Arbor Way at	AM	0.397	--	A	No
El Toro Road (LF)	PM	0.489	--	A	No
4) Rockfield Boulevard at	AM	0.528	--	A	No
El Toro Road (LF)	PM	0.610	--	B	No
5) Bridger Road/I-5 Northbound Ramps at	AM	0.509	--	A	No
El Toro Road (CMP/LF)	PM	0.749	--	C	No
Intersection 1 HCM 6:	AM	--	31.7	C	No
HCM 6:	PM	--	35.6	D	No
6) Avenida de la Carlota/I-5 Southbound	AM	0.446	--	A	No
On-Ramp at El Toro Road (CMP)	PM	0.647	--	B	No
Intersection 3 HCM 6:	AM	--	25.7	C	No
HCM 6:	PM	--	34.2	C	No
7) Regional Center Drive at	AM	0.293	--	A	No
El Toro Road	PM	0.616	--	B	No
8) Paseo de Valencia at	AM	0.506	--	A	No
El Toro Road	PM	0.537	--	A	No
9) Avenida Sevilla at	AM	0.486	--	A	No
El Toro Road (LW)	PM	0.480	--	A	No
10) Catholic Church/Lutheran Church at	AM	0.336	--	A	No
El Toro Road (LW)	PM	0.346	--	A	No
11) Moulton Parkway at	AM	0.642	--	B	No
El Toro Road (CMP/LW)	PM	0.699	--	B	No
12) Home Depot at	AM	0.363	--	A	No
El Toro Road (LW)	PM	0.479	--	A	No
13) Calle Sanora at	AM	0.320	--	A	No
El Toro Road (LW)	PM	0.313	--	A	No
14) Canyon Wren Lane at	AM	0.294	--	A	No
El Toro Road (AV)	PM	0.304	--	A	No
15) Calle Corta at	AM	0.303	--	A	No
El Toro Road (LW)	PM	0.301	--	A	No
16) Aliso Creek Road at	AM	0.605	--	B	No
El Toro Road (LW)	PM	0.633	--	B	No

TABLE 4 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
17) The Club Drive/Bells Vireo Lane at	AM	0.601	--	B	No
El Toro Road (LB)	PM	0.484	--	A	No
18) SR-73 Northbound Ramps at	AM	0.665	--	B	No
El Toro Road (CMP/LB)	PM	0.649	--	B	No
HCM 6:	AM	--	12.8	B	No
HCM 6:	PM	--	8.5	A	No
19) SR-73 Southbound Ramps at	AM	0.439	--	A	No
El Toro Road (CMP/LB)	PM	0.619	--	B	No
HCM 6:	AM	--	20.5	C	No
HCM 6:	PM	--	27.7	C	No
20) Avenida de la Carlota at	AM	0.482	--	A	No
Paseo de Valencia/I-5 Southbound Ramps	PM	0.496	--	A	No
Intersection 2 HCM 6:	AM	--	41.4	D	No
HCM 6:	PM	--	41.7	D	No
21) Paseo de Valencia at	*AM*	--	*14.3*	*B*	*No*
Ronda del Rossmoor (LW)	*PM*	--	*15.1*	*C*	*No*
22) Paseo de Valencia at	AM	0.388	--	A	No
Calle de la Plata (LW)	PM	0.398	--	A	No
23) Paseo de Valencia at	AM	0.306	--	A	No
Calle de la Magdalena (LW)	PM	0.321	--	A	No
24) Paseo de Valencia at	AM	0.330	--	A	No
Health Center Drive (LW)	PM	0.448	--	A	No
25) Paseo de Valencia at	*AM*	--	*13.0*	*B*	*No*
Calle de los Caballeros (LW)	*PM*	--	*12.2*	*B*	*No*
26) Paseo de Valencia at Intersection 6	AM	0.421	--	A	No
Los Alisos Boulevard	PM	0.438	--	A	No
27) Paseo de Valencia at	AM	0.399	--	A	No
Kennington Drive (LW)	PM	0.533	--	A	No
28) Paseo de Valencia at	AM	0.461	--	A	No
Avenida Sevilla/Beckenham Street (LW)	PM	0.571	--	A	No
29) Paseo de Valencia at	AM	0.570	--	A	No
Laguna Hills Drive/Stockport Street	PM	0.589	--	A	No
30) Paseo de Valencia at	AM	0.386	--	A	No
Hawk Highway	PM	0.409	--	A	No
31) Paseo de Valencia at	AM	0.659	--	B	No
Alicia Parkway	PM	0.656	--	B	No

TABLE 4 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
32) Avenida de la Carlota at	AM	0.209	--	A	No
Plaza Lane/Mall Entrance	PM	0.401	--	A	No
33) Avenida de la Carlota at	*AM*	*--*	*12.8*	*B*	*No*
Mall Driveway 1	*PM*	*--*	*26.8*	*D*	*No*
34) Avenida de la Carlota at	*AM*	*--*	*13.1*	*B*	*No*
Mall Driveway 2	*PM*	*--*	*25.9*	*D*	*No*
35) Avenida de la Carlota at	*AM*	*--*	*13.7*	*B*	*No*
Mall Driveway 3	*PM*	*--*	*28.0*	*D*	*No*
36) Avenida de la Carlota at	*AM*	*--*	*9.4*	*A*	*No*
Oakbrook Village Driveway 1	*PM*	*--*	*11.7*	*B*	*No*
37) Avenida de la Carlota at	AM	0.212	--	A	No
Oakbrook Village Driveway 2	PM	0.337	--	A	No
38) Avenida de la Carlota at	AM	0.411	--	A	No
Los Alisos Boulevard	PM	0.504	--	A	No
39) Ronda del Rossmoor/Calle de la Louisa at	*AM*	*--*	*9.0*	*A*	*No*
Calle de la Plata	*PM*	*--*	*10.0*	*A*	*No*
40) Calle de la Louisa at	*AM*	*--*	*8.6*	*A*	*No*
Health Center Drive	*PM*	*--*	*9.0*	*A*	*No*
41) Calle de la Louisa at	*AM*	*--*	*8.1*	*A*	*No*
Calle de los Caballeros	*PM*	*--*	*9.3*	*A*	*No*
42) Irvine Center Drive/Moulton Parkway at	AM	0.444	--	A	No
Lake Forest Drive	PM	0.667	--	B	No
43) Moulton Parkway at	AM	0.380	--	A	No
Ridge Route Drive	PM	0.610	--	B	No
44) Moulton Parkway at	AM	0.519	--	A	No
Santa Maria Avenue	PM	0.650	--	B	No
45) Moulton Parkway at	AM	0.562	--	A	No
Via Campo Verde (LW)	PM	0.572	--	A	No
46) Moulton Parkway at	AM	0.530	--	A	No
Calle Cortez (AV)	PM	0.591	--	A	No
47) Moulton Parkway at	AM	0.539	--	A	No
Calle Aragon (AV)	PM	0.512	--	A	No
48) Moulton Parkway at	AM	0.515	--	A	No
Glenwood Drive/Indian Creek Lane	PM	0.662	--	B	No

TABLE 4 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
49) Avenida de la Carlota/I-5 Southbound Ramps at Lake Forest Drive	AM	0.705	--	C	No
	PM	0.715	--	C	No
HCM 6:	AM	--	39.6	D	No
HCM 6:	PM	--	36.1	D	No
50) I-5 Northbound Ramps at Lake Forest Drive (LF)	AM	0.424	--	A	No
	PM	0.582	--	A	No
HCM 6:	AM	--	14.9	B	No
HCM 6:	PM	--	16.8	B	No
51) Rockfield Boulevard at Lake Forest Drive (LF)	AM	0.586	--	A	No
	PM	0.679	--	B	No
52) Avenida de la Carlota at Ridge Route Drive	AM	0.399	--	A	No
	PM	0.699	--	B	No
53) Avenida de la Carlota at Via Puerta (LW)	AM	0.218	--	A	No
	PM	0.504	--	A	No
54) Rockfield Boulevard at Landisview Avenue (LF)	AM	0.376	--	A	No
	PM	0.385	--	A	No
55) Muirlands Boulevard at Los Alisos Boulevard (MV)	AM	0.720	--	C	No
	PM	0.744	--	C	No
56) Rockfield Boulevard/Fordview at Los Alisos Boulevard (LF)	AM	0.738	--	C	No
	PM	0.619	--	B	No
57) Muirlands Boulevard at Marathon Street (MV)	AM	0.343	--	A	No
	PM	0.421	--	A	No
58) Muirlands Boulevard at Alicia Parkway (MV)	AM	0.779	--	C	No
	PM	0.874	--	D	No
59) Charlinda Drive at Alicia Parkway (MV)	AM	0.578	--	A	No
	PM	0.674	--	B	No
60) I-5 Northbound Ramps at Alicia Parkway (MV)	AM	0.463	--	A	No
	PM	0.652	--	B	No
HCM 6:	AM	--	12.7	B	No
HCM 6:	PM	--	20.6	C	No
61) I-5 Southbound Ramps at Alicia Parkway	AM	0.651	--	B	No
	PM	0.757	--	C	No
HCM 6:	AM	--	24.2	C	No
HCM 6:	PM	--	31.3	C	No

TABLE 4 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
62) Laguna Canyon Road at	AM	0.691	--	B	No
El Toro Road (CMP/LB)	PM	0.617	-	B	No
HCM 6:	AM	--	21.9	C	No
HCM 6:	PM	--	22.4	C	No
63) Laguna Canyon Road at	AM	0.494	--	A	No
Canyon Acres Drive (LB)	PM	0.440	-	A	No
64) Laguna Canyon Road at	AM	0.469	--	A	No
Festival of Arts Driveway (LB)	PM	0.445	-	A	No
65) Broadway Street at	AM	0.569	--	A	No
Forest Avenue (LB)	PM	0.572	-	A	No
66) Broadway Street at	AM	0.443	--	A	No
N Beach Street (LB)	PM	0.431	-	A	No
67) Broadway Street at	AM	0.436	--	A	No
S Beach Street (LB)	PM	0.464	-	A	No
68) Broadway Street at	AM	0.668	--	B	No
Coast Highway (CMP/LB)	PM	0.619	-	B	No
HCM 6:	AM	--	22.0	C	No
HCM 6:	PM	--	18.7	B	No

Notes:

Italicized text corresponds to an unsignalized/stop-controlled intersection.

Blue text corresponds to a CMP intersection where LOS E is the minimum acceptable LOS.

CMP = Congestion Management Program; LF = Lake Forest; LW = Laguna Woods; AV = Aliso Viejo; LB = Laguna Beach; MV = Mission Viejo

TABLE 5

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
1) Muirlands Boulevard at El Toro Road (LF)	Sat Midday	0.575	--	A	No
2) Raymond Way at El Toro Road (LF)	Sat Midday	0.532	--	A	No
3) Arbor Way at El Toro Road (LF)	Sat Midday	0.518	--	A	No
4) Rockfield Boulevard at El Toro Road (LF)	Sat Midday	0.664	--	B	No
5) Bridger Road/I-5 Northbound Ramps at El Toro Road (CMP/LF)	Sat Midday	0.730	--	C	No
HCM 6:	Sat	--	35.7	D	No
HCM 6:	Midday				
6) Avenida de la Carlota/I-5 Southbound On-Ramp at El Toro Road (CMP)	Sat Midday	0.636	--	B	No
HCM 6:	Sat	--	36.6	D	No
HCM 6:	Midday				
7) Regional Center Drive at El Toro Road	Sat Midday	0.523	--	A	No
8) Paseo de Valencia at El Toro Road	Sat Midday	0.486	--	A	No
9) Avenida Sevilla at El Toro Road (LW)	Sat Midday	0.429	--	A	No
10) Catholic Church/Lutheran Church at El Toro Road (LW)	Sat Midday	0.300	--	A	No
11) Moulton Parkway at El Toro Road (CMP/LW)	Sat Midday	0.497	--	A	No
12) Home Depot at El Toro Road (LW)	Sat Midday	0.430	--	A	No
13) Calle Sanora at El Toro Road (LW)	Sat Midday	0.293	--	A	No
14) Canyon Wren Lane at El Toro Road (AV)	Sat Midday	0.266	--	A	No
15) Calle Corta at El Toro Road (LW)	Sat Midday	0.233	--	A	No
16) Aliso Creek Road at El Toro Road (LW)	Sat Midday	0.399	--	A	No

TABLE 5 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)		Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
17)	The Club Drive/Bells Vireo Lane at El Toro Road (LB)	Sat Midday	0.329	--	A	No
18)	SR-73 Northbound Ramps at El Toro Road (CMP/LB)	Sat Midday	0.344	--	A	No
	HCM 6:	Sat	--	9.3	A	No
	HCM 6:	Midday				
19)	SR-73 Southbound Ramps at El Toro Road (CMP/LB)	Sat Midday	0.343	--	A	No
	HCM 6:	Sat	--	23.1	C	No
	HCM 6:	Midday				
20)	Avenida de la Carlota at Paseo de Valencia/I-5 Southbound Ramps	Sat Midday	0.490	--	A	No
	HCM 6:	Sat	--	52.0	D	No
	HCM 6:	Midday				
21)	*Paseo de Valencia at Ronda del Rossmoor (LW)*	*Sat Midday*	--	*13.0*	*B*	*No*
22)	Paseo de Valencia at Calle de la Plata (LW)	Sat Midday	0.375	--	A	No
23)	Paseo de Valencia at Calle de la Magdalena (LW)	Sat Midday	0.268	--	A	No
24)	Paseo de Valencia at Health Center Drive (LW)	Sat Midday	0.329	--	A	No
25)	*Paseo de Valencia at Calle de los Caballeros (LW)*	*Sat Midday*	--	*11.6*	*B*	*No*
26)	Paseo de Valencia at Los Alisos Boulevard	Sat Midday	0.326	--	A	No
27)	Paseo de Valencia at Kennington Drive (LW)	Sat Midday	0.397	--	A	No
28)	Paseo de Valencia at Avenida Sevilla/Beckenham Street (LW)	Sat Midday	0.429	--	A	No
29)	Paseo de Valencia at Laguna Hills Drive/Stockport Street	Sat Midday	0.390	--	A	No
30)	Paseo de Valencia at Hawk Highway	Sat Midday	0.327	--	A	No
31)	Paseo de Valencia at Alicia Parkway	Sat Midday	0.525	--	A	No

TABLE 5 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)		Peak Hour	Existing (2019)			
			ICU	Delay	LOS	Poor LOS?
32)	Avenida de la Carlota at Plaza Lane/Mall Entrance	Sat Midday	0.389	--	A	No
33)	*Avenida de la Carlota at Mall Driveway 1*	*Sat Midday*	*--*	*28.4*	*D*	*No*
34)	*Avenida de la Carlota at Mall Driveway 2*	*Sat Midday*	*--*	***35.2***	***E***	***Yes***
35)	*Avenida de la Carlota at Mall Driveway 3*	*Sat Midday*	*--*	*23.6*	*C*	*No*
36)	*Avenida de la Carlota at Oakbrook Village Driveway 1*	*Sat Midday*	*--*	*11.8*	*B*	*No*
37)	Avenida de la Carlota at Oakbrook Village Driveway 2	Sat Midday	0.343	--	A	No
38)	Avenida de la Carlota at Los Alisos Boulevard	Sat Midday	0.384	--	A	No
39)	*Ronda del Rossmoor/Calle de la Louisa at Calle de la Plata*	*Sat Midday*	*--*	*8.3*	*A*	*No*
40)	*Calle de la Louisa at Health Center Drive*	*Sat Midday*	*--*	*8.1*	*A*	*No*
41)	*Calle de la Louisa at Calle de los Caballeros*	*Sat Midday*	*--*	*8.2*	*A*	*No*
42)	Irvine Center Drive/Moulton Parkway at Lake Forest Drive	Sat Midday	0.356	--	A	No
43)	Moulton Parkway at Ridge Route Drive	Sat Midday	0.283	--	A	No
44)	Moulton Parkway at Santa Maria Avenue	Sat Midday	0.365	--	A	No
45)	Moulton Parkway at Via Campo Verde (LW)	Sat Midday	0.320	--	A	No
46)	Moulton Parkway at Calle Cortez (AV)	Sat Midday	0.295	--	A	No
47)	Moulton Parkway at Calle Aragon (AV)	Sat Midday	0.329	--	A	No
48)	Moulton Parkway at Glenwood Drive/Indian Creek Lane	Sat Midday	0.353	--	A	No

TABLE 5 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
49) Avenida de la Carlota/I-5 Southbound Ramps at Lake Forest Drive	Sat Midday	0.491	--	A	No
HCM 6:	Sat Midday	--	33.3	C	No
50) I-5 Northbound Ramps at Lake Forest Drive (LF)	Sat Midday	0.416	--	A	No
HCM 6:	Sat Midday	--	16.8	B	No
51) Rockfield Boulevard at Lake Forest Drive (LF)	Sat Midday	0.493	--	A	No
52) Avenida de la Carlota at Ridge Route Drive	Sat Midday	0.405	--	A	No
53) Avenida de la Carlota at Via Puerta (LW)	Sat Midday	0.301	--	A	No
54) Rockfield Boulevard at Landisview Avenue (LF)	Sat Midday	0.332	--	A	No
55) Muirlands Boulevard at Los Alisos Boulevard (MV)	Sat Midday	0.462	--	A	No
56) Rockfield Boulevard/Fordview at Los Alisos Boulevard (LF)	Sat Midday	0.591	--	A	No
57) Muirlands Boulevard at Marathon Street (MV)	Sat Midday	0.281	--	A	No
58) Muirlands Boulevard at Alicia Parkway (MV)	Sat Midday	0.675	--	B	No
59) Charlinda Drive at Alicia Parkway (MV)	Sat Midday	0.585	--	A	No
60) I-5 Northbound Ramps at Alicia Parkway (MV)	Sat Midday	0.513	--	A	No
HCM 6:	Sat Midday	--	18.6	B	No
61) I-5 Southbound Ramps at Alicia Parkway	Sat Midday	0.664	--	B	No
HCM 6:	Sat Midday	--	29.5	C	No

TABLE 5 (CONTINUED)

EXISTING (2019) INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019) ICU	Delay	LOS	Poor LOS?
62) Laguna Canyon Road at El Toro Road (CMP/LB)	Sat Midday	0.593	--	A	No
HCM 6:	Sat Midday	--	27.4	C	No
63) Laguna Canyon Road at Canyon Acres Drive (LB)	Sat Midday	0.438	--	A	No
64) Laguna Canyon Road at Festival of Arts Driveway (LB)	Sat Midday	0.432	--	A	No
65) Broadway Street at Forest Avenue (LB)	Sat Midday	0.574	--	A	No
66) Broadway Street at N Beach Street (LB)	Sat Midday	0.473	--	A	No
67) Broadway Street at S Beach Street (LB)	Sat Midday	0.509	--	A	No
68) Broadway Street at Coast Highway (CMP/LB)	Sat Midday	0.623	--	B	No
HCM 6:	Sat Midday	--	20.7	C	No

Notes:

Italicized text corresponds to an unsignalized/stop-controlled intersection.

Blue text corresponds to a CMP intersection where LOS E is the minimum acceptable LOS.

CMP = Congestion Management Program; LF = Lake Forest; LW = Laguna Woods; AV = Aliso Viejo; LB = Laguna Beach; MV = Mission Viejo

4.0 TRAFFIC FORECASTS

In order to determine potential traffic impacts of the Project, a multi-step process has been utilized. The first step is traffic generation, which estimates the total arriving and departing traffic on a peak hour and daily basis. The traffic generation potential is estimated by applying the appropriate vehicle trip generation equations or rates to the Project development tabulation with applicable trip adjustments/credits to account for the existing land uses on site, internal capture, and/or alternative modes of transportation.

The second step of the forecasting process is traffic distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing/expected future travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic 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 project traffic assignments developed, the impact of the proposed project is isolated by comparing levels of service at selected key intersections using expected future traffic volumes with and without project-generated traffic. The significance of the Project's impacts, and the need for site-specific and/or cumulative local area traffic improvements, can then be determined.

4.1 Project Traffic Generation

Traffic generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Generation equations and/or rates used in the traffic forecasting procedure are found in the 10th Edition of *Trip Generation*, published by the Institute of Transportation Engineers (ITE) [Washington D.C., 2017]. The trip rates for ITE Land Use 820: Shopping Center, 720: General Office Building, 221: Multifamily (Mid-Rise), and 310: Hotel were applied to the Project.

Since the Project is comprised of a mix of uses (including retail, restaurant, cinema, health club, office, and residential), it was appropriate to account for "internal" tripmaking/interactions that will occur between the various land uses on site, and will not occur by traveling on the external street system. ITE trip generation rates and equations are derived from single-use, stand-alone sites, and do not reflect the potential for interaction among uses in a mixed-use setting. The methodology used in estimating internal trips for the project is well documented in the Third Edition of ITE's *Trip Generation Handbook* [Washington, D.C., August 2014].

Additionally, because of the retail component of the Project, "pass-by" reductions were applied to retail-generated trips (after accounting for internal trip reductions). This is typically done to account

for conditions when the total number of trips generated by a retail-oriented development is not entirely new to the external street system. Retail-oriented developments such as shopping centers and restaurants, which are located along major/busy roadways, attract a portion of their trips from traffic already on the street system for a different purpose (i.e., the retail site is not the primary or ultimate destination). These retail trips do not add new traffic to the surrounding street system. The methodology used in estimating pass-by trips is also contained in ITE's *Trip Generation Handbook*.

Modest internal capture and pass-by trip reductions were applied (despite the vast majority of uses surrounding the site that could realistically result in greater interactions with the Project than assumed), which are appropriate for application based on the Project setting and ITE-recommended methodology, and are allowed per the City's traffic study guidelines for LOS analysis. It should be noted that internal tripmaking within the mall is inherent in the ITE Shopping Center rates/equations; therefore, internal trip reductions were not applied to shopping center trips, and only applied to the residential, hotel, and office trips in this study. As a conservative measure, no further trip reductions to account for alternative modes of travel (despite the Project's proximity to the Laguna Hills Transportation Center) have been applied.

As shown in ***Table 6***, the net Project trips are estimated to be 9,970 fewer than for Five Lagunas on a typical weekday. During the AM peak hour, weekday trips would be 119 more than for Five Lagunas. During the PM peak hour, weekday trips would be 910 fewer than for Five Lagunas.

On Saturdays, the net Project trips are estimated to be 15,542 fewer than for Five Lagunas. During the Saturday midday peak hour, net Project trips would be 1,704 fewer than for Five Lagunas.

The reductions in all trip generation categories other than the weekday AM peak is explained by the Project's substantial rebalancing of square footage, creating more residential and less retail use than Five Lagunas.

The potential impact of any added/incremental trips generated by the Project (Village at Laguna Hills) are assessed in this report as compared to background conditions that include the previously approved Five Lagunas; specifically, the incremental trips assigned to the street system within the study area and evaluated in this traffic impact analysis correspond to the "Project versus Five Lagunas" line item on *Table 6* (highlighted in blue), which indicates a reduction of 9,970 weekday daily trips, an increase of 119 AM peak hour trips, and reduction of 910, 15,542, and 1,704 trips during the PM peak hour. Saturday daily, and Saturday midday peak hour, respectively.

Table 6 also presents a trip budget assessment for the Project, given its location within the UVSP area. As described in the UVSP, the Program EIR, and the 2016 Addendum, development intensity within the UVSP is regulated by trip budget limits that correlate with LOS D (except with regard to CMP intersections), and the "anticipated" land uses referenced in the Program EIR and UVSP do not function as development limits.

City staff identified development projects that have been assigned UVSP trips subsequent to the certification of the Program EIR. After deducting the assigned UVSP trips (including Five Lagunas),

335 AM peak hour trips and 1,680 PM peak hour trips remain unassigned and available for redevelopment in the UVSP. Deducting the incremental trips between the Project and Five Lagunas from the unassigned UVSP trips results in 216 AM peak hour trips and 2,590 PM peak hour trips remaining in the UVSP budget.

TABLE 6
PROJECT TRIP GENERATION

LAND USE	Unit / Size	Typical Weekday Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Saturday Daily	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total
ITE TRIP RATES												
Shopping Ctr	trips/KSF GLA	[a]	62%	38%	[a]	48%	52%	[a]	[a]	52%	48%	[a]
General Office	trips/KSF GFA	[b]	86%	14%	[b]	16%	84%	[b]	2.21	54%	46%	0.53
Multifamily (Mid-Rise)	trips/DU	5.44	26%	74%	0.36	61%	39%	0.44	4.91	49%	51%	0.44
Hotel	trips/Room	8.36	59%	41%	0.47	51%	49%	0.60	8.19	56%	44%	0.72
PROPOSED PROJECT												
Mall [c]	**250,000 SF GLA**	11,210	172	105	277	514	556	1,070	15,730	664	613	1,277
Retail (99,305 SF GLA)												
Restaurants (60,695 SF GLA)												
Health Club (40,000 SF GLA)												
Cinema (50,000 SF GLA)												
Hotel	**150 RM**	1,254	42	29	71	46	44	90	1,229	60	48	108
General Office	**465,000 SF GFA**	4,712	399	65	464	78	412	490	1,028	133	113	246
Multifamily	**1,500 DU**	8,160	140	400	540	403	257	660	7,365	323	337	660
FUTURE (Gross Project Trips)		**25,336**	**753**	**599**	**1,352**	**1,041**	**1,269**	**2,310**	**25,352**	**1,180**	**1,111**	**2,291**
Internal Trip Reduction [d]		(2,825)	(58)	(49)	(107)	(105)	(143)	(248)	(1,924)	(103)	(100)	(203)
	Sub-Total	22,511	695	550	1,245	936	1,126	2,062	23,428	1,077	1,011	2,088
Pass-By Trip Reduction [e]		(1,121)	(9)	(5)	(14)	(51)	(56)	(107)	(1,573)	(66)	(61)	(127)
	Net Future Trips	**21,390**	**686**	**545**	**1,231**	**885**	**1,070**	**1,955**	**21,855**	**1,011**	**950**	**1,961**
FIVE LAGUNAS Net Future Trips [f]		**31,360**	**505**	**607**	**1,112**	**1,437**	**1,428**	**2,865**	**37,397**	**1,780**	**1,885**	**3,665**
PROJECT VS. FIVE LAGUNAS (Project minus Five Lagunas)		**(9,970)**	**181**	**(62)**	**119**	**(552)**	**(358)**	**(910)**	**(15,542)**	**(769)**	**(935)**	**(1,704)**

TABLE 6 (CONTINUED)
PROJECT TRIP GENERATION

LAND USE	Unit / Size	Typical Weekday Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Saturday Daily	Midday Peak Hour In	Midday Peak Hour Out	Midday Peak Hour Total
UVSP TRIP BUDGETS Per June 2009 GP Update EIR		--	--	--	**1,243**	--	--	**2,272**	--	--	--	--
Less Chevron (approved 5/11)		--	--	--	0	--	--	27	--	--	--	--
Less Taj Mahal (approved 6/11)		--	--	--	(12)	--	--	(49)	--	--	--	--
Less Ash./ChickFilA (approved 7/11)		--	--	--	(128)	--	--	(12)	--	--	--	--
Less Oakbrook Vill. (approved 11/12)		--	--	--	(129)	--	--	33	--	--	--	--
Less Raising Cane's (approved 4/15)		--	--	--	(32)	--	--	3	--	--	--	--
Less Five Lagunas (approved 3/16) [f]		--	--	--	(558)	--	--	(569)	--	--	--	--
Remaining UVSP Trip Budgets (w/ Five Lagunas, w/out Project)		--	--	--	**384**	--	--	**1,705**	--	--	--	--
Less Farmer Boys (approved 9/16)		--	--	--	**(49)**	--	--	**(25)**	--	--	--	--
Remaining UVSP Trip Budgets (Before Project Credits/Debits)		--	--	--	**335**	--	--	**1,680**	--	--	--	--
Less Project vs. Five Lagunas		--	--	--	**(119)**	--	--	**910**	--	--	--	--
Unused UVSP Trip Budgets (After Project Credits/Debits)		--	--	--	**216**	--	--	**2,590**	--	--	--	--

Notes:

[a] Trip generation for shopping centers/retail uses were calculated using the following equations:
Weekday Daily Rate: Ln(T) = 0.68Ln(X) + 5.57
AM Commuter Peak Hour Rate: Ln(T) = 0.50(X) + 151.78
PM Commuter Peak Hour Rate: Ln(T) = 0.74Ln(X) + 2.89
Saturday Daily Rate: Ln(T) = 0.62Ln(X) + 6.24
Saturday Peak Hour of the Generator: Ln(T) = 0.79Ln(X) + 2.79
Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
X = Area in 1,000 gross square feet of leasable area

[b] Trip generation for the general office land use was calculated using the following equations:
Weekday Daily Rate: Ln(T) = 0.97Ln(X) + 2.50
AM Commuter Peak Hour Rate: Ln(T) = 0.94(X) + 26.49
PM Commuter Peak Hour Rate: Ln(T) = 0.95Ln(X) + 0.36
Saturday Daily Rate: Not Given
Saturday Peak Hour of the Generator: Not Given
Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
X = Area in 1,000 gross square feet of leasable area

[c] Per City staff direction and ITE's definition of Land Use: 820 (Shopping Center), the health club SF is included in the Shopping Center SF.

[d] The internal trip reductions correspond to approximately 7% to 12% of total future trips.

[e] The pass-by trip reductions applied to retail trips are 10% for daily, 5% for AM peak hour, and 10% for PM and Saturday midday peak hours.

[f] Source: *Traffic Impact Analysis for the Five Lagunas Project*, prepared by LLG, November 13, 2015.

4.2 Project Traffic Distribution and Assignment

The geographic distribution of traffic generated by developments such as the Project is dependent upon the following factors:

- the Project's market/service area
- location of site access points in relation to the surrounding street system
- location of parking areas, and ingress/egress availability at the parking areas
- the site's proximity to major traffic carriers and regional access routes
- physical characteristics of the circulation system such as lane channelization and presence of traffic signals that affect travel patterns
- presence of traffic congestion in the surrounding vicinity

A select zone assignment from the City's traffic model (contained in ***Appendix C*** of this report), and prior traffic studies prepared for the mall and other developments within the study area, were used as a starting point, and further refined to reflect a less local/more regional orientation. The trip distribution refinements were based on the Project's market analysis, and SCAG's *Profile of the City of Laguna Hills* (dated May 2019). Based on these considerations, a project trip distribution pattern was developed and presented on ***Figures 7A*** through ***7D***. In addition, background traffic volumes at Avenida de la Carlota intersections were redistributed to account for the reconfiguration of Project driveways to restrict movements to right-turns in and out only.

The incremental traffic expected to be generated by the Project versus Five Lagunas (the trips generated by the previously approved Five Lagunas were included in background traffic volumes) was assigned to the local street network using the trip generation differential highlighted in blue and presented in *Table 6*, and the Project distribution pattern illustrated in *Figures 7A* through *7C*. ***Figures 8A*** through ***10D*** present the Project-generated traffic volumes for the weekday AM, weekday PM, and Saturday midday, peak hours, respectively.

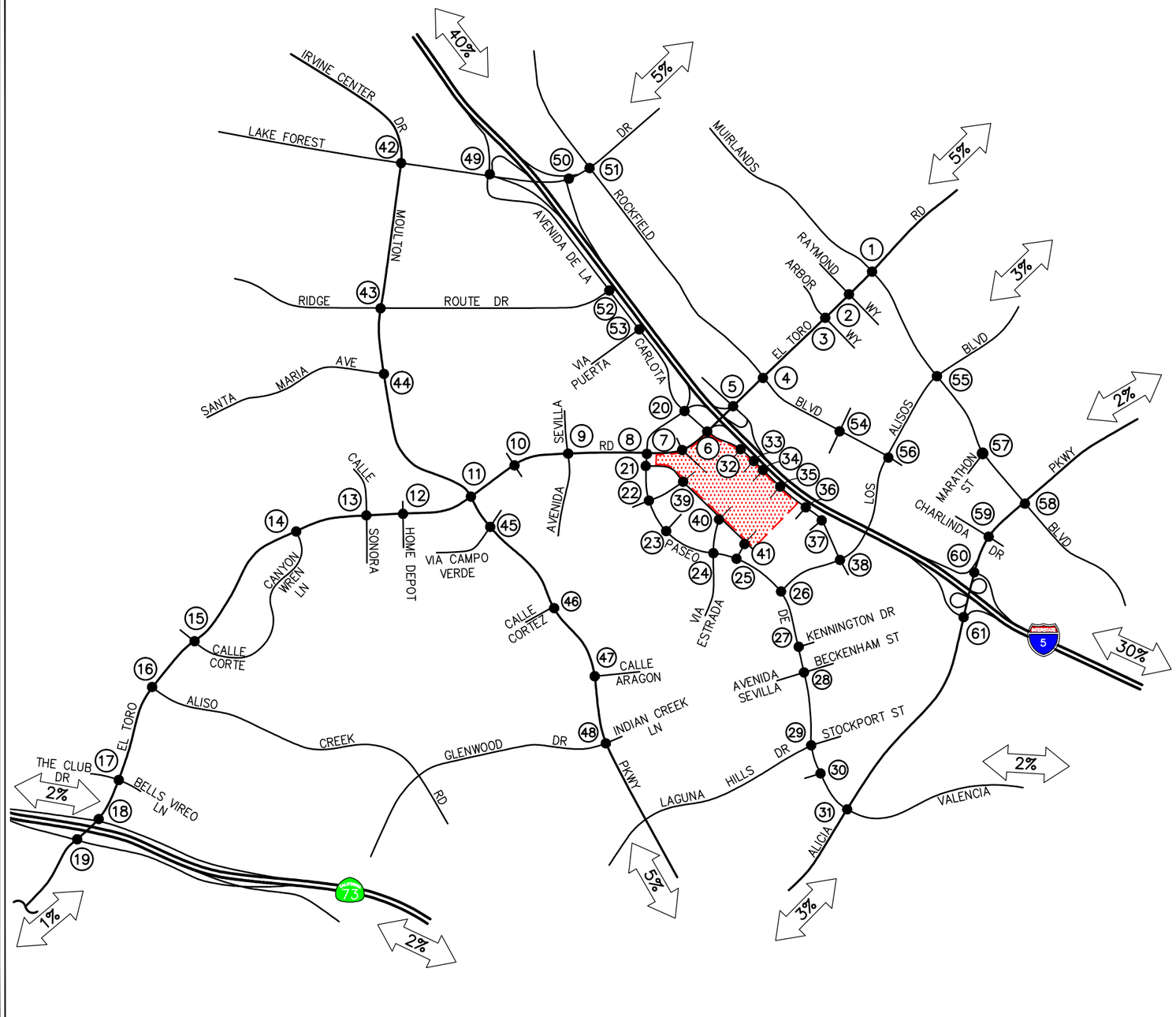
4.3 Year 2024 Cumulative Base

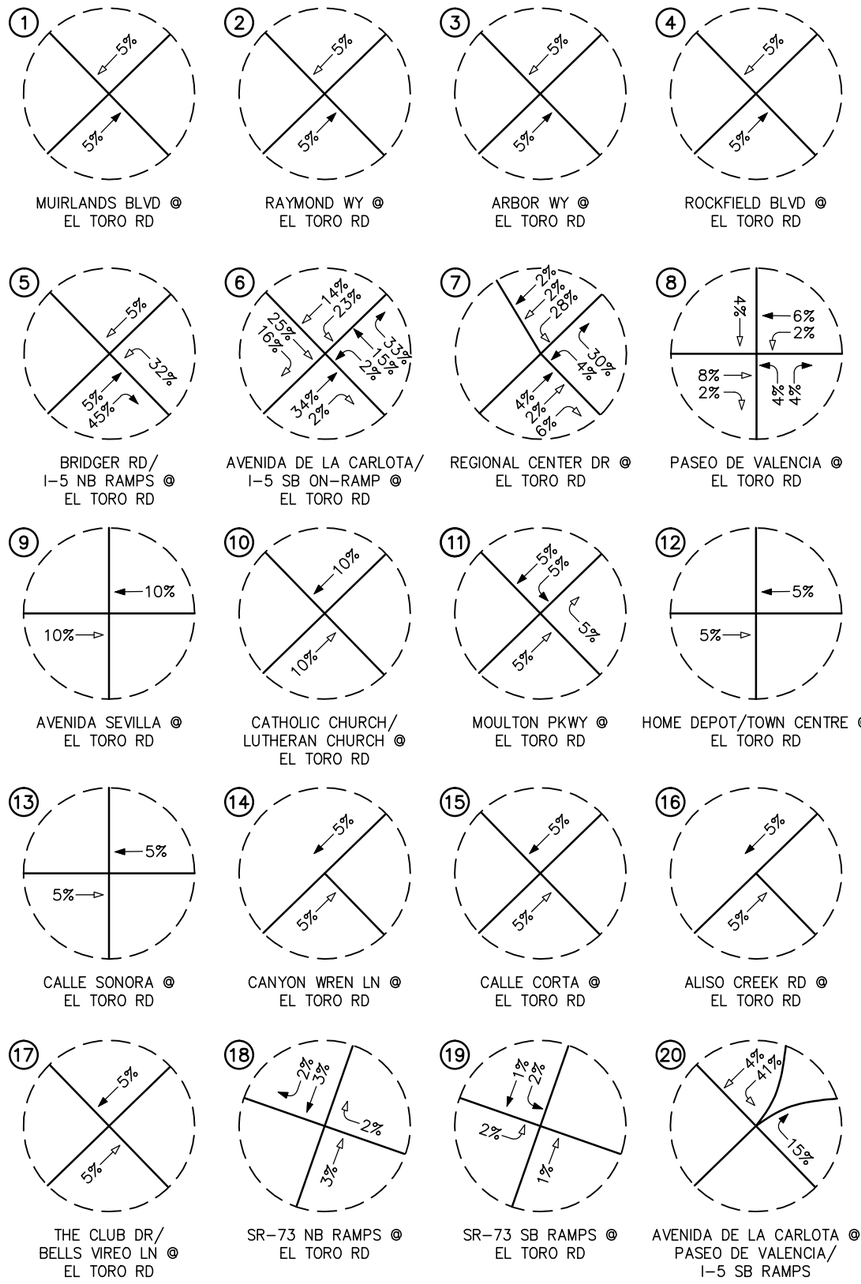
The Cumulative Base or "background" traffic projections account for existing traffic volumes, and include two growth elements over existing traffic volumes: (1) increase in the existing traffic volumes due to overall regional growth; and, (2) traffic generated by specific developments expected to be constructed by Year 2024 in the vicinity of the Project study area. The following sections describe these two growth elements in existing traffic volumes.

No physical, capacity-enhancing improvements to intersection geometry or roadway segments have been assumed under Year 2024 Cumulative Base conditions because no transportation system projects within the study area are expected to be fully developed/completed by Year 2024.

4.3.1 *Ambient Growth*

The ambient traffic growth factor is intended to include unknown and future related projects in the study area, as well as account for regular growth in traffic volumes due to the development of projects outside the study area. The Year 2024 background traffic volumes were estimated based on





n:\4200\2194208 - five lagunas seir, laguna hills\dwg\4208 f7-a.dwg LDP 10:34:44 03-13-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

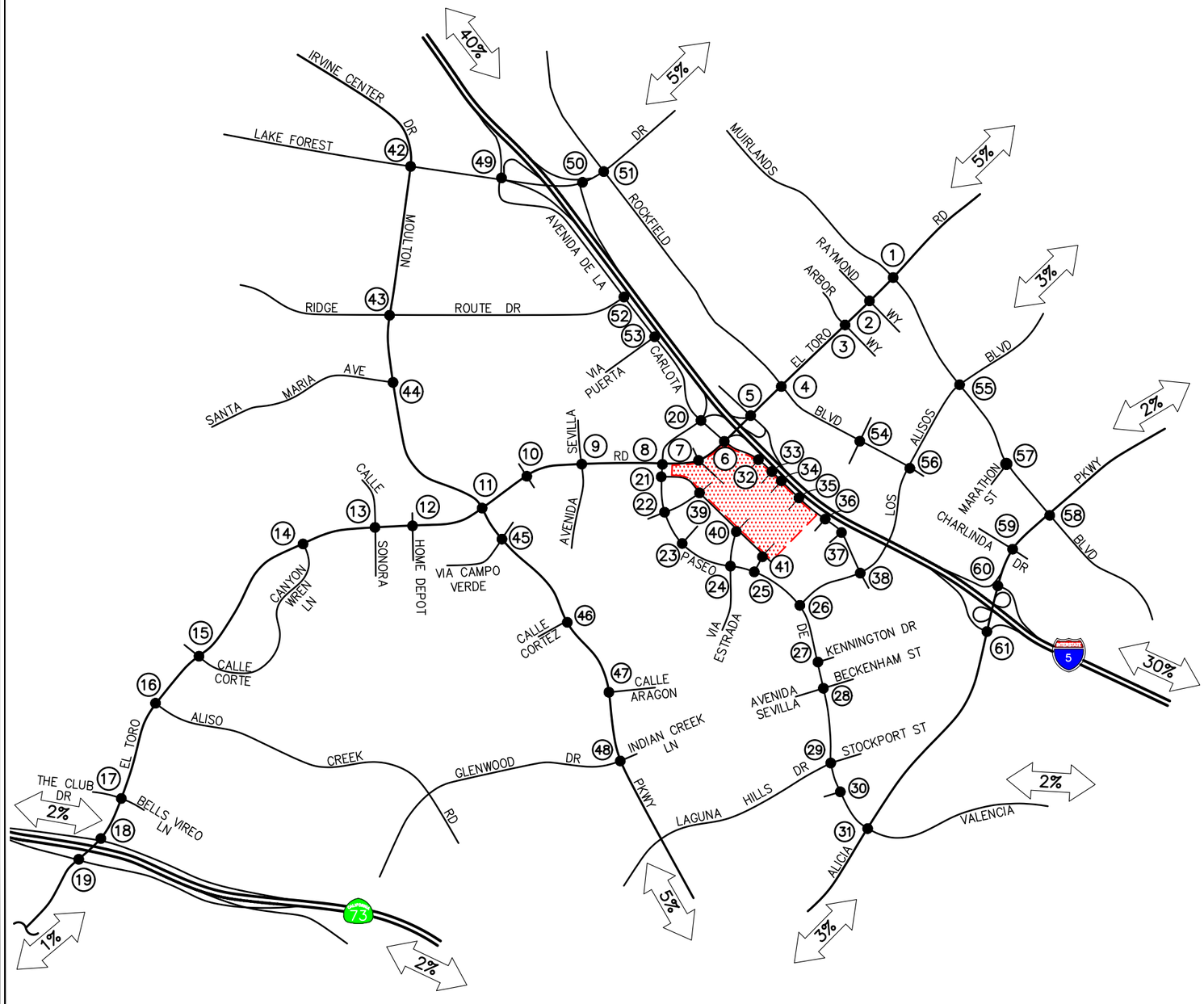
N NO SCALE

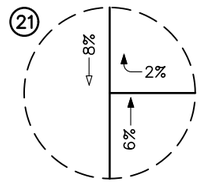
KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= PROJECT SITE

FIGURE 7A

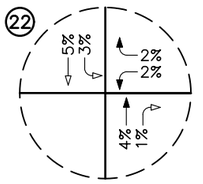
PROJECT TRAFFIC DISTRIBUTION PATTERN

VILLAGE AT LAGUNA HILLS

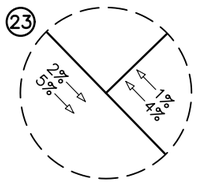




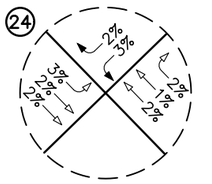
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



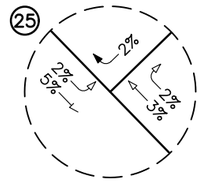
PASEO DE VALENCIA @ CALLE DE LA PLATA



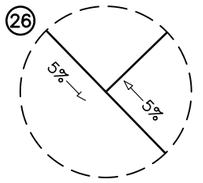
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



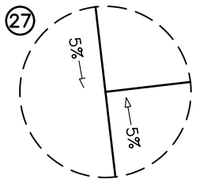
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



PASEO DE VALENCIA @ LOS ALISOS BLVD



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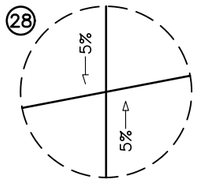

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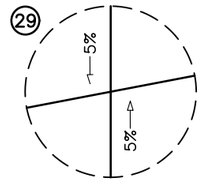
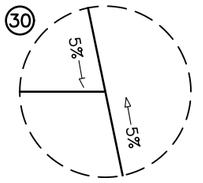


PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



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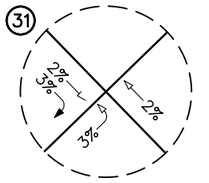
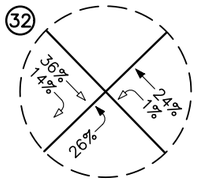
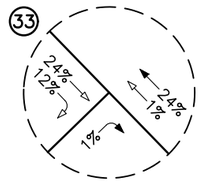


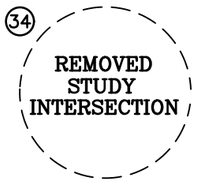
PASEO DE VALENCIA @ ALICIA PKWY



AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



AVENIDA DE LA CARLOTA @ MALL DWY 1



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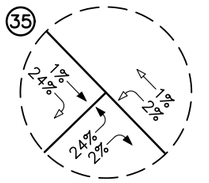
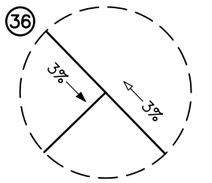
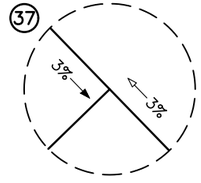


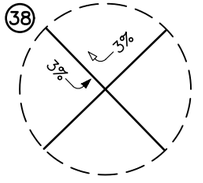
AVENIDA DE LA CARLOTA @ MALL DWY 3



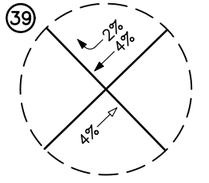
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



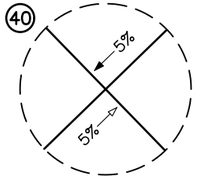
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

LINSCOTT LAW & GREENSPAN engineers

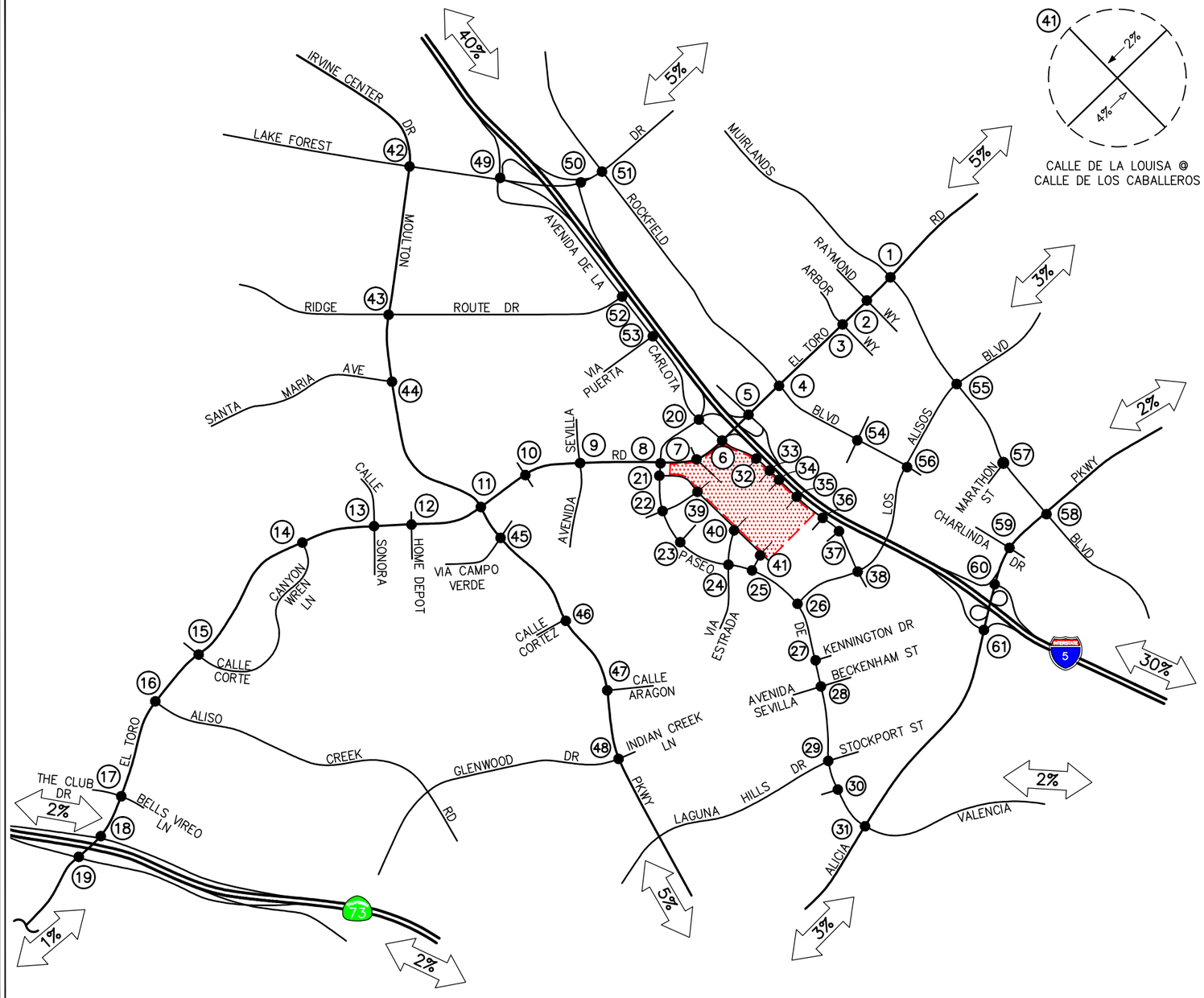
N NO SCALE

KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= PROJECT SITE

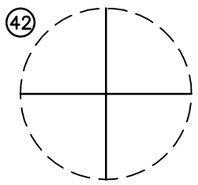
FIGURE 7B

PROJECT TRAFFIC DISTRIBUTION PATTERN

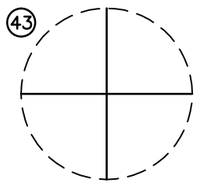
VILLAGE AT LAGUNA HILLS



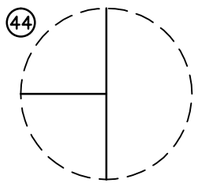
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



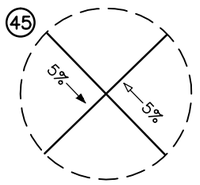
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



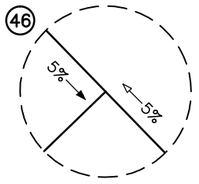
MOULTON PKWY @
RIDGE ROUTE DR



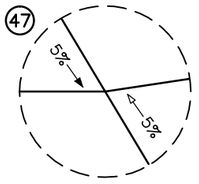
MOULTON PKWY @
SANTA MARIA AVE



MOULTON PKWY @
VIA CAMPO VERDE



MOULTON PKWY @
CALLE CORTEZ



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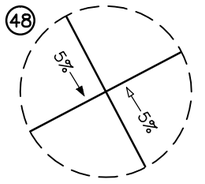
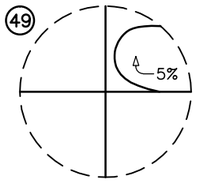
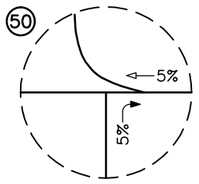
CALLE ARAGON



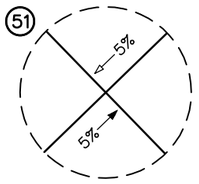
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



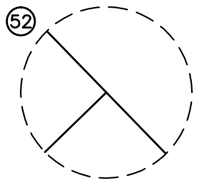
AVENIDA DE LA CARLOTA/
I-5 SB RAMPS @
LAKE FOREST DR



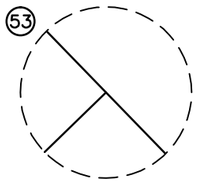
I-5 NB RAMPS @
LAKE FOREST DR



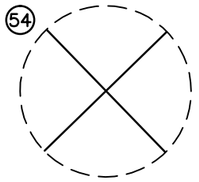
ROCKFIELD BLVD @
LAKE FOREST DR



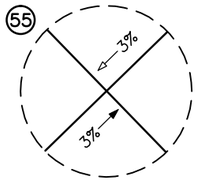
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



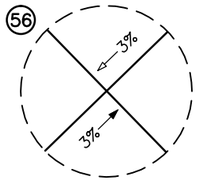
AVENIDA DE LA CARLOTA @
VIA PUERTA



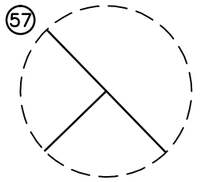
ROCKFIELD BLVD @
LANDISVIEW AVE



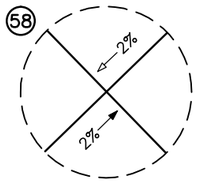
MUIRLANDS BLVD @
LOS ALISOS BLVD



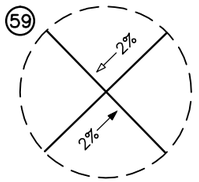
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



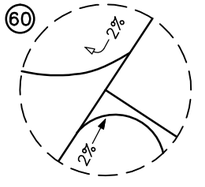
MUIRLANDS BLVD @
MARATHON ST



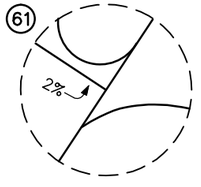
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

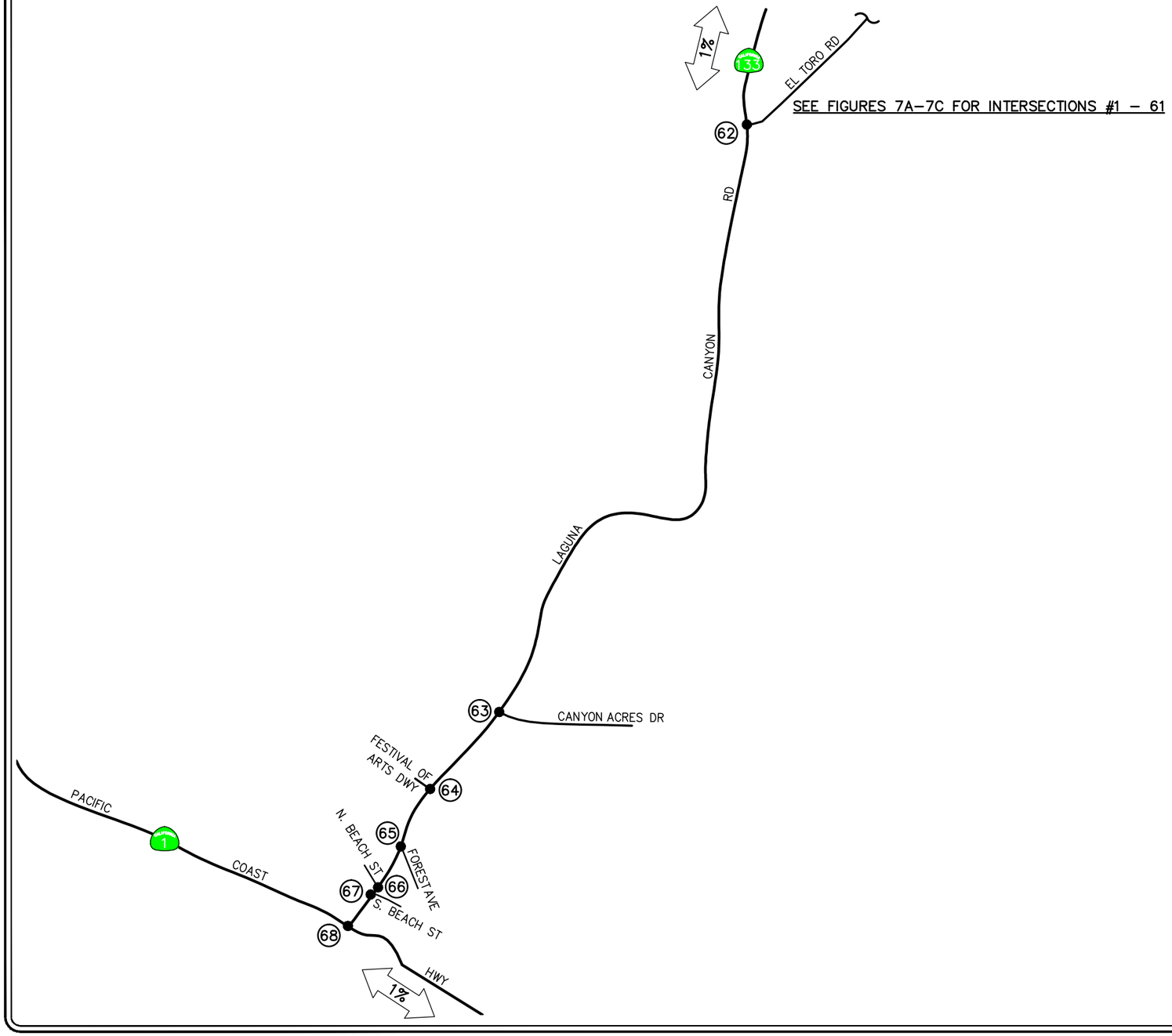
N NO SCALE

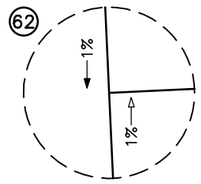
KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= PROJECT SITE

FIGURE 7C

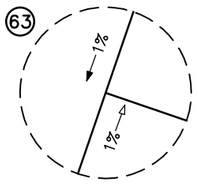
PROJECT TRAFFIC DISTRIBUTION PATTERN

VILLAGE AT LAGUNA HILLS

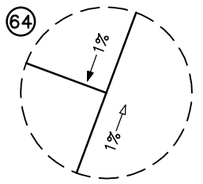




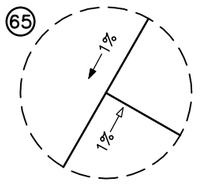
LAGUNA CANYON RD @
EL TORO RD



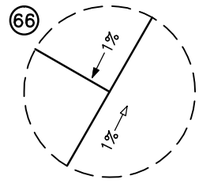
LAGUNA CANYON RD @
CANYON ACRES DR



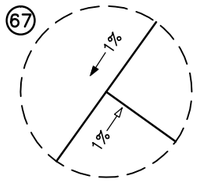
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



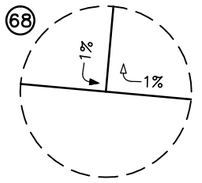
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

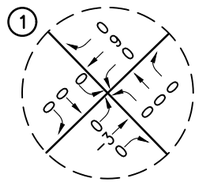
KEY
= INBOUND PERCENTAGE
= OUTBOUND PERCENTAGE
= PROJECT SITE

FIGURE 7D

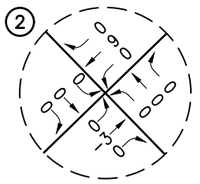
PROJECT TRAFFIC DISTRIBUTION PATTERN

VILLAGE AT LAGUNA HILLS

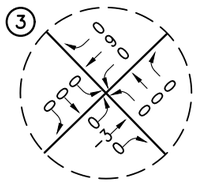
SEE FIGURE 8D FOR INTERSECTIONS #62 – 68



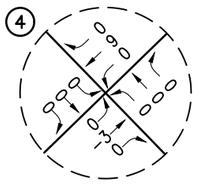
MUIRLANDS BLVD @
EL TORO RD



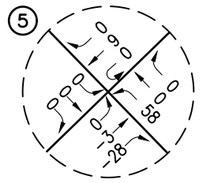
RAYMOND WY @
EL TORO RD



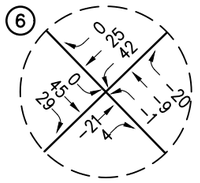
ARBOR WY @
EL TORO RD



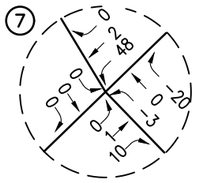
ROCKFIELD BLVD @
EL TORO RD



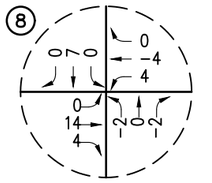
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



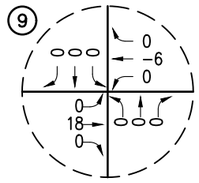
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



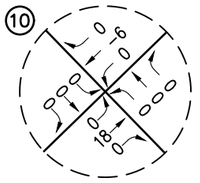
REGIONAL CENTER DR @
EL TORO RD



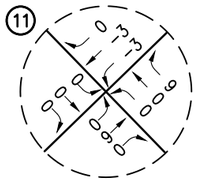
PASEO DE VALENCIA @
EL TORO RD



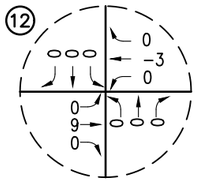
AVENIDA SEVILLA @
EL TORO RD



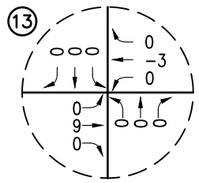
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



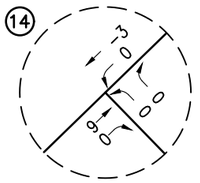
MOULTON PKWY @
EL TORO RD



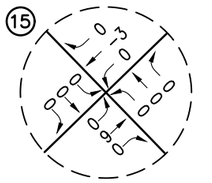
HOME DEPOT/TOWN CENTRE @
EL TORO RD



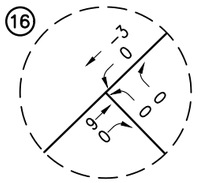
CALLE SONORA @
EL TORO RD



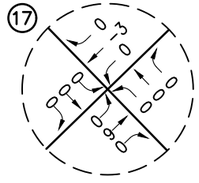
CANYON WREN LN @
EL TORO RD



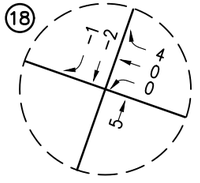
CALLE CORTA @
EL TORO RD



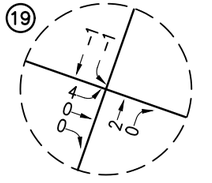
ALISO CREEK RD @
EL TORO RD



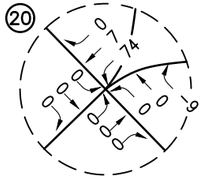
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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N NO SCALE

KEY

(#) = STUDY INTERSECTION

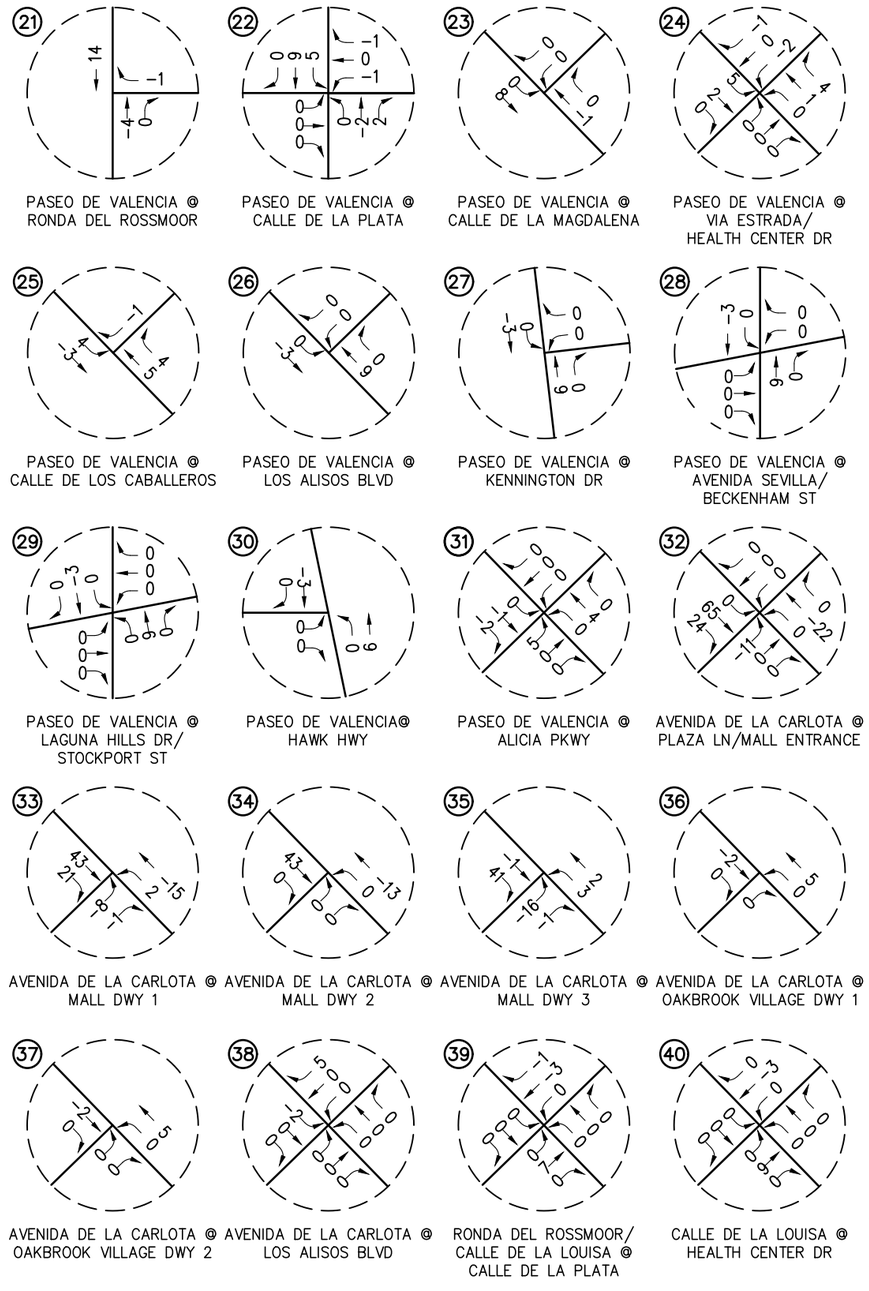
= PROJECT SITE

FIGURE 8A

PROJECT TRAFFIC VOLUMES AM PEAK HOUR

VILLAGE AT LAGUNA HILLS

SEE FIGURE 8D FOR INTERSECTIONS #62 – 68



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

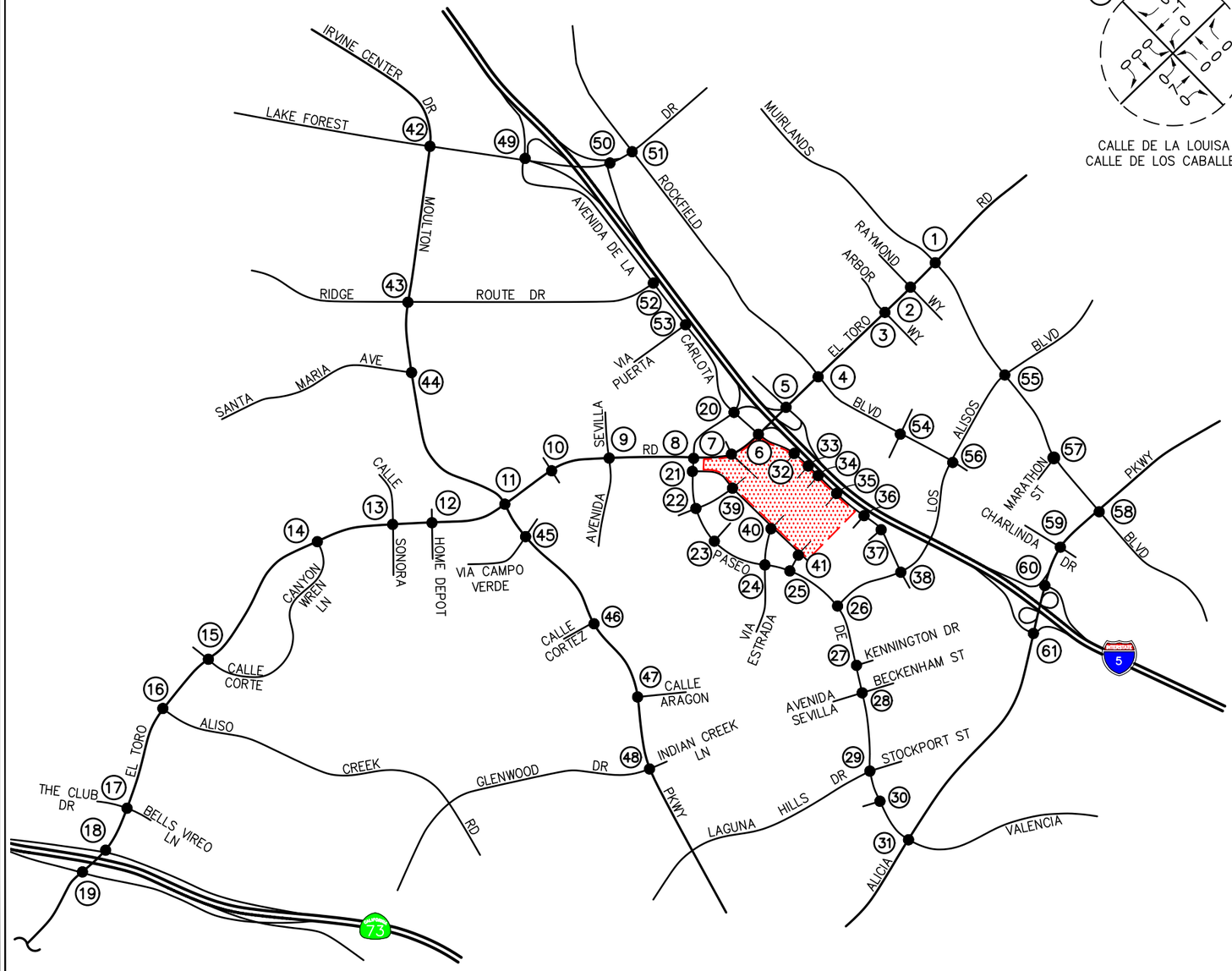
(#) = STUDY INTERSECTION

= PROJECT SITE

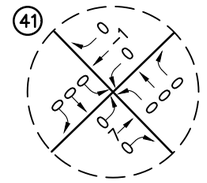
FIGURE 8B

PROJECT TRAFFIC VOLUMES AM PEAK HOUR

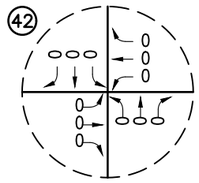
VILLAGE AT LAGUNA HILLS



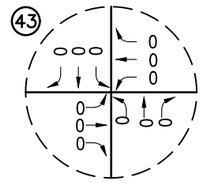
SEE FIGURE 8D FOR INTERSECTIONS #62 – 68



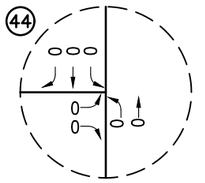
41 CALLE DE LA LOUISA @ CALLE DE LOS CABALLEROS



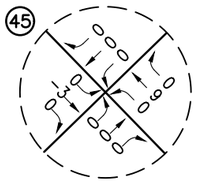
42 IRVINE CENTER DR/ MOULTON PKWY @ LAKE FOREST DR



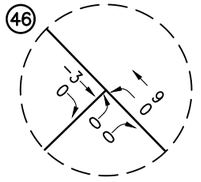
43 MOULTON PKWY @ RIDGE ROUTE DR



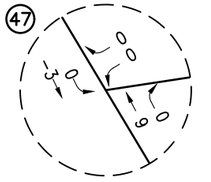
44 MOULTON PKWY @ SANTA MARIA AVE



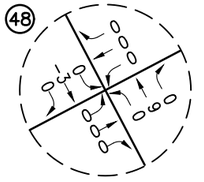
45 MOULTON PKWY @ VIA CAMPO VERDE



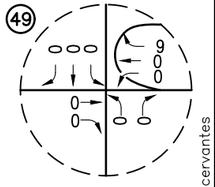
46 MOULTON PKWY @ CALLE CORTEZ



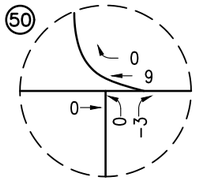
47 MOULTON PKWY @ CALLE ARAGON



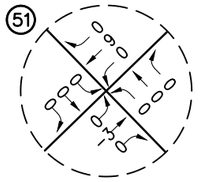
48 MOULTON PKWY @ GLENWOOD DR/ INDIAN CREEK LN



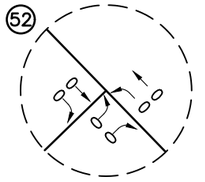
49 AVENIDA DE LA CARLOTA/ I-5 SB RAMPS @ LAKE FOREST DR



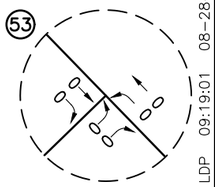
50 I-5 NB RAMPS @ LAKE FOREST DR



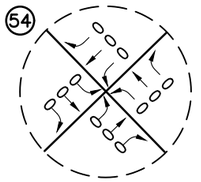
51 ROCKFIELD BLVD @ LAKE FOREST DR



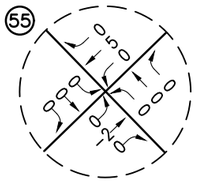
52 AVENIDA DE LA CARLOTA @ RIDGE ROUTE DR



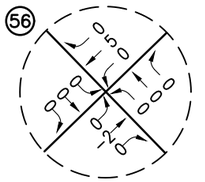
53 AVENIDA DE LA CARLOTA @ VIA PUERTA



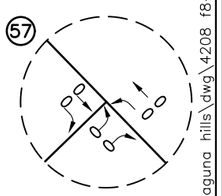
54 ROCKFIELD BLVD @ LANDISVIEW AVE



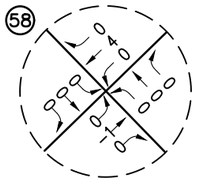
55 MUIRLANDS BLVD @ LOS ALISOS BLVD



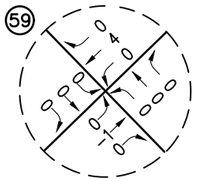
56 ROCKFIELD BLVD/FORDVIEW @ LOS ALISOS BLVD



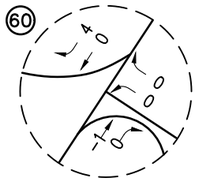
57 MUIRLANDS BLVD @ MARATHON ST



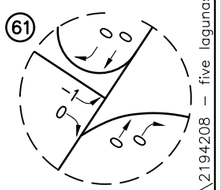
58 MUIRLANDS BLVD @ ALICIA PKWY



59 CHARLINDA DR @ ALICIA PKWY



60 I-5 NB RAMPS @ ALICIA PKWY



61 I-5 SB RAMPS @ ALICIA PKWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

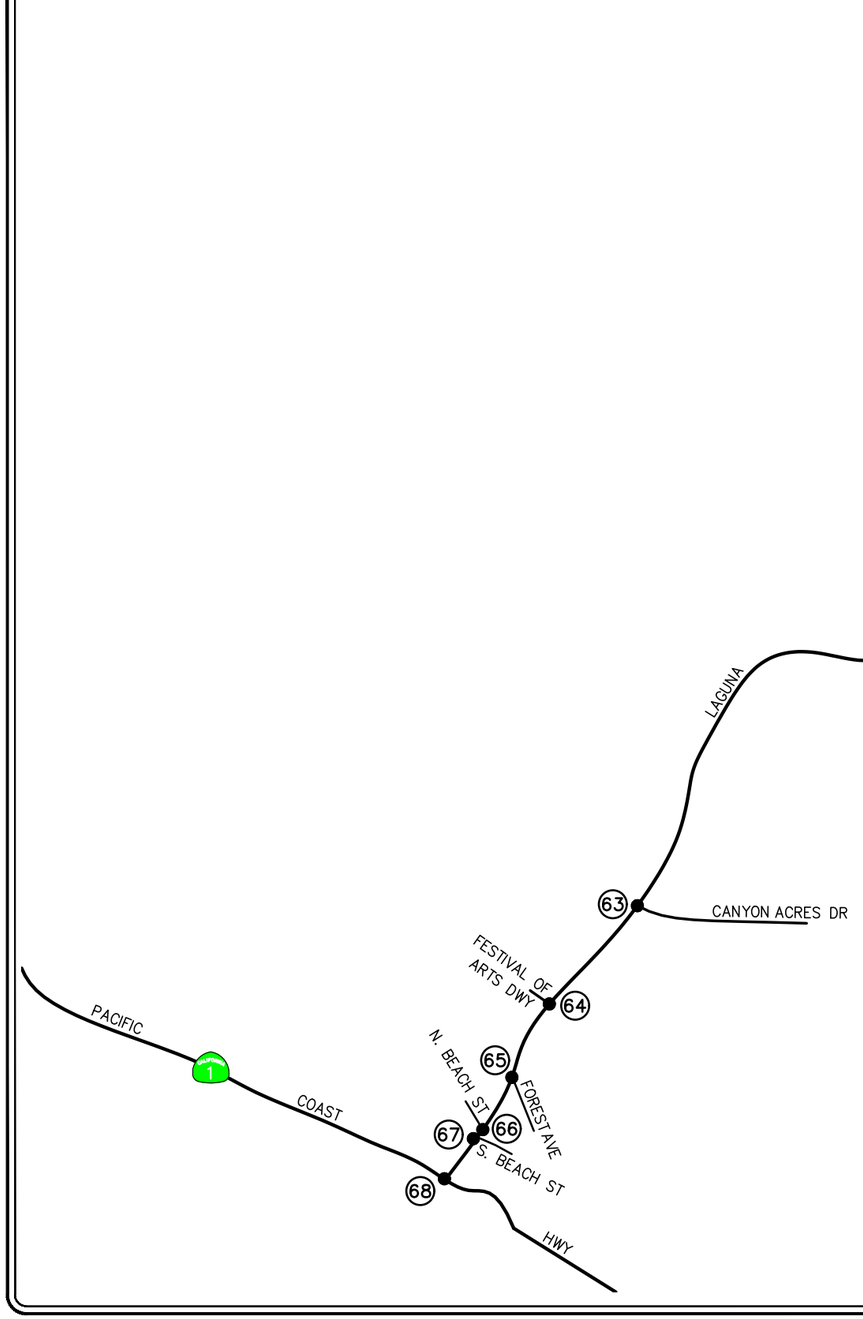
(#) = STUDY INTERSECTION

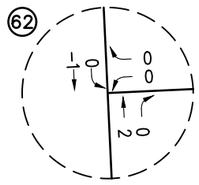
= PROJECT SITE

FIGURE 8C

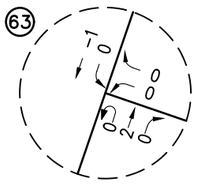
PROJECT TRAFFIC VOLUMES AM PEAK HOUR

VILLAGE AT LAGUNA HILLS

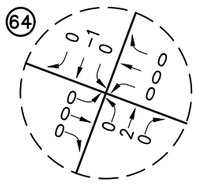




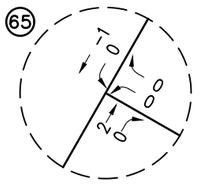
LAGUNA CANYON RD @
EL TORO RD



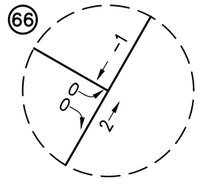
LAGUNA CANYON RD @
CANYON ACRES DR



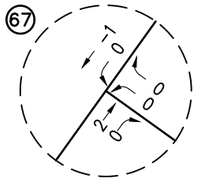
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



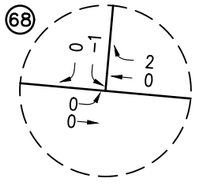
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN
engineers

N
NO SCALE

KEY

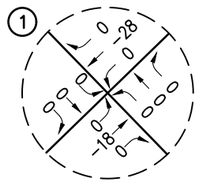
(#) = STUDY INTERSECTION

FIGURE 8D

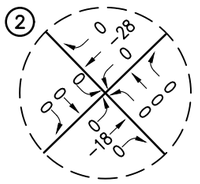
PROJECT TRAFFIC VOLUMES AM PEAK HOUR

VILLAGE AT LAGUNA HILLS

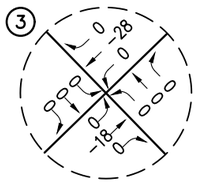
SEE FIGURE 9D FOR INTERSECTIONS #62 – 68



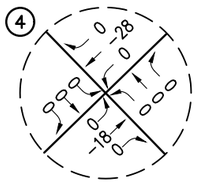
MUIRLANDS BLVD @
EL TORO RD



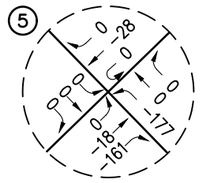
RAYMOND WY @
EL TORO RD



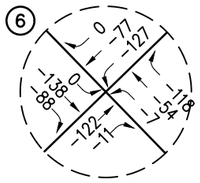
ARBOR WY @
EL TORO RD



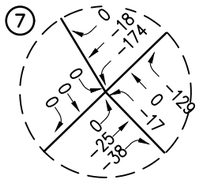
ROCKFIELD BLVD @
EL TORO RD



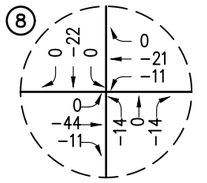
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



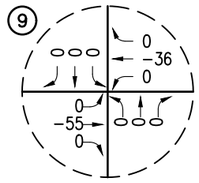
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



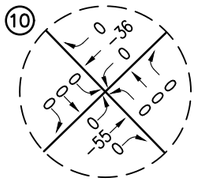
REGIONAL CENTER DR @
EL TORO RD



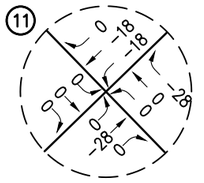
PASEO DE VALENCIA @
EL TORO RD



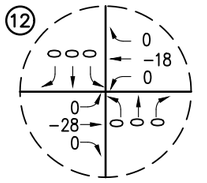
AVENIDA SEVILLA @
EL TORO RD



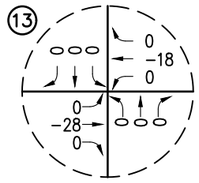
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



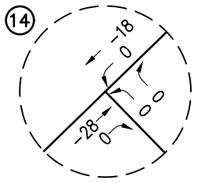
MOULTON PKWY @
EL TORO RD



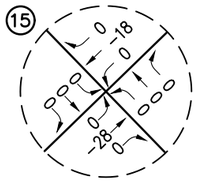
HOME DEPOT/TOWN CENTRE @
EL TORO RD



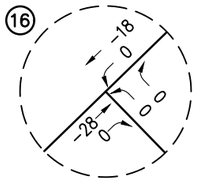
CALLE SONORA @
EL TORO RD



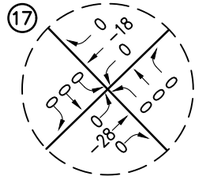
CANYON WREN LN @
EL TORO RD



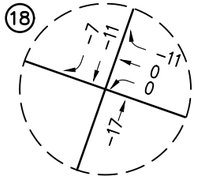
CALLE CORTA @
EL TORO RD



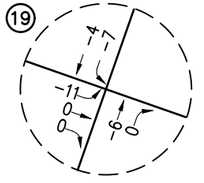
ALISO CREEK RD @
EL TORO RD



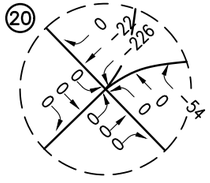
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f9-a.dwg LDP 09:23:58 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

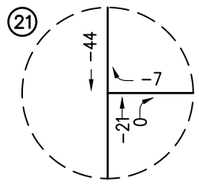
= PROJECT SITE

FIGURE 9A

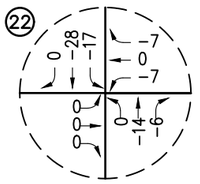
PROJECT TRAFFIC VOLUMES PM PEAK HOUR

VILLAGE AT LAGUNA HILLS

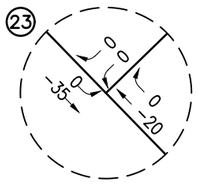
SEE FIGURE 9D FOR INTERSECTIONS #62 – 68



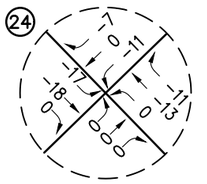
PASEO DE VALENCIA @
RONDA DEL ROSSMOOR



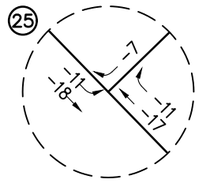
PASEO DE VALENCIA @
CALLE DE LA PLATA



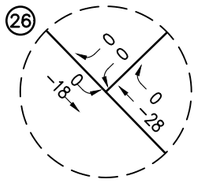
PASEO DE VALENCIA @
CALLE DE LA MAGDALENA



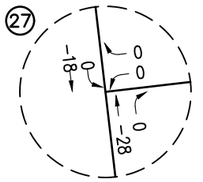
PASEO DE VALENCIA @
VIA ESTRADA/
HEALTH CENTER DR



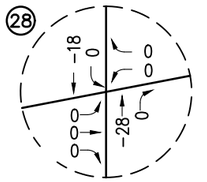
PASEO DE VALENCIA @
CALLE DE LOS CABALLEROS



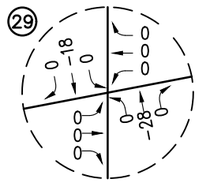
PASEO DE VALENCIA @
LOS ALISOS BLVD



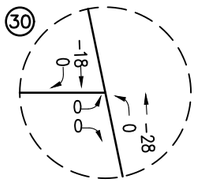
PASEO DE VALENCIA @
KENNINGTON DR



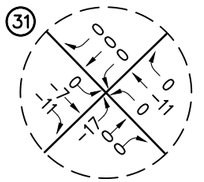
PASEO DE VALENCIA @
AVENIDA SEVILLA/
BECKENHAM ST



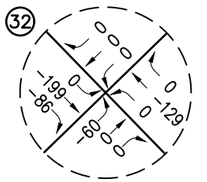
PASEO DE VALENCIA @
LAGUNA HILLS DR/
STOCKPORT ST



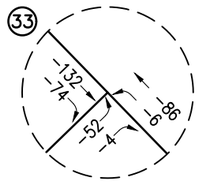
PASEO DE VALENCIA@
HAWK HWY



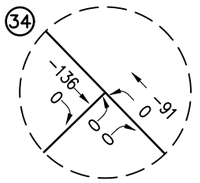
PASEO DE VALENCIA @
ALICIA PKWY



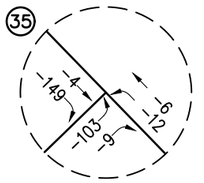
AVENIDA DE LA CARLOTA @
PLAZA LN/MALL ENTRANCE



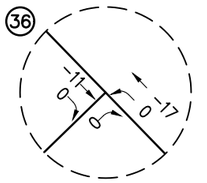
AVENIDA DE LA CARLOTA @
MALL DWY 1



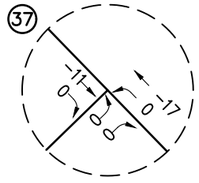
AVENIDA DE LA CARLOTA @
MALL DWY 2



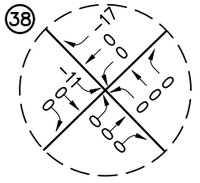
AVENIDA DE LA CARLOTA @
MALL DWY 3



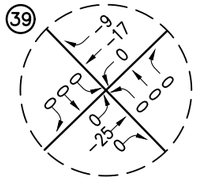
AVENIDA DE LA CARLOTA @
OAKBROOK VILLAGE DWY 1



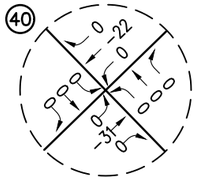
AVENIDA DE LA CARLOTA @
OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @
LOS ALISOS BLVD



RONDA DEL ROSSMOOR/
CALLE DE LA LOUISA @
CALLE DE LA PLATA



CALLE DE LA LOUISA @
HEALTH CENTER DR

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

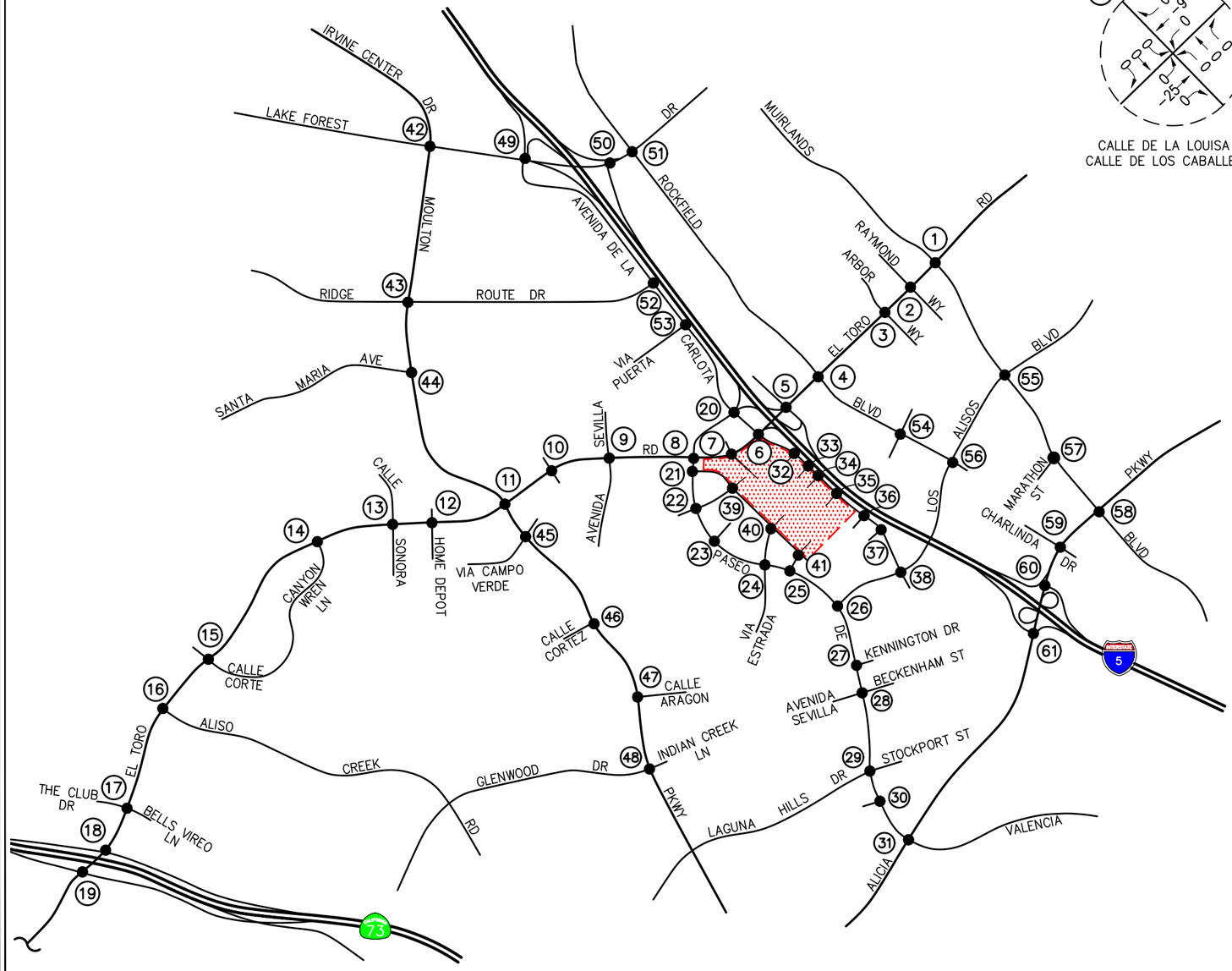
(#) = STUDY INTERSECTION

= PROJECT SITE

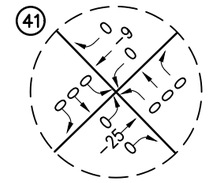
FIGURE 9B

PROJECT TRAFFIC VOLUMES PM PEAK HOUR

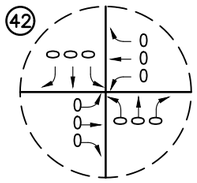
VILLAGE AT LAGUNA HILLS



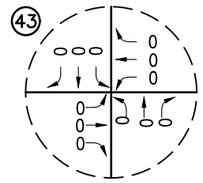
SEE FIGURE 9D FOR INTERSECTIONS #62 – 68



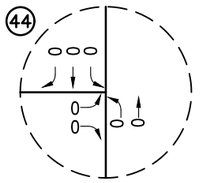
41 CALLE DE LA LOUISA @ CALLE DE LOS CABALLEROS



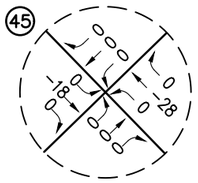
42 IRVINE CENTER DR/ MOULTON PKWY @ LAKE FOREST DR



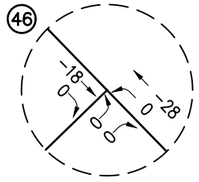
43 MOULTON PKWY @ RIDGE ROUTE DR



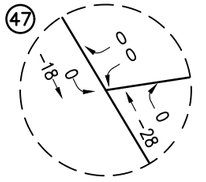
44 MOULTON PKWY @ SANTA MARIA AVE



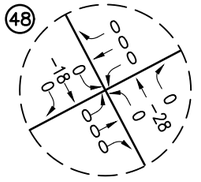
45 MOULTON PKWY @ VIA CAMPO VERDE



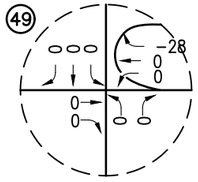
46 MOULTON PKWY @ CALLE CORTEZ



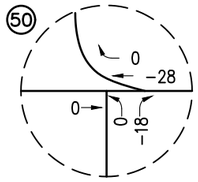
47 MOULTON PKWY @ CALLE ARAGON



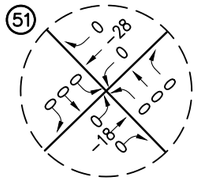
48 MOULTON PKWY @ GLENWOOD DR/ INDIAN CREEK LN



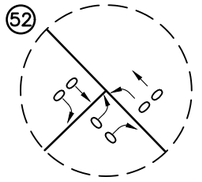
49 AVENIDA DE LA CARLOTA/ I-5 SB RAMPS @ LAKE FOREST DR



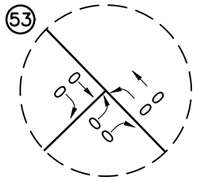
50 I-5 NB RAMPS @ LAKE FOREST DR



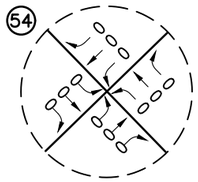
51 ROCKFIELD BLVD @ LAKE FOREST DR



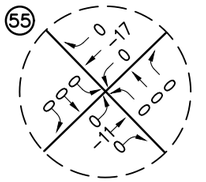
52 AVENIDA DE LA CARLOTA @ RIDGE ROUTE DR



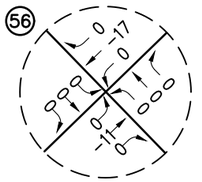
53 AVENIDA DE LA CARLOTA @ VIA PUERTA



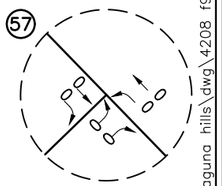
54 ROCKFIELD BLVD @ LANDISVIEW AVE



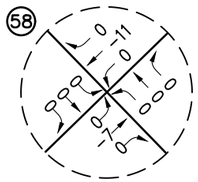
55 MUIRLANDS BLVD @ LOS ALISOS BLVD



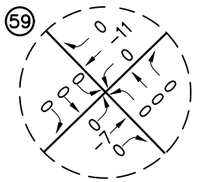
56 ROCKFIELD BLVD/FORDVIEW @ LOS ALISOS BLVD



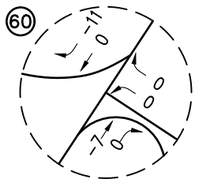
57 MUIRLANDS BLVD @ MARATHON ST



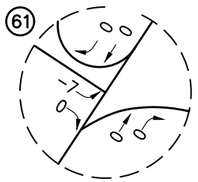
58 MUIRLANDS BLVD @ ALICIA PKWY



59 CHARLINDA DR @ ALICIA PKWY



60 I-5 NB RAMPS @ ALICIA PKWY



61 I-5 SB RAMPS @ ALICIA PKWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

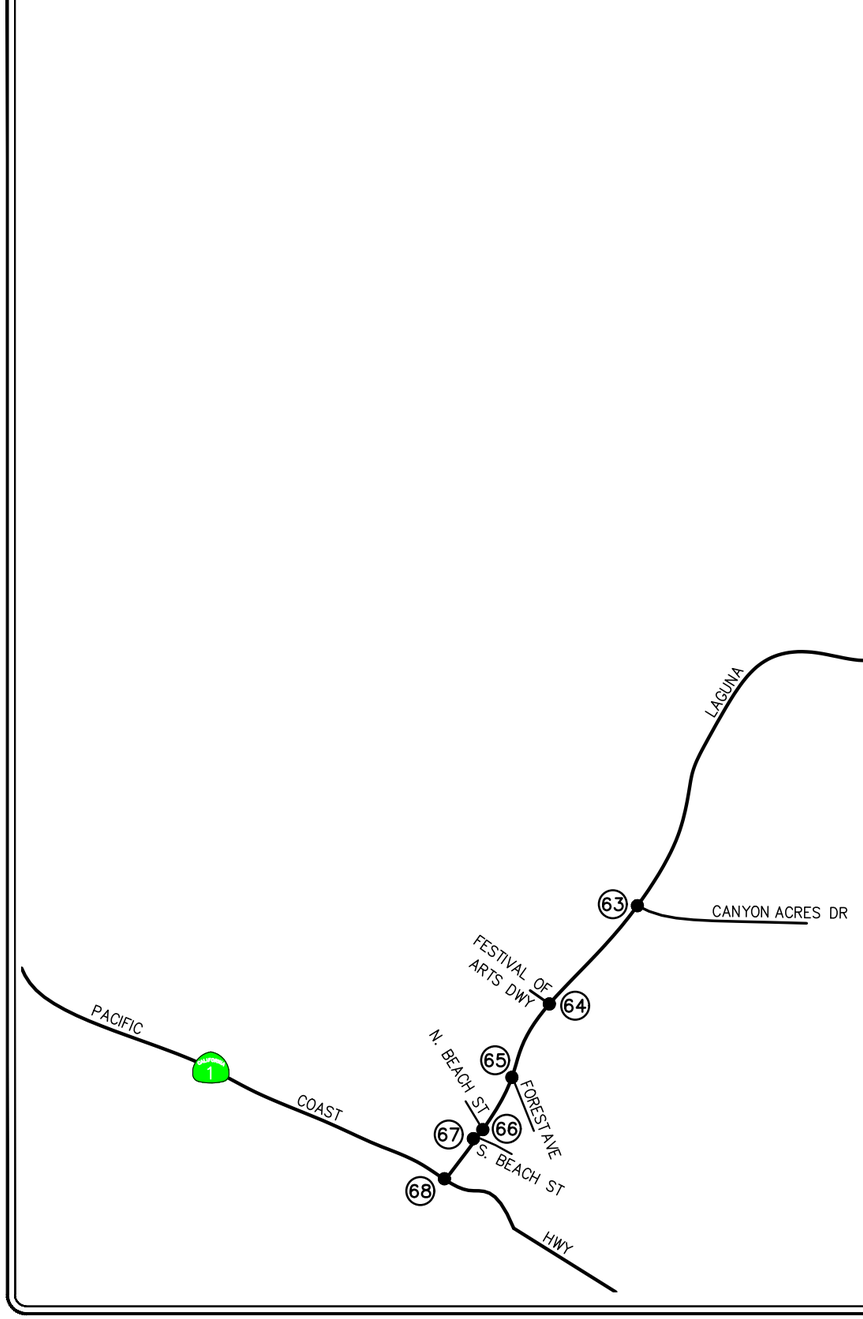
(#) = STUDY INTERSECTION

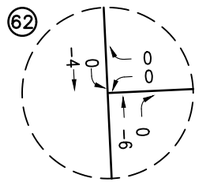
= PROJECT SITE

FIGURE 9C

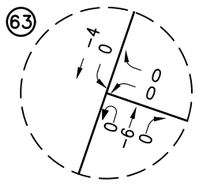
PROJECT TRAFFIC VOLUMES PM PEAK HOUR

VILLAGE AT LAGUNA HILLS

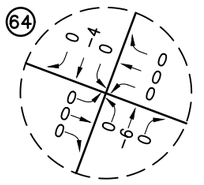




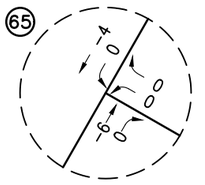
LAGUNA CANYON RD @
EL TORO RD



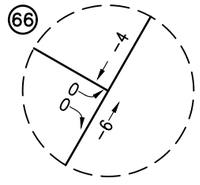
LAGUNA CANYON RD @
CANYON ACRES DR



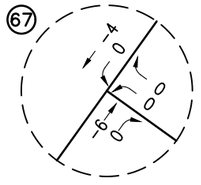
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



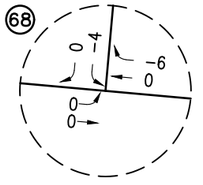
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

n:\4200\2194208 - five lagunas seir, laguna hills\dwg\4208 f9-d.dwg LDP 09:26:56 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

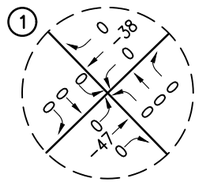
(#) = STUDY INTERSECTION

FIGURE 9D

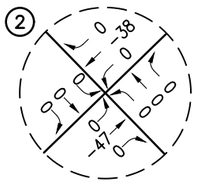
PROJECT TRAFFIC VOLUMES PM PEAK HOUR

VILLAGE AT LAGUNA HILLS

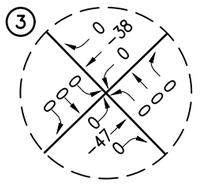
SEE FIGURE 10D FOR INTERSECTIONS #62 – 68



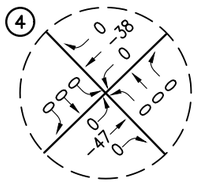
MUIRLANDS BLVD @
EL TORO RD



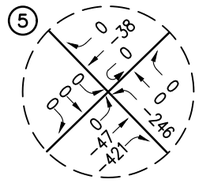
RAYMOND WY @
EL TORO RD



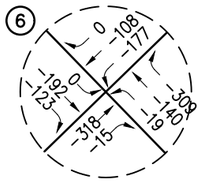
ARBOR WY @
EL TORO RD



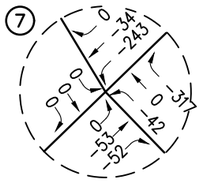
ROCKFIELD BLVD @
EL TORO RD



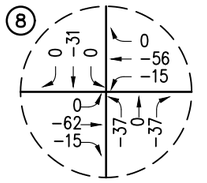
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



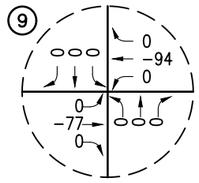
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



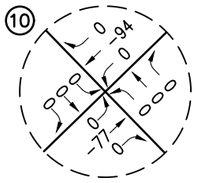
REGIONAL CENTER DR @
EL TORO RD



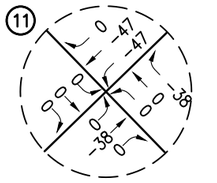
PASEO DE VALENCIA @
EL TORO RD



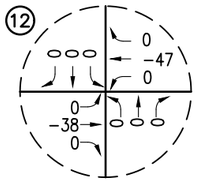
AVENIDA SEVILLA @
EL TORO RD



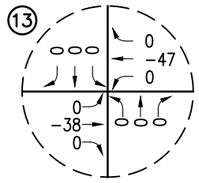
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



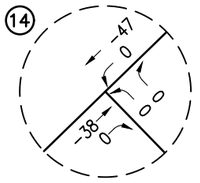
MOULTON PKWY @
EL TORO RD



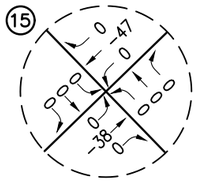
HOME DEPOT/TOWN CENTRE @
EL TORO RD



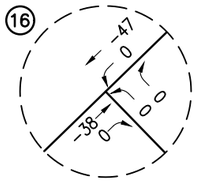
CALLE SONORA @
EL TORO RD



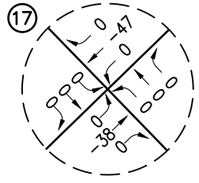
CANYON WREN LN @
EL TORO RD



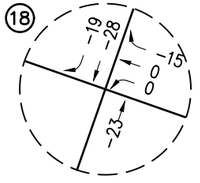
CALLE CORTA @
EL TORO RD



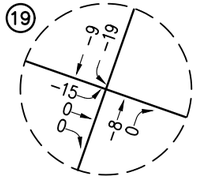
ALISO CREEK RD @
EL TORO RD



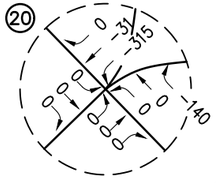
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f10-a.dwg LDP 09:34:37 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

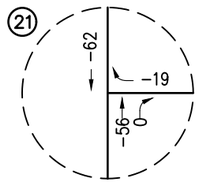
= PROJECT SITE

FIGURE 10A

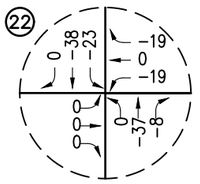
PROJECT TRAFFIC VOLUMES MIDDAY PEAK HOUR

VILLAGE AT LAGUNA HILLS

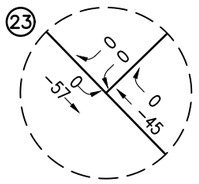
SEE FIGURE 10D FOR INTERSECTIONS #62 – 68



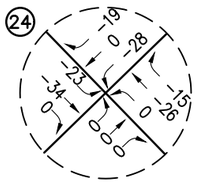
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



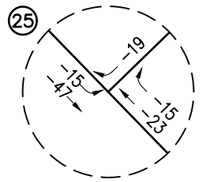
PASEO DE VALENCIA @ CALLE DE LA PLATA



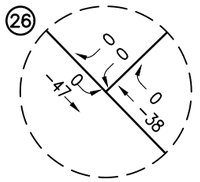
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



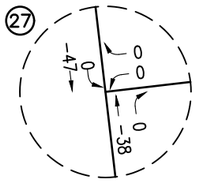
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



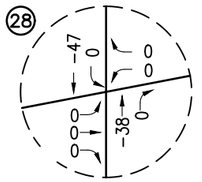
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



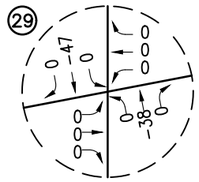
PASEO DE VALENCIA @ LOS ALISOS BLVD



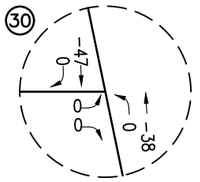
PASEO DE VALENCIA @ KENNINGTON DR



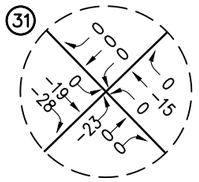
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



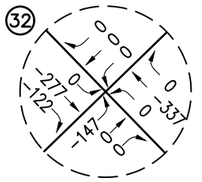
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



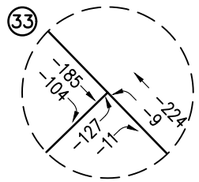
PASEO DE VALENCIA@ HAWK HWY



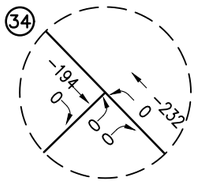
PASEO DE VALENCIA @ ALICIA PKWY



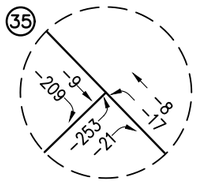
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



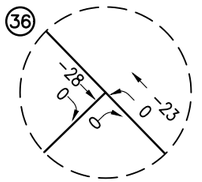
AVENIDA DE LA CARLOTA @ MALL DWY 1



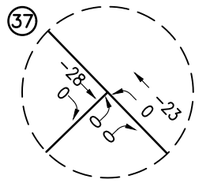
AVENIDA DE LA CARLOTA @ MALL DWY 2



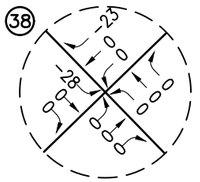
AVENIDA DE LA CARLOTA @ MALL DWY 3



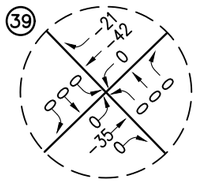
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



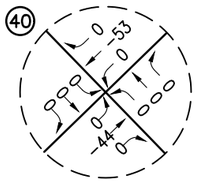
AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

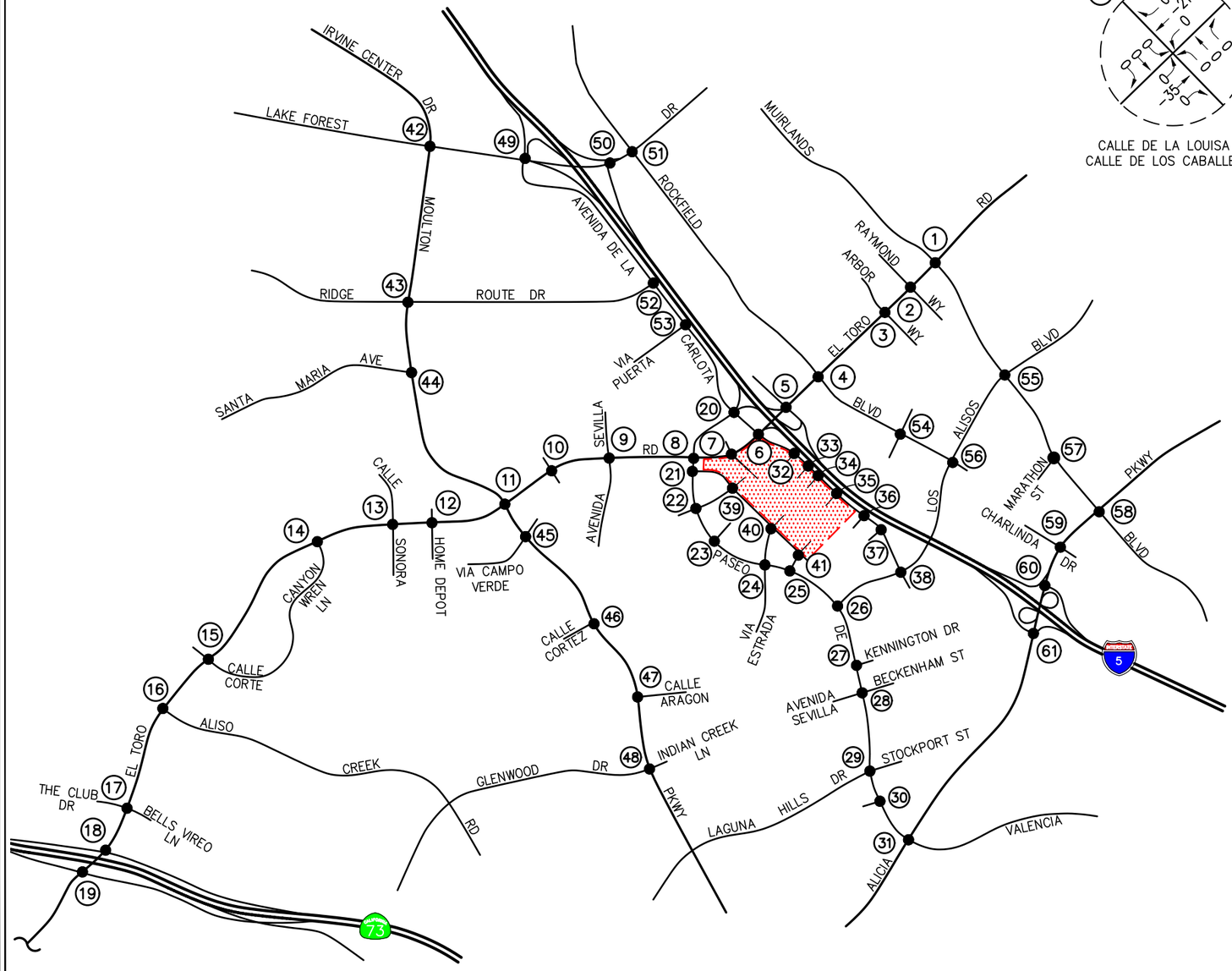
(#) = STUDY INTERSECTION

= PROJECT SITE

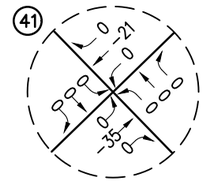
FIGURE 10B

PROJECT TRAFFIC VOLUMES MIDDAY PEAK HOUR

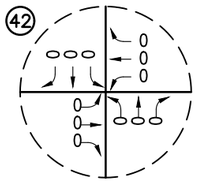
VILLAGE AT LAGUNA HILLS



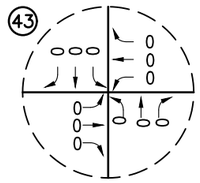
SEE FIGURE 10D FOR INTERSECTIONS #62 – 68



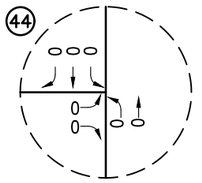
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



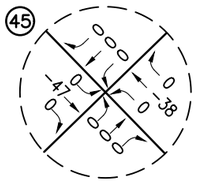
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



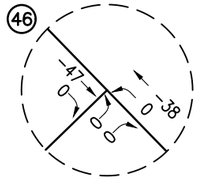
MOULTON PKWY @
RIDGE ROUTE DR



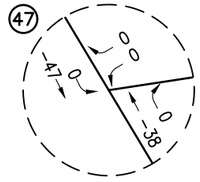
MOULTON PKWY @
SANTA MARIA AVE



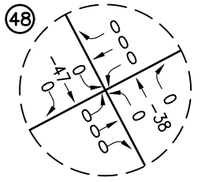
MOULTON PKWY @
VIA CAMPO VERDE



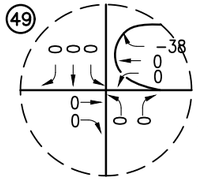
MOULTON PKWY @
CALLE CORTEZ



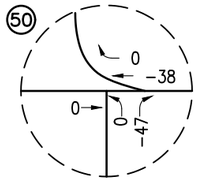
MOULTON PKWY @
CALLE ARAGON



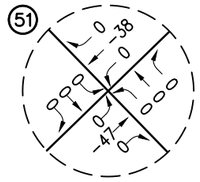
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



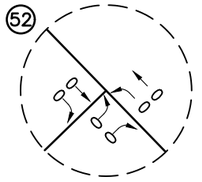
AVENIDA DE LA CARLOTA @
I-5 SB RAMPS @
LAKE FOREST DR



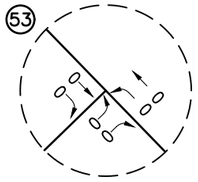
I-5 NB RAMPS @
LAKE FOREST DR



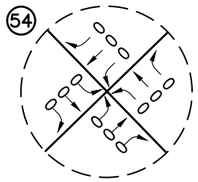
ROCKFIELD BLVD @
LAKE FOREST DR



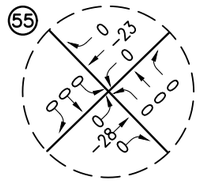
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



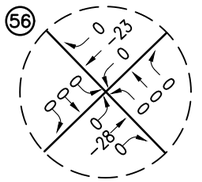
AVENIDA DE LA CARLOTA @
VIA PUERTA



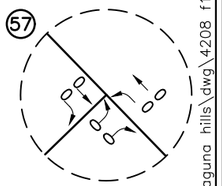
ROCKFIELD BLVD @
LANDISVIEW AVE



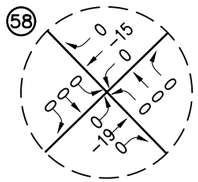
MUIRLANDS BLVD @
LOS ALISOS BLVD



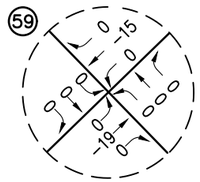
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



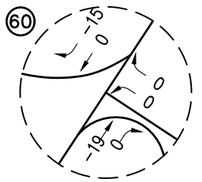
MUIRLANDS BLVD @
MARATHON ST



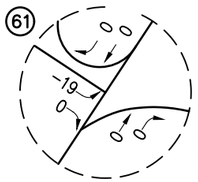
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

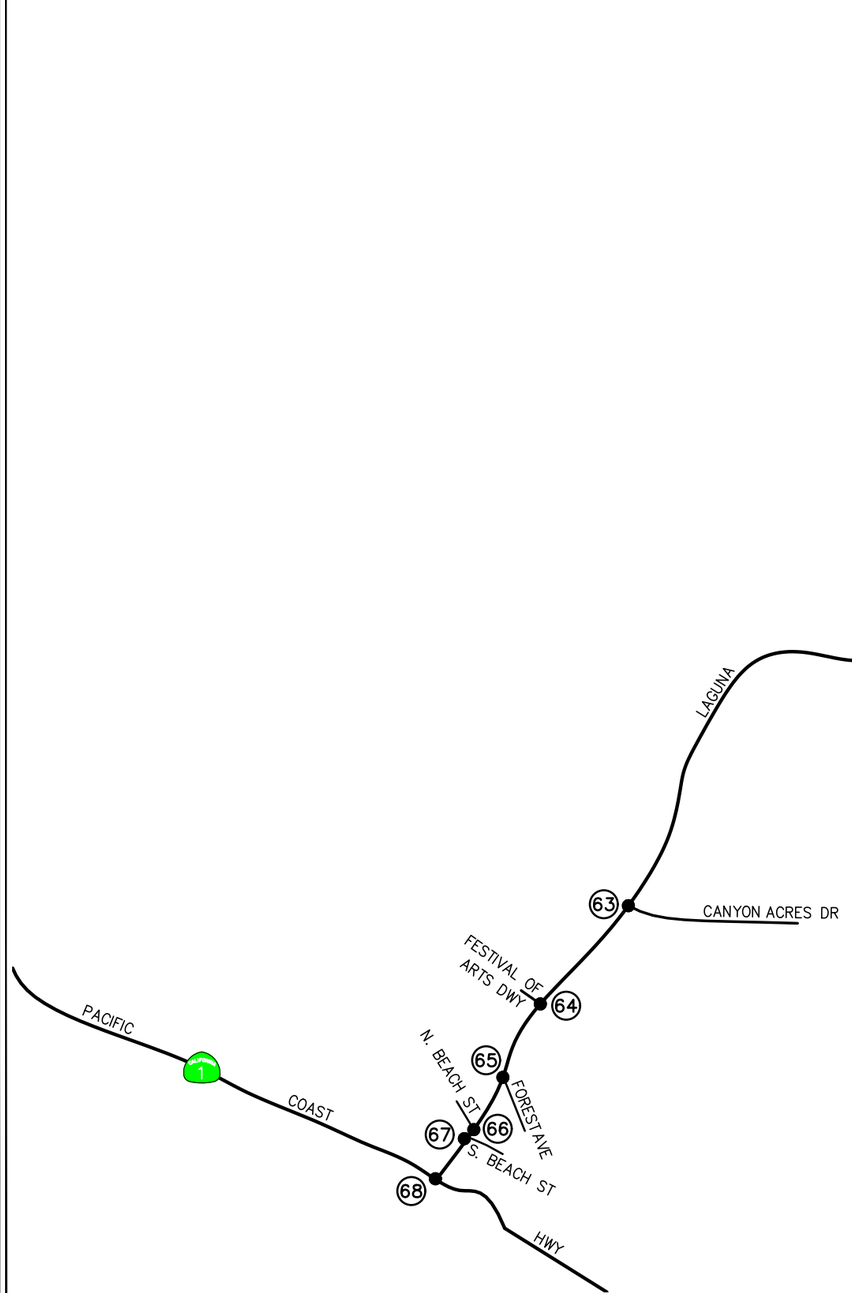
(#) = STUDY INTERSECTION

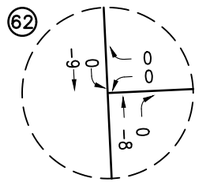
= PROJECT SITE

FIGURE 10C

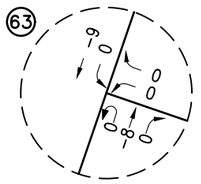
PROJECT TRAFFIC VOLUMES MIDDAY PEAK HOUR

VILLAGE AT LAGUNA HILLS

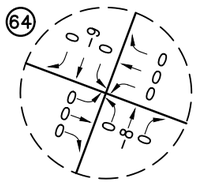




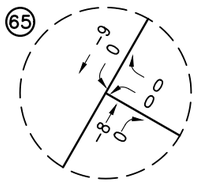
LAGUNA CANYON RD @
EL TORO RD



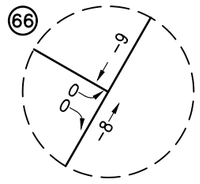
LAGUNA CANYON RD @
CANYON ACRES DR



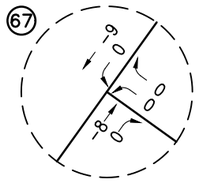
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



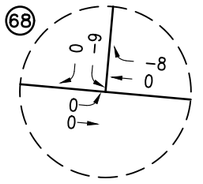
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN
engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

FIGURE 10D

PROJECT TRAFFIC VOLUMES MIDDAY PEAK HOUR

VILLAGE AT LAGUNA HILLS

a 1% annual growth rate (based on other traffic studies completed in the City), corresponding to a total adjustment of 5% from 2019 conditions.

4.3.2 *Cumulative Projects*

The traffic expected to be generated by future projects that are either under construction or proposed within the study area accounts for the second element of the Year 2024 Cumulative Base scenario. ***Table 7*** presents the list of 12 cumulative projects, including the previously approved Five Lagunas, and ***Table 8*** presents the trip generation estimates for the 12 cumulative projects. ***Figure 11*** shows the location of these related projects. The list of cumulative projects was developed in conjunction with City staff.

4.3.3 *Year 2024 Cumulative Base Traffic Volumes*

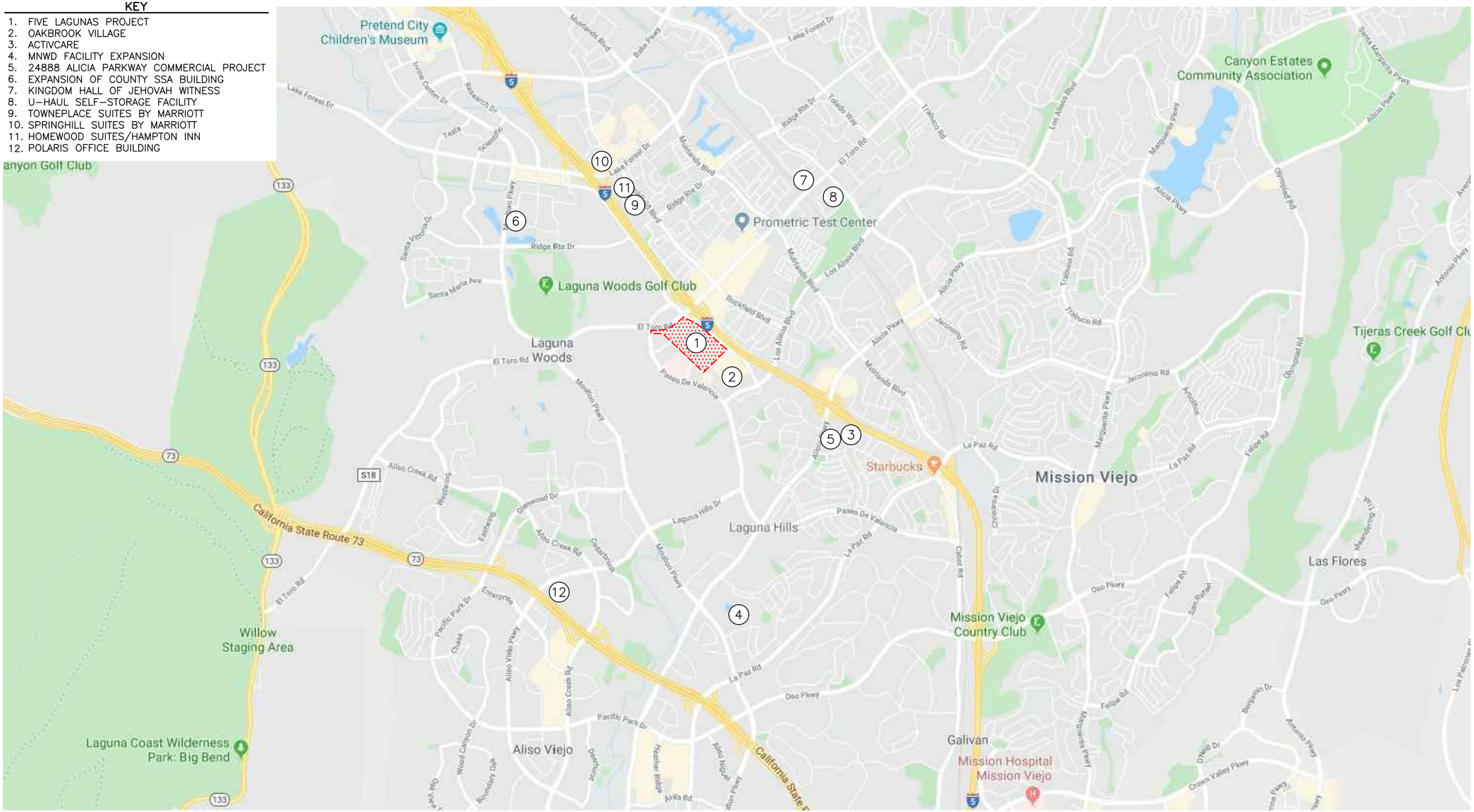
Figures 12A through ***14D*** present the Year 2024 Cumulative Base traffic volumes at the 68 key intersections during the weekday AM, weekday PM, and Saturday midday, peak hours, respectively.

4.4 Year 2024 Cumulative Plus Project Traffic Volumes

Figures 15A through ***17D*** illustrate the Year 2024 Cumulative Plus Project traffic volumes at the 68 key intersections during the weekday AM, weekday PM, and Saturday midday, peak hours, respectively.

KEY

1. FIVE LAGUNAS PROJECT
2. OAKBROOK VILLAGE
3. ACTIVCARE
4. MNWD FACILITY EXPANSION
5. 24888 ALICIA PARKWAY COMMERCIAL PROJECT
6. EXPANSION OF COUNTY SSA BUILDING
7. KINGDOM HALL OF JEHOVAH WITNESS
8. U-HAUL SELF-STORAGE FACILITY
9. TOWNEPLACE SUITES BY MARRIOTT
10. SPRINGHILL SUITES BY MARRIOTT
11. HOMEWOOD SUITES/HAMPTON INN
12. POLARIS OFFICE BUILDING



LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = CUMULATIVE PROJECT LOCATION

= PROJECT SITE

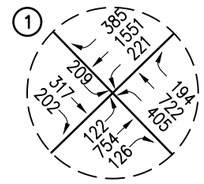
FIGURE 11

LOCATION OF CUMULATIVE PROJECTS

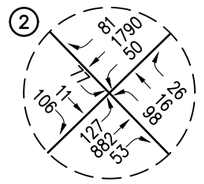
VILLAGE AT LAGUNA HILLS

n:\4200\2194208 - five lagunas seir, laguna hills\dwg\4208 f-11.dwg LDP 11:03:50 08-27-2020 cervantes

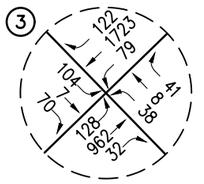
SEE FIGURE 12D FOR INTERSECTIONS #62 – 68



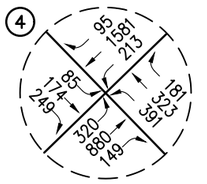
MUIRLANDS BLVD @
EL TORO RD



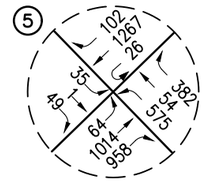
RAYMOND WY @
EL TORO RD



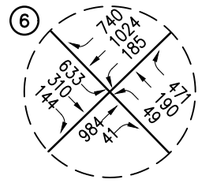
ARBOR WY @
EL TORO RD



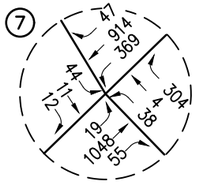
ROCKFIELD BLVD @
EL TORO RD



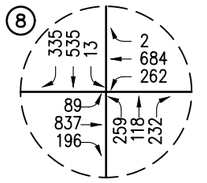
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



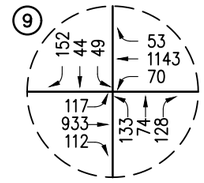
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



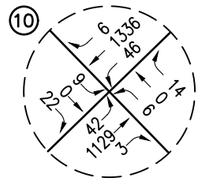
REGIONAL CENTER DR @
EL TORO RD



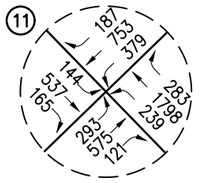
PASEO DE VALENCIA @
EL TORO RD



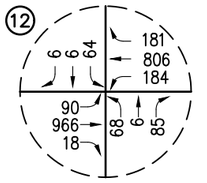
AVENIDA SEVILLA @
EL TORO RD



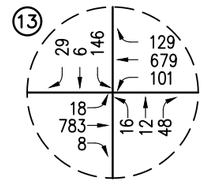
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



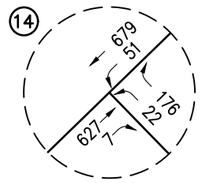
MOULTON PKWY @
EL TORO RD



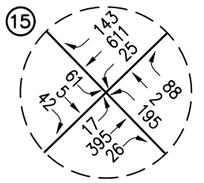
HOME DEPOT/TOWN CENTRE @
EL TORO RD



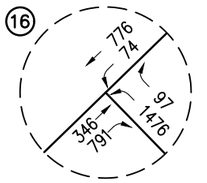
CALLE SONORA @
EL TORO RD



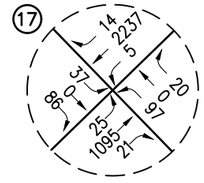
CANYON WREN LN @
EL TORO RD



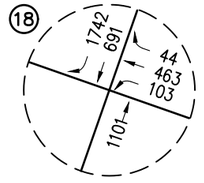
CALLE CORTA @
EL TORO RD



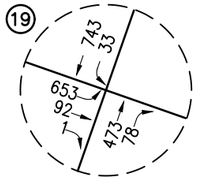
ALISO CREEK RD @
EL TORO RD



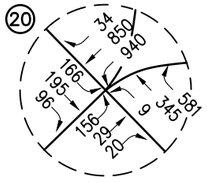
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

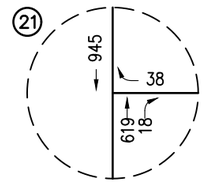
= PROJECT SITE

FIGURE 12A

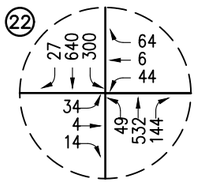
YEAR 2024 AM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

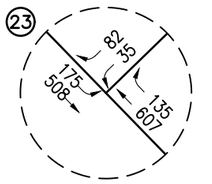
SEE FIGURE 12D FOR INTERSECTIONS #62 – 68



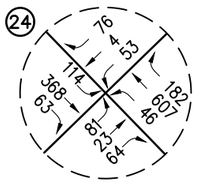
PASEO DE VALENCIA @
RONDA DEL ROSSMOOR



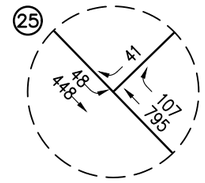
PASEO DE VALENCIA @
CALLE DE LA PLATA



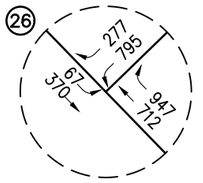
PASEO DE VALENCIA @
CALLE DE LA MAGDALENA



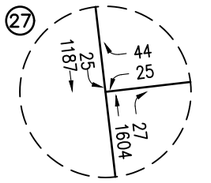
PASEO DE VALENCIA @
VIA ESTRADA/
HEALTH CENTER DR



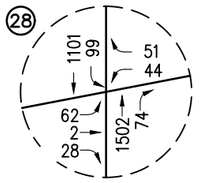
PASEO DE VALENCIA @
CALLE DE LOS CABALLEROS



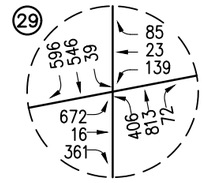
PASEO DE VALENCIA @
LOS ALISOS BLVD



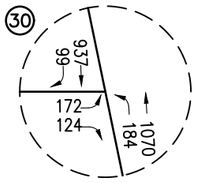
PASEO DE VALENCIA @
KENNINGTON DR



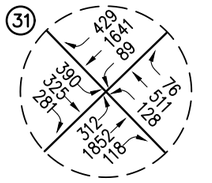
PASEO DE VALENCIA @
AVENIDA SEVILLA/
BECKENHAM ST



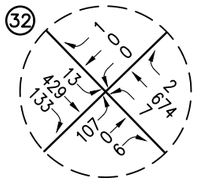
PASEO DE VALENCIA @
LAGUNA HILLS DR/
STOCKPORT ST



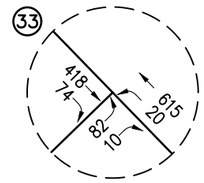
PASEO DE VALENCIA@
HAWK HWY



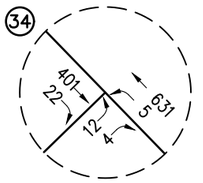
PASEO DE VALENCIA @
ALICIA PKWY



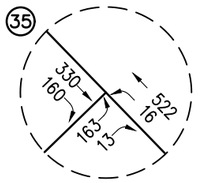
AVENIDA DE LA CARLOTA @
PLAZA LN/MALL ENTRANCE



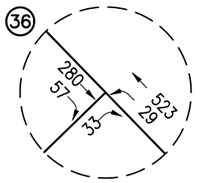
AVENIDA DE LA CARLOTA @
MALL DWY 1



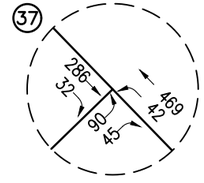
AVENIDA DE LA CARLOTA @
MALL DWY 2



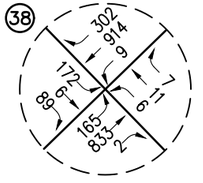
AVENIDA DE LA CARLOTA @
MALL DWY 3



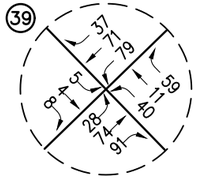
AVENIDA DE LA CARLOTA @
OAKBROOK VILLAGE DWY 1



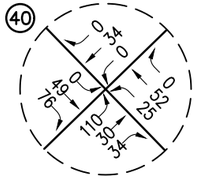
AVENIDA DE LA CARLOTA @
OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @
LOS ALISOS BLVD



RONDA DEL ROSSMOOR/
CALLE DE LA LOUISA @
CALLE DE LA PLATA



CALLE DE LA LOUISA @
HEALTH CENTER DR

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

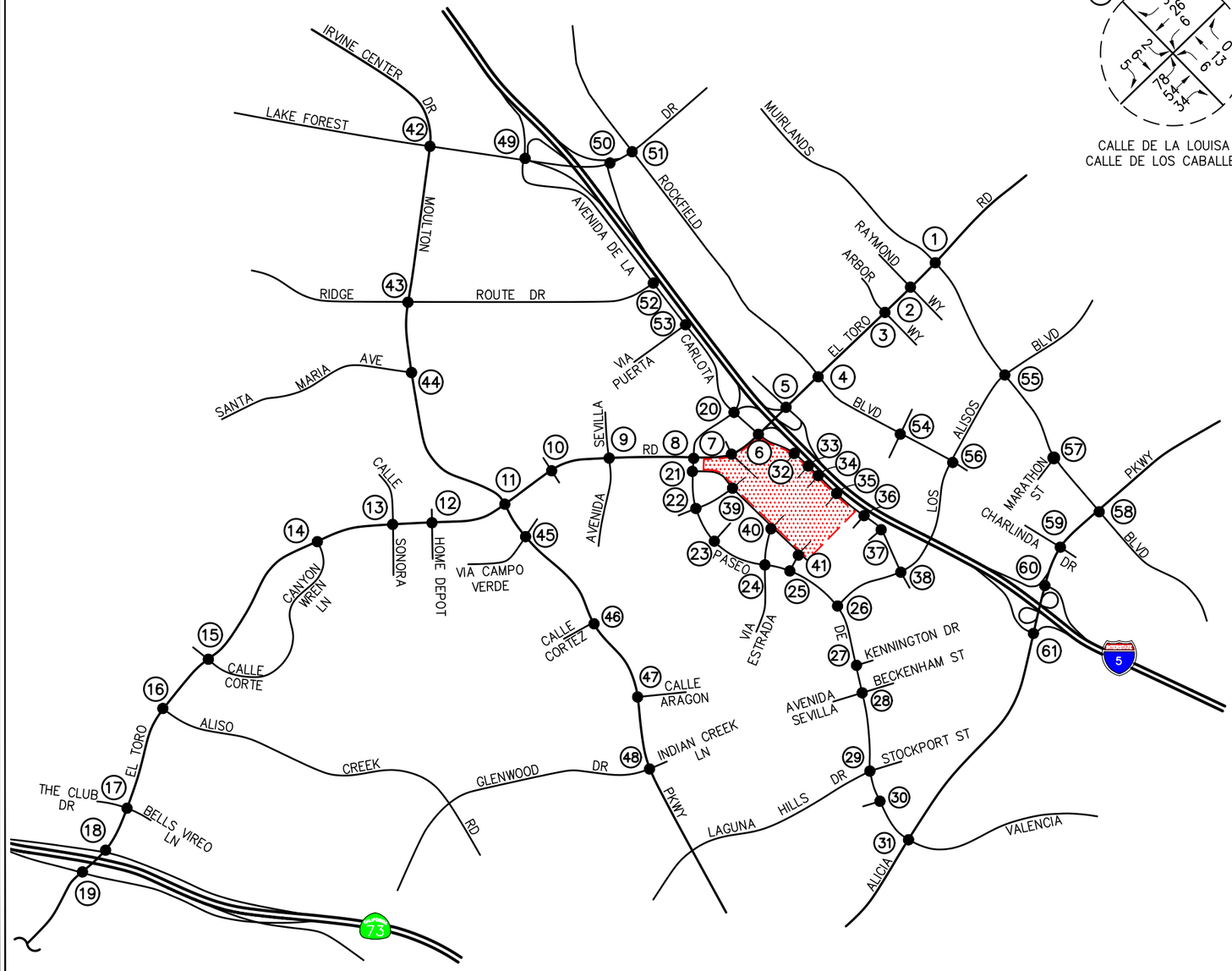
(#) = STUDY INTERSECTION

= PROJECT SITE

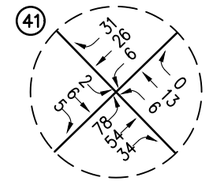
FIGURE 12B

YEAR 2024 AM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

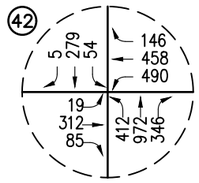
VILLAGE AT LAGUNA HILLS



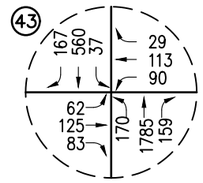
SEE FIGURE 12D FOR INTERSECTIONS #62 – 68



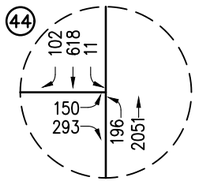
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



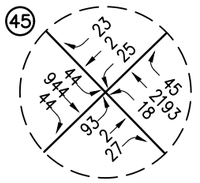
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



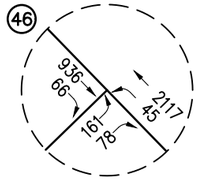
MOULTON PKWY @
RIDGE ROUTE DR



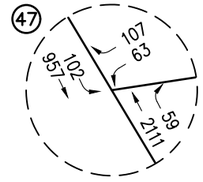
MOULTON PKWY @
SANTA MARIA AVE



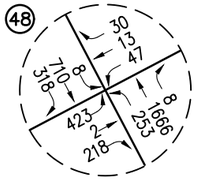
MOULTON PKWY @
VIA CAMPO VERDE



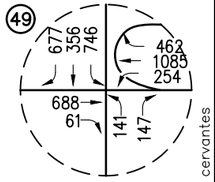
MOULTON PKWY @
CALLE CORTEZ



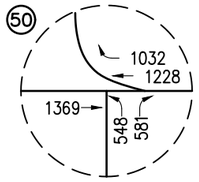
MOULTON PKWY @
CALLE ARAGON



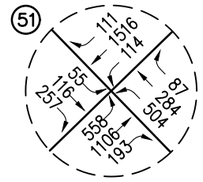
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



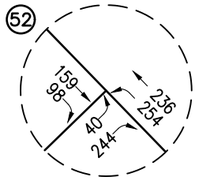
AVENIDA DE LA CARLOTA
I-5 SB RAMPS @
LAKE FOREST DR



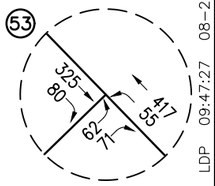
I-5 NB RAMPS @
LAKE FOREST DR



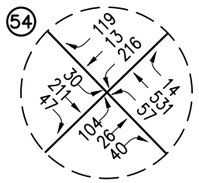
ROCKFIELD BLVD @
LAKE FOREST DR



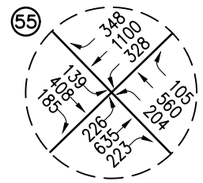
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



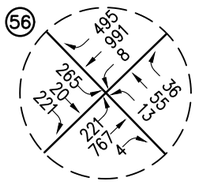
AVENIDA DE LA CARLOTA @
VIA PUERTA



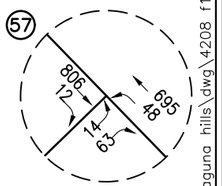
ROCKFIELD BLVD @
LANDISVIEW AVE



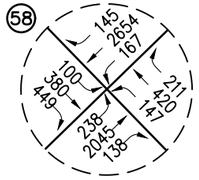
MUIRLANDS BLVD @
LOS ALISOS BLVD



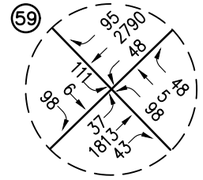
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



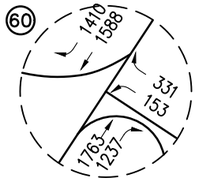
MUIRLANDS BLVD @
MARATHON ST



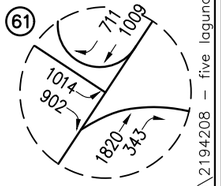
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

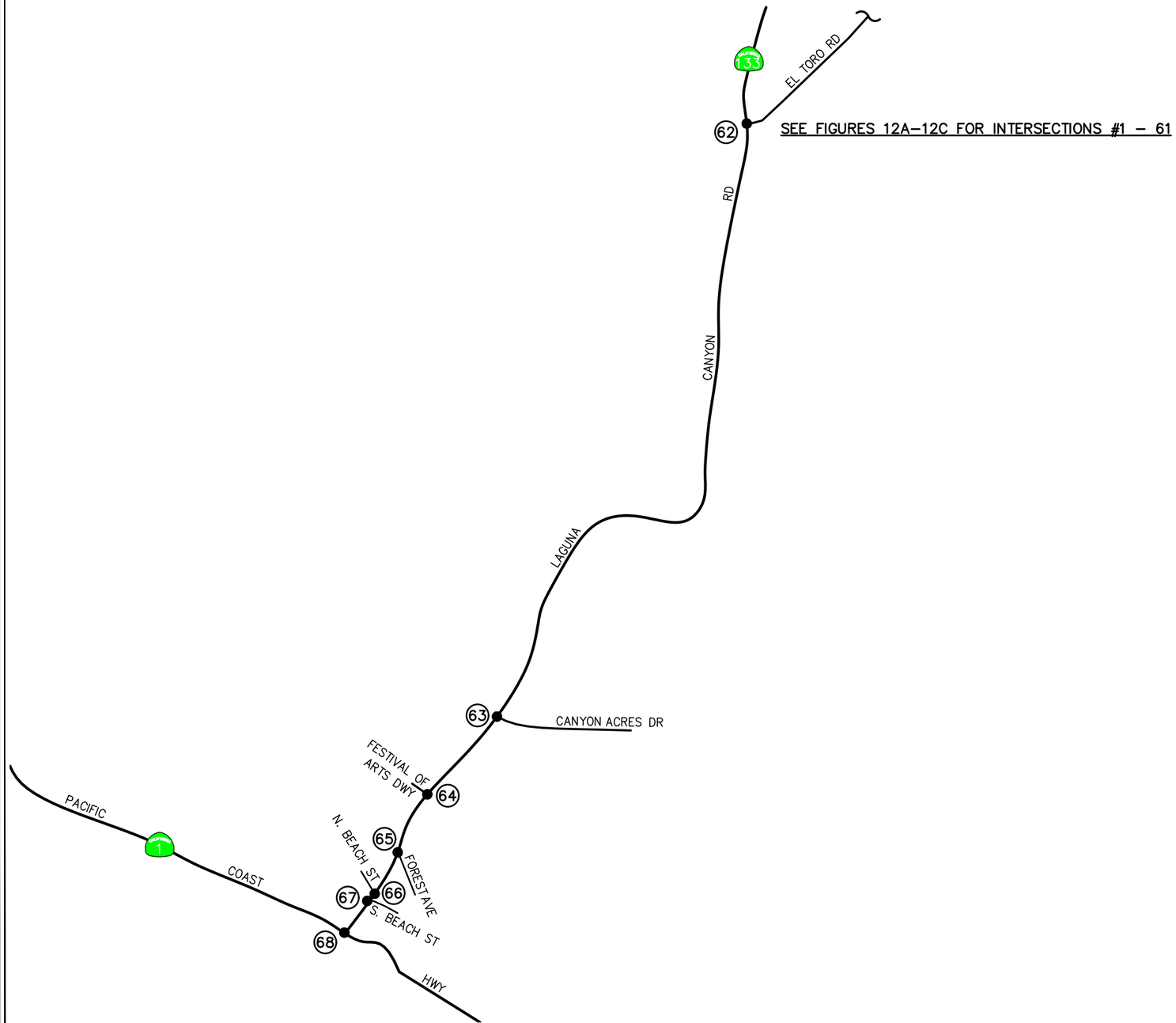
(#) = STUDY INTERSECTION

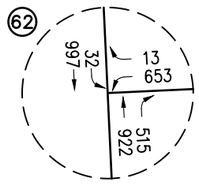
= PROJECT SITE

FIGURE 12C

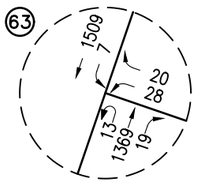
YEAR 2024 AM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

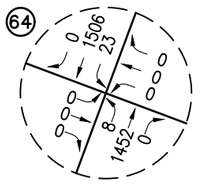




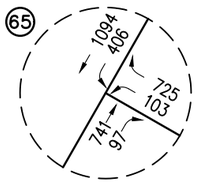
LAGUNA CANYON RD @
EL TORO RD



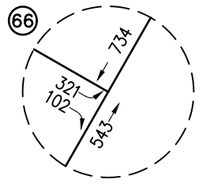
LAGUNA CANYON RD @
CANYON ACRES DR



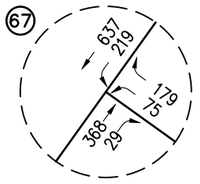
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



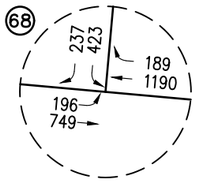
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN
engineers

N
NO SCALE

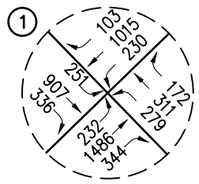
KEY
(#) = STUDY INTERSECTION

FIGURE 12D

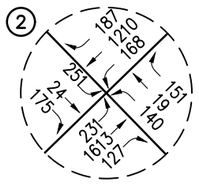
YEAR 2024 AM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

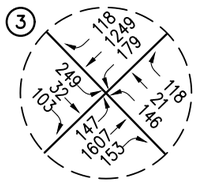
SEE FIGURE 13D FOR INTERSECTIONS #62 – 68



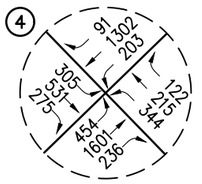
MUIRLANDS BLVD @
EL TORO RD



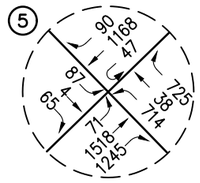
RAYMOND WY @
EL TORO RD



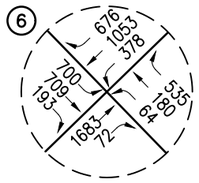
ARBOR WY @
EL TORO RD



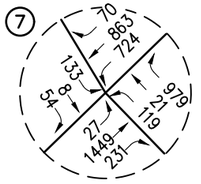
ROCKFIELD BLVD @
EL TORO RD



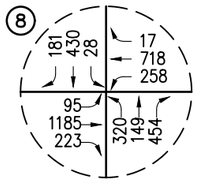
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



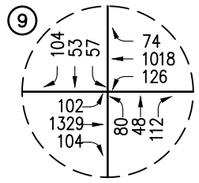
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



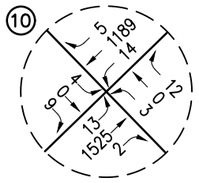
REGIONAL CENTER DR @
EL TORO RD



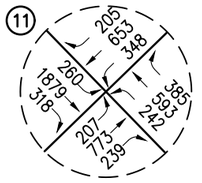
PASEO DE VALENCIA @
EL TORO RD



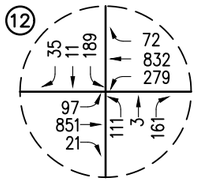
AVENIDA SEVILLA @
EL TORO RD



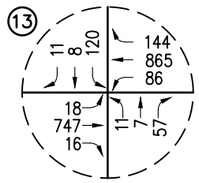
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



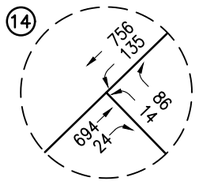
MOULTON PKWY @
EL TORO RD



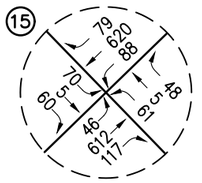
HOME DEPOT/TOWN CENTRE @
EL TORO RD



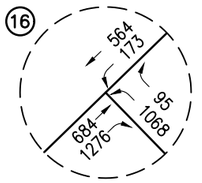
CALLE SONORA @
EL TORO RD



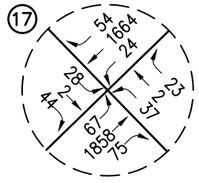
CANYON WREN LN @
EL TORO RD



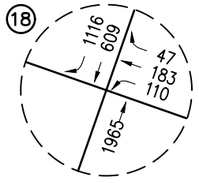
CALLE CORTA @
EL TORO RD



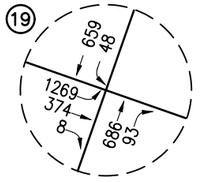
ALISO CREEK RD @
EL TORO RD



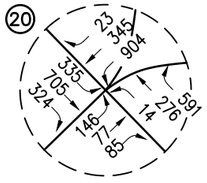
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f13-a.dwg LDP 09:50:27 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 13A

YEAR 2024 PM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

SEE FIGURE 13D FOR INTERSECTIONS #62 – 68

(21) PASEO DE VALENCIA @ RONDA DEL ROSSMOOR

(22) PASEO DE VALENCIA @ CALLE DE LA PLATA

(23) PASEO DE VALENCIA @ CALLE DE LA MAGDALENA

(24) PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR

(25) PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS

(26) PASEO DE VALENCIA @ LOS ALISOS BLVD

(27) PASEO DE VALENCIA @ KENNINGTON DR

(28) PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST

(29) PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST

(30) PASEO DE VALENCIA@ HAWK HWY

(31) PASEO DE VALENCIA @ ALICIA PKWY

(32) AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE

(33) AVENIDA DE LA CARLOTA @ MALL DWY 1

(34) AVENIDA DE LA CARLOTA @ MALL DWY 2

(35) AVENIDA DE LA CARLOTA @ MALL DWY 3

(36) AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1

(37) AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2

(38) AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD

(39) RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA

(40) CALLE DE LA LOUISA @ HEALTH CENTER DR

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f13-b.dwg LDP 09:53:12 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

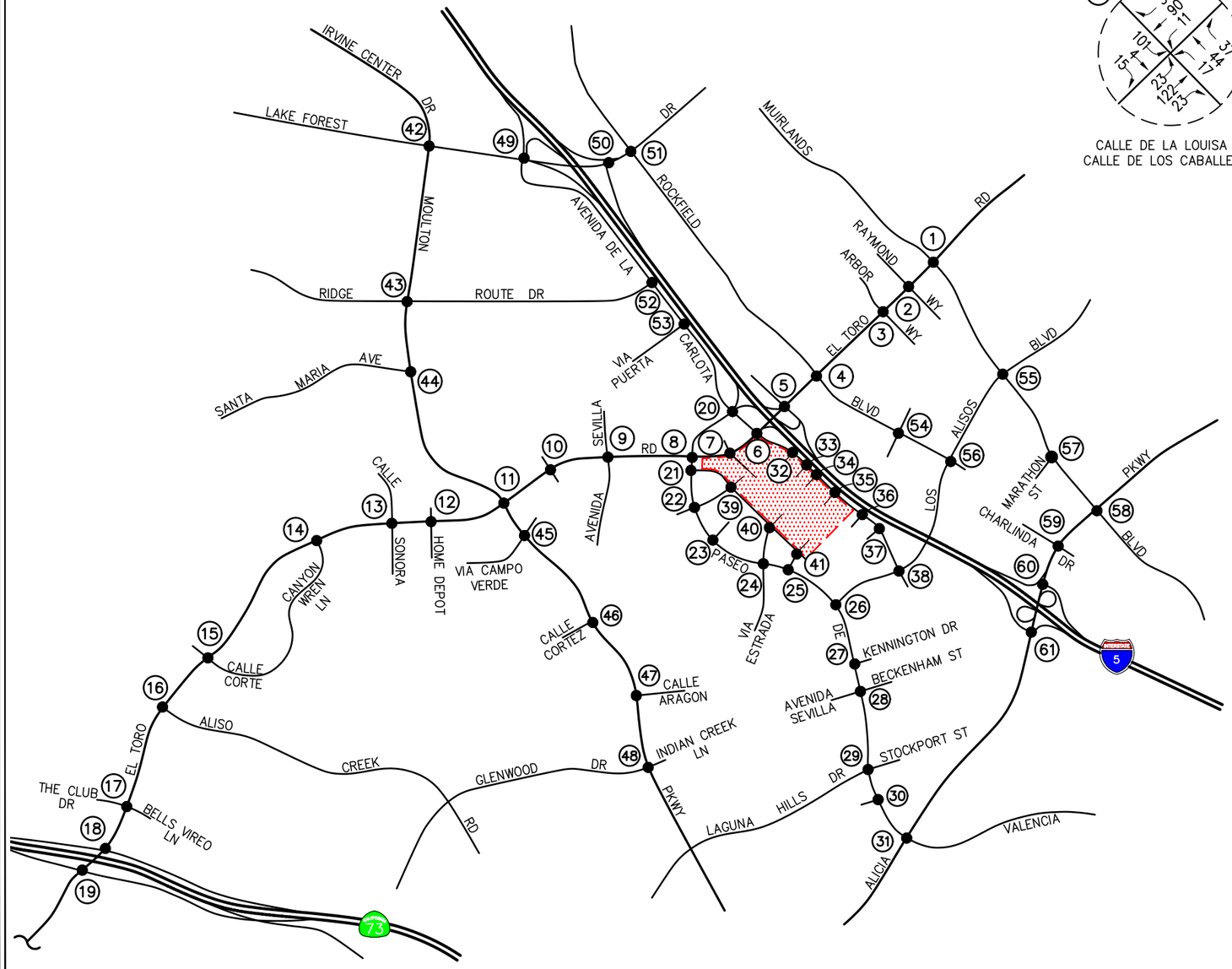
(#) = STUDY INTERSECTION

= PROJECT SITE

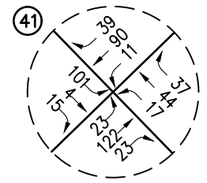
FIGURE 13B

YEAR 2024 PM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

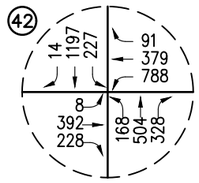
VILLAGE AT LAGUNA HILLS



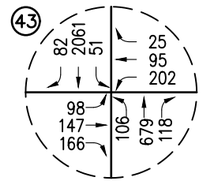
SEE FIGURE 13D FOR INTERSECTIONS #62 – 68



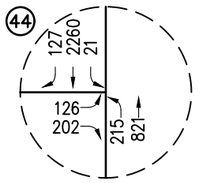
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



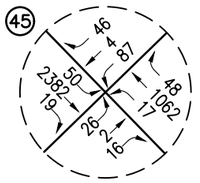
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



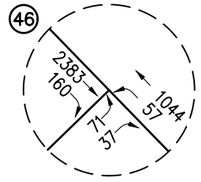
MOULTON PKWY @
RIDGE ROUTE DR



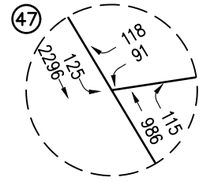
MOULTON PKWY @
SANTA MARIA AVE



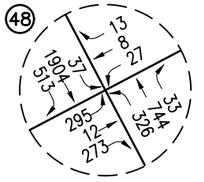
MOULTON PKWY @
VIA CAMPO VERDE



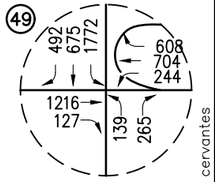
MOULTON PKWY @
CALLE CORTEZ



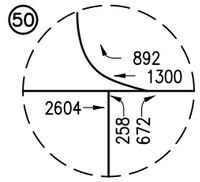
MOULTON PKWY @
CALLE ARAGON



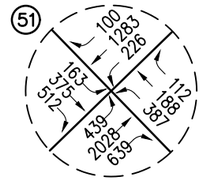
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



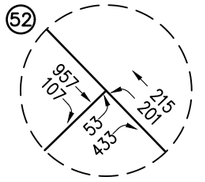
AVENIDA DE LA CARLOTA @
I-5 SB RAMPS @
LAKE FOREST DR



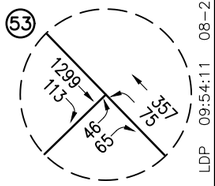
I-5 NB RAMPS @
LAKE FOREST DR



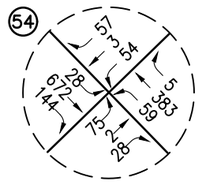
ROCKFIELD BLVD @
LAKE FOREST DR



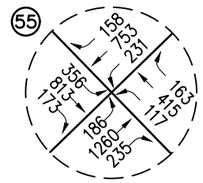
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



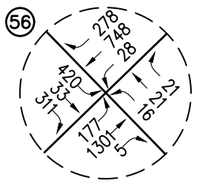
AVENIDA DE LA CARLOTA @
VIA PUERTA



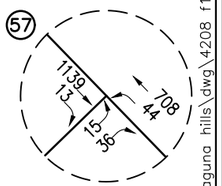
ROCKFIELD BLVD @
LANDISVIEW AVE



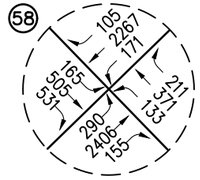
MUIRLANDS BLVD @
LOS ALISOS BLVD



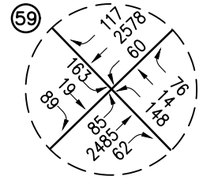
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



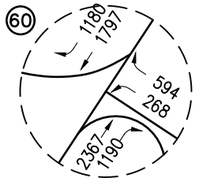
MUIRLANDS BLVD @
MARATHON ST



MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY

I-5 SB RAMPS @
ALICIA PKWY

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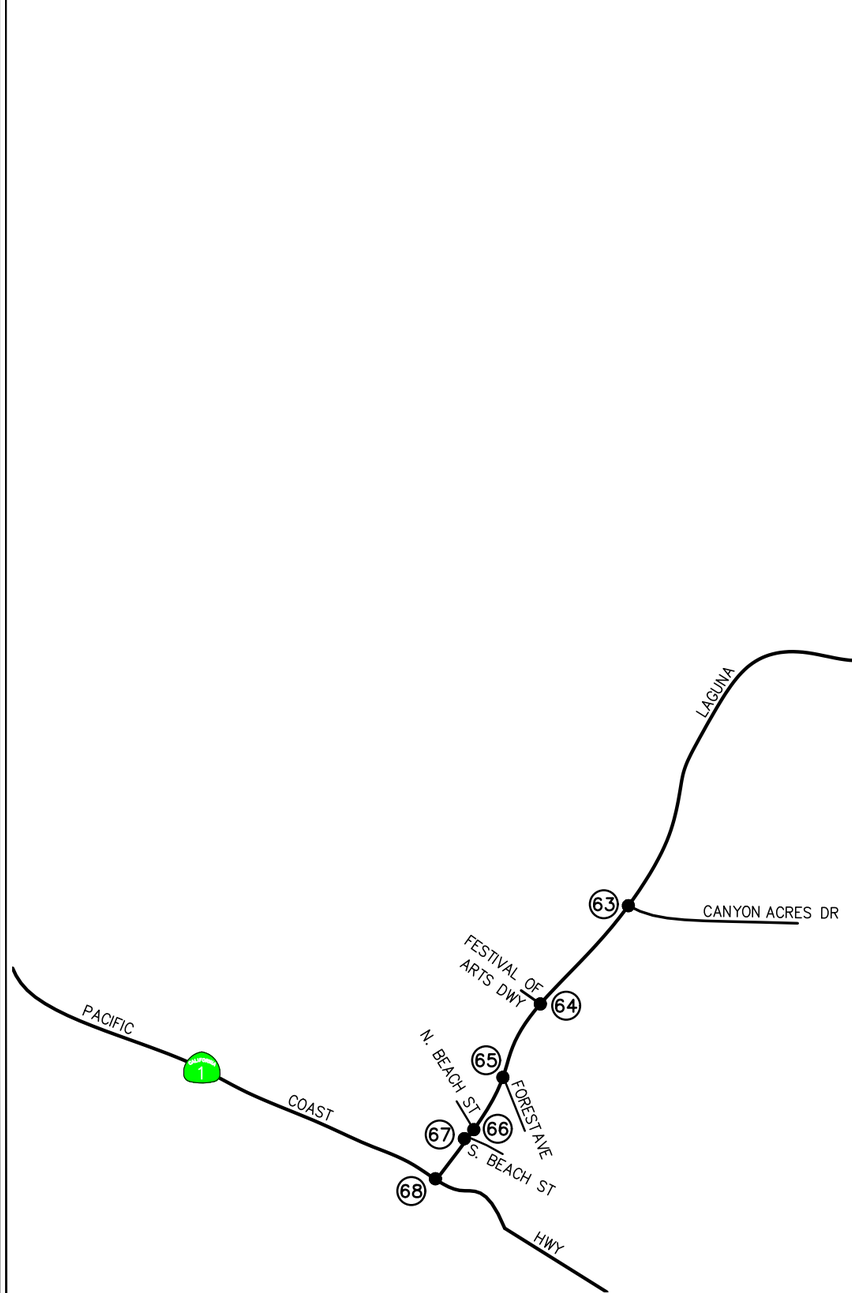
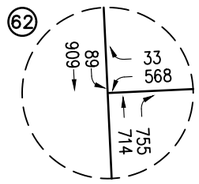
FIGURE 13C

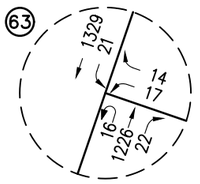
YEAR 2024 PM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

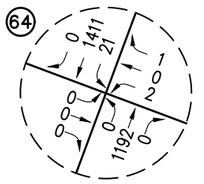




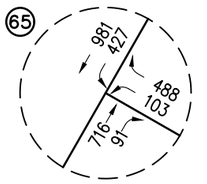
LAGUNA CANYON RD @
EL TORO RD



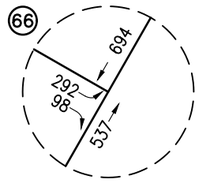
LAGUNA CANYON RD @
CANYON ACRES DR



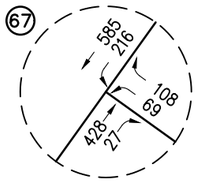
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



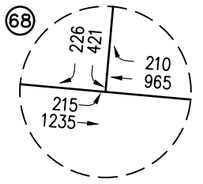
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN
engineers

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NO SCALE

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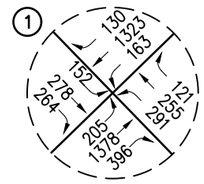
(#) = STUDY INTERSECTION

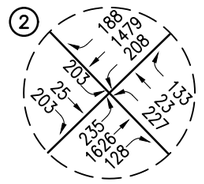
FIGURE 13D

YEAR 2024 PM PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

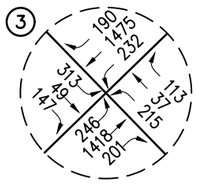
VILLAGE AT LAGUNA HILLS



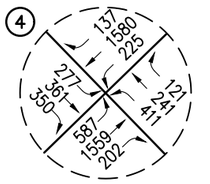
MUIRLANDS BLVD @
EL TORO RD



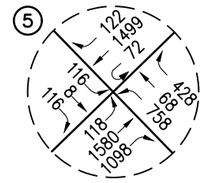
RAYMOND WY @
EL TORO RD



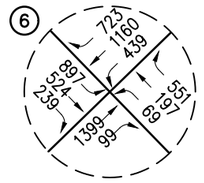
ARBOR WY @
EL TORO RD



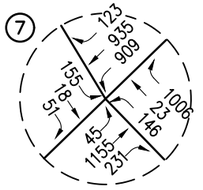
ROCKFIELD BLVD @
EL TORO RD



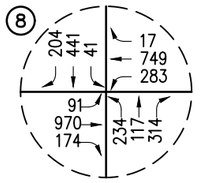
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



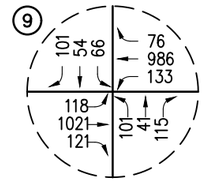
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



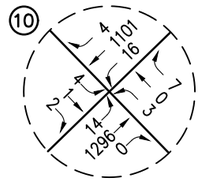
REGIONAL CENTER DR @
EL TORO RD



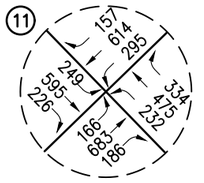
PASEO DE VALENCIA @
EL TORO RD



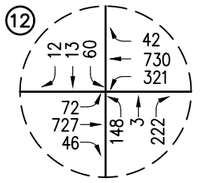
AVENIDA SEVILLA @
EL TORO RD



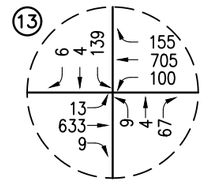
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



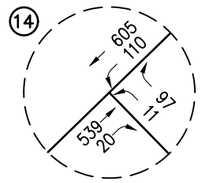
MOULTON PKWY @
EL TORO RD



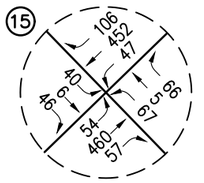
HOME DEPOT/TOWN CENTRE @
EL TORO RD



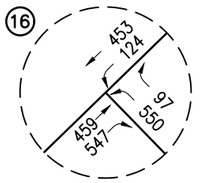
CALLE SONORA @
EL TORO RD



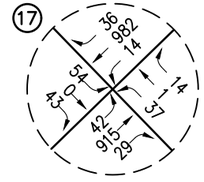
CANYON WREN LN @
EL TORO RD



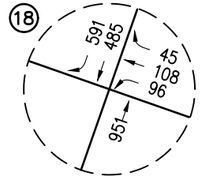
CALLE CORTA @
EL TORO RD



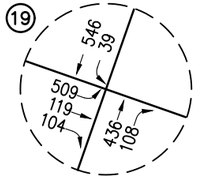
ALISO CREEK RD @
EL TORO RD



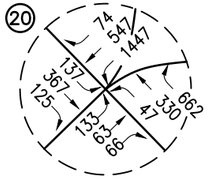
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f14-a.dwg LDP 10:09:08 08-28-2020 cervantes

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(#) = STUDY INTERSECTION

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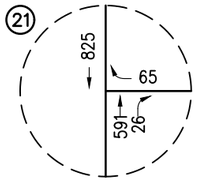
FIGURE 14A

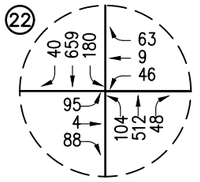
YEAR 2024 MIDDAY PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

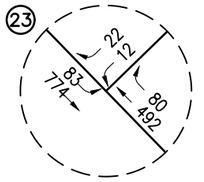
21 — PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



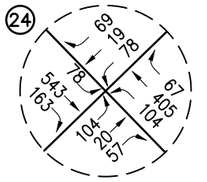
22 — PASEO DE VALENCIA @ CALLE DE LA PLATA



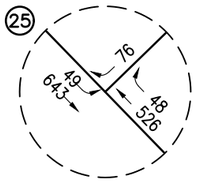
23 — PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



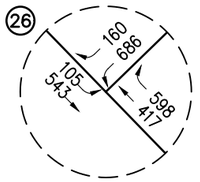
24 — PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



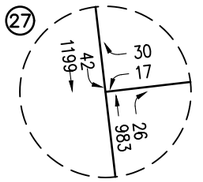
25 — PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



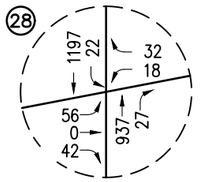
26 — PASEO DE VALENCIA @ LOS ALISOS BLVD



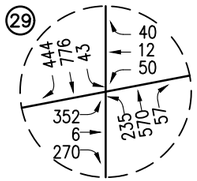
27 — PASEO DE VALENCIA @ KENNINGTON DR



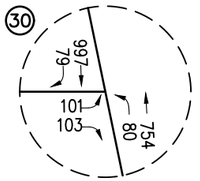
28 — PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



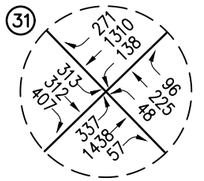
29 — PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



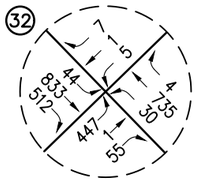
30 — PASEO DE VALENCIA@ HAWK HWY



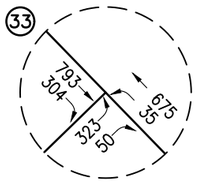
31 — PASEO DE VALENCIA @ ALICIA PKWY



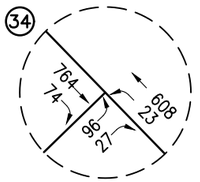
32 — AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



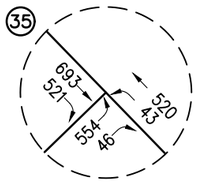
33 — AVENIDA DE LA CARLOTA @ MALL DWY 1



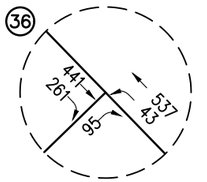
34 — AVENIDA DE LA CARLOTA @ MALL DWY 2



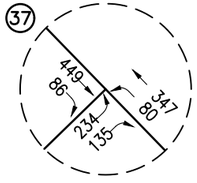
35 — AVENIDA DE LA CARLOTA @ MALL DWY 3



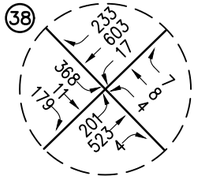
36 — AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



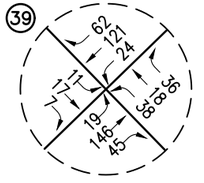
37 — AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



38 — AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



39 — RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



40 — CALLE DE LA LOUISA @ HEALTH CENTER DR

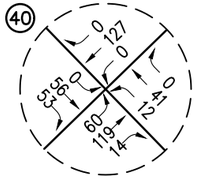


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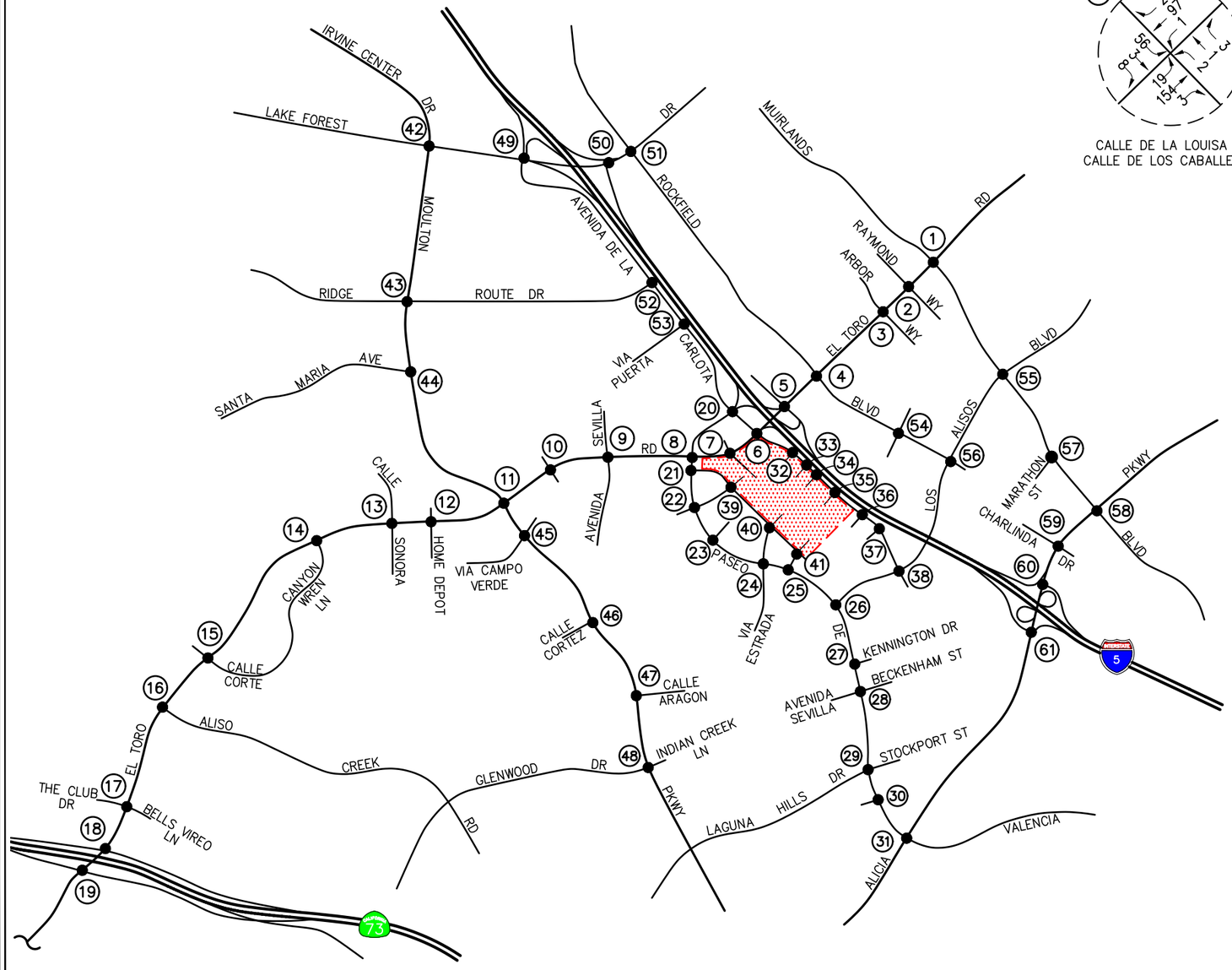
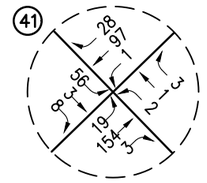
FIGURE 14B

YEAR 2024 MIDDAY PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

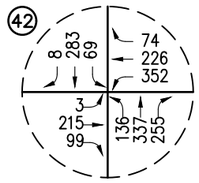
VILLAGE AT LAGUNA HILLS



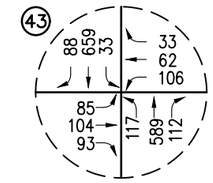
SEE FIGURE 14D FOR INTERSECTIONS #62 – 68



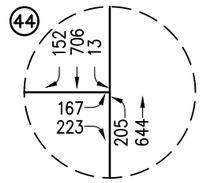
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



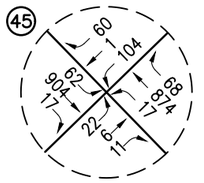
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



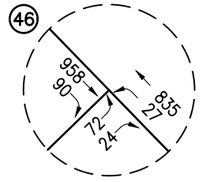
MOULTON PKWY @
RIDGE ROUTE DR



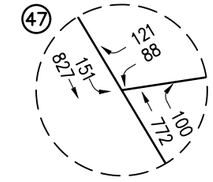
MOULTON PKWY @
SANTA MARIA AVE



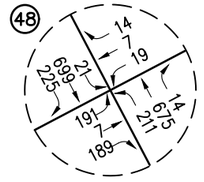
MOULTON PKWY @
VIA CAMPO VERDE



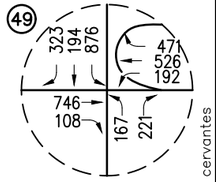
MOULTON PKWY @
CALLE CORTEZ



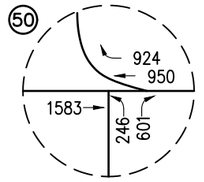
MOULTON PKWY @
CALLE ARAGON



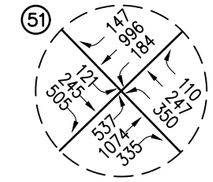
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



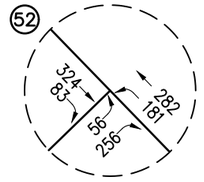
AVENIDA DE LA CARLOTA
I-5 SB RAMPS @
LAKE FOREST DR



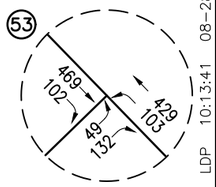
I-5 NB RAMPS @
LAKE FOREST DR



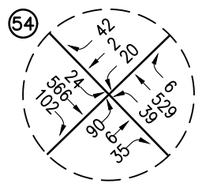
ROCKFIELD BLVD @
LAKE FOREST DR



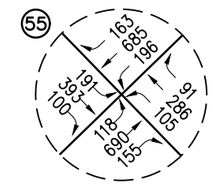
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



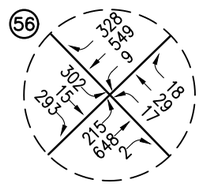
AVENIDA DE LA CARLOTA @
VIA PUERTA



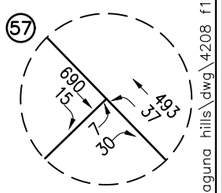
ROCKFIELD BLVD @
LANDISVIEW AVE



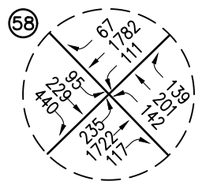
MUIRLANDS BLVD @
LOS ALISOS BLVD



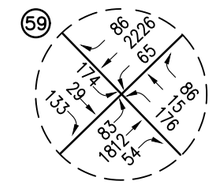
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



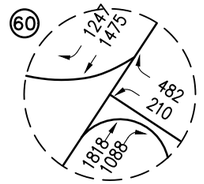
MUIRLANDS BLVD @
MARATHON ST



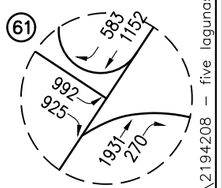
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

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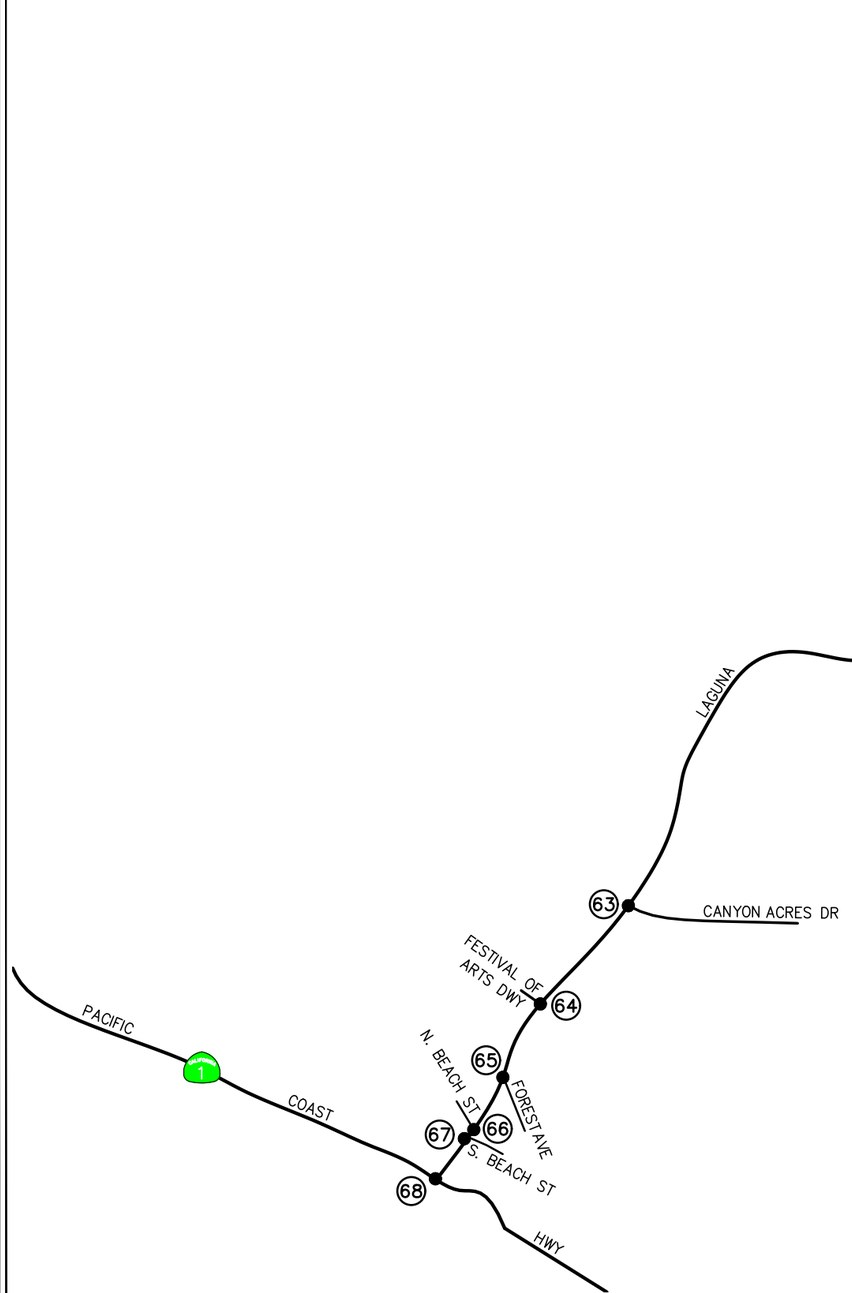
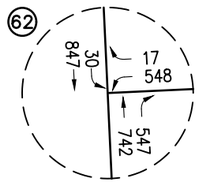
FIGURE 14C

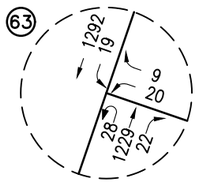
YEAR 2024 MIDDAY PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

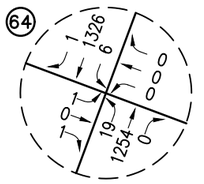




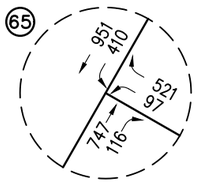
LAGUNA CANYON RD @
EL TORO RD



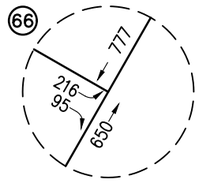
LAGUNA CANYON RD @
CANYON ACRES DR



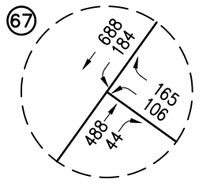
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



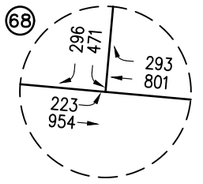
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN
engineers

N
NO SCALE

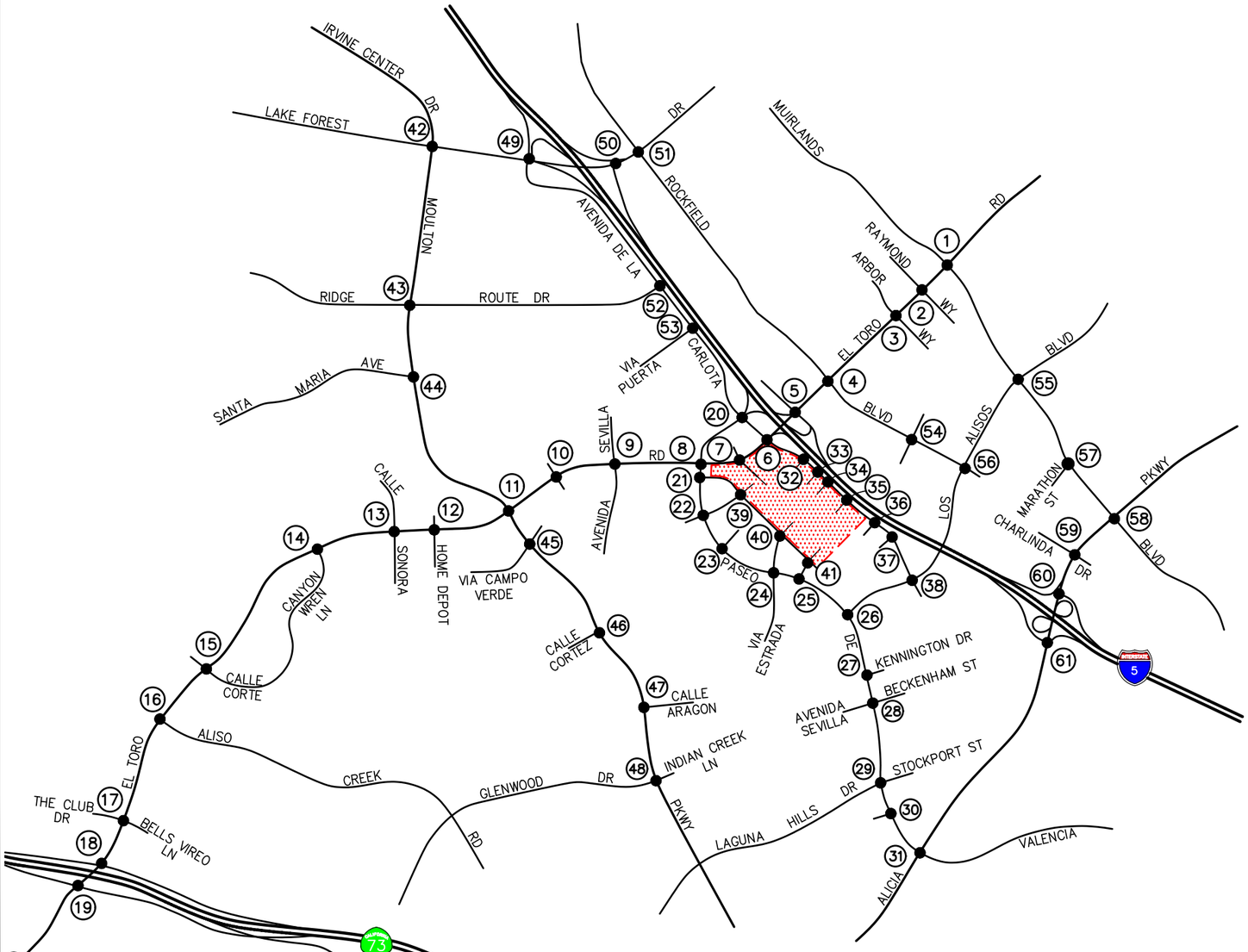
KEY

(#) = STUDY INTERSECTION

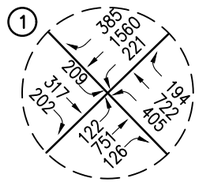
FIGURE 14D

YEAR 2024 MIDDAY PEAK HOUR CUMULATIVE BASE TRAFFIC VOLUMES

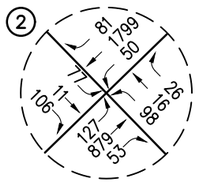
VILLAGE AT LAGUNA HILLS



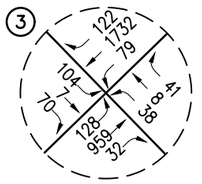
SEE FIGURE 15D FOR INTERSECTIONS #62 – 68



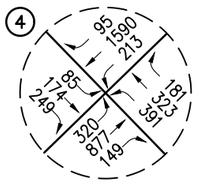
MUIRLANDS BLVD @
EL TORO RD



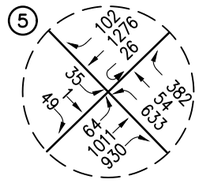
RAYMOND WY @
EL TORO RD



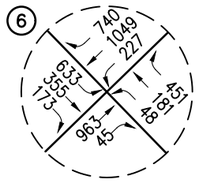
ARBOR WY @
EL TORO RD



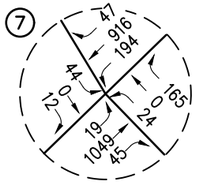
ROCKFIELD BLVD @
EL TORO RD



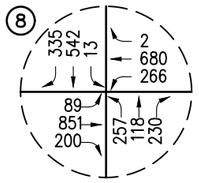
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



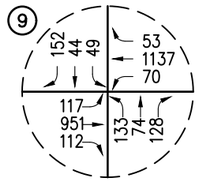
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



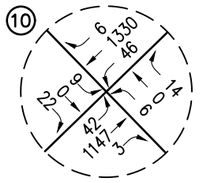
REGIONAL CENTER DR @
EL TORO RD



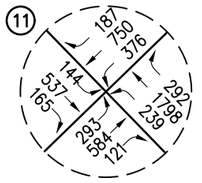
PASEO DE VALENCIA @
EL TORO RD



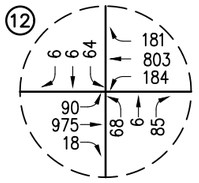
AVENIDA SEVILLA @
EL TORO RD



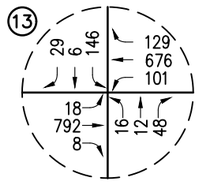
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



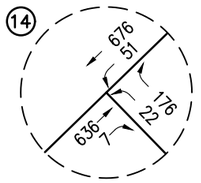
MOULTON PKWY @
EL TORO RD



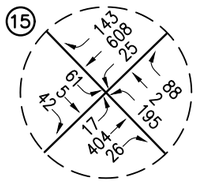
HOME DEPOT/TOWN CENTRE @
EL TORO RD



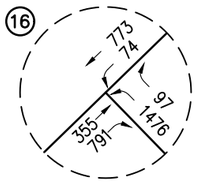
CALLE SONORA @
EL TORO RD



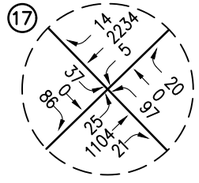
CANYON WEN LN @
EL TORO RD



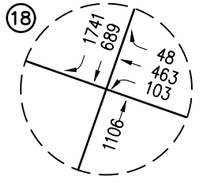
CALLE CORTA @
EL TORO RD



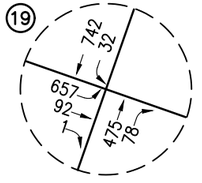
ALISO CREEK RD @
EL TORO RD



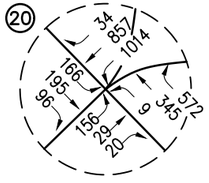
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

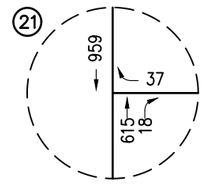
= PROJECT SITE

FIGURE 15A

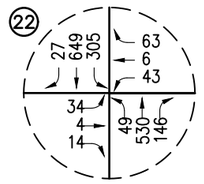
YEAR 2024 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

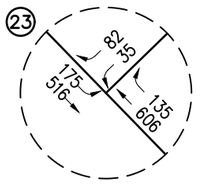
SEE FIGURE 15D FOR INTERSECTIONS #62 – 68



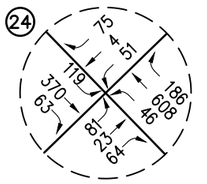
PASEO DE VALENCIA @
RONDA DEL ROSSMOOR



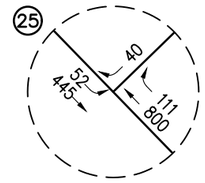
PASEO DE VALENCIA @
CALLE DE LA PLATA



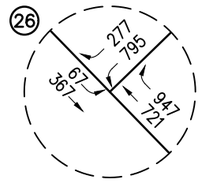
PASEO DE VALENCIA @
CALLE DE LA MAGDALENA



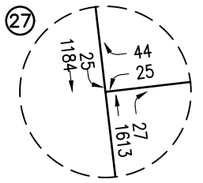
PASEO DE VALENCIA @
VIA ESTRADA/
HEALTH CENTER DR



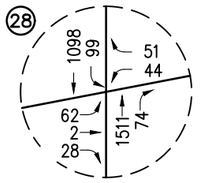
PASEO DE VALENCIA @
CALLE DE LOS CABALLEROS



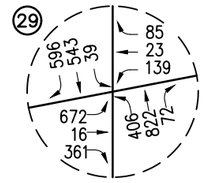
PASEO DE VALENCIA @
LOS ALISOS BLVD



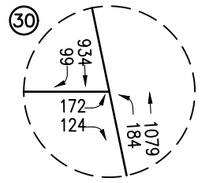
PASEO DE VALENCIA @
KENNINGTON DR



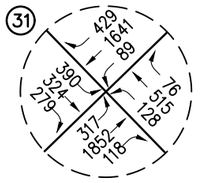
PASEO DE VALENCIA @
AVENIDA SEVILLA/
BECKENHAM ST



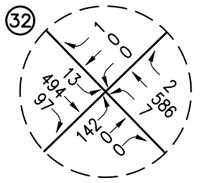
PASEO DE VALENCIA @
LAGUNA HILLS DR/
STOCKPORT ST



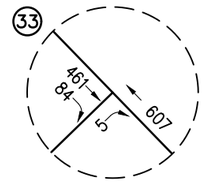
PASEO DE VALENCIA@
HAWK HWY



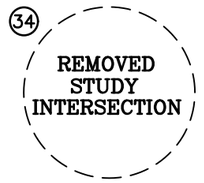
PASEO DE VALENCIA @
ALICIA PKWY



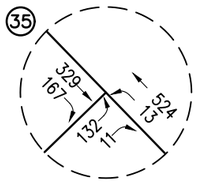
AVENIDA DE LA CARLOTA @
PLAZA LN/MALL ENTRANCE



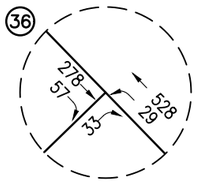
AVENIDA DE LA CARLOTA @
MALL DWY 1



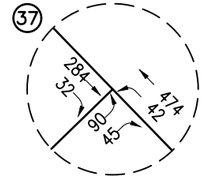
AVENIDA DE LA CARLOTA @
MALL DWY 2



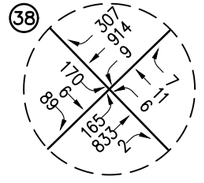
AVENIDA DE LA CARLOTA @
MALL DWY 3



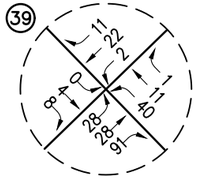
AVENIDA DE LA CARLOTA @
OAKBROOK VILLAGE DWY 1



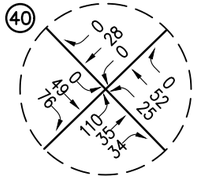
AVENIDA DE LA CARLOTA @
OAKBROOK VILLAGE DWY 2



AVENIDA DE LA CARLOTA @
LOS ALISOS BLVD



RONDA DEL ROSSMOOR/
CALLE DE LA LOUISA @
CALLE DE LA PLATA



CALLE DE LA LOUISA @
HEALTH CENTER DR

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f15-b.dwg LDP 10:18:25 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

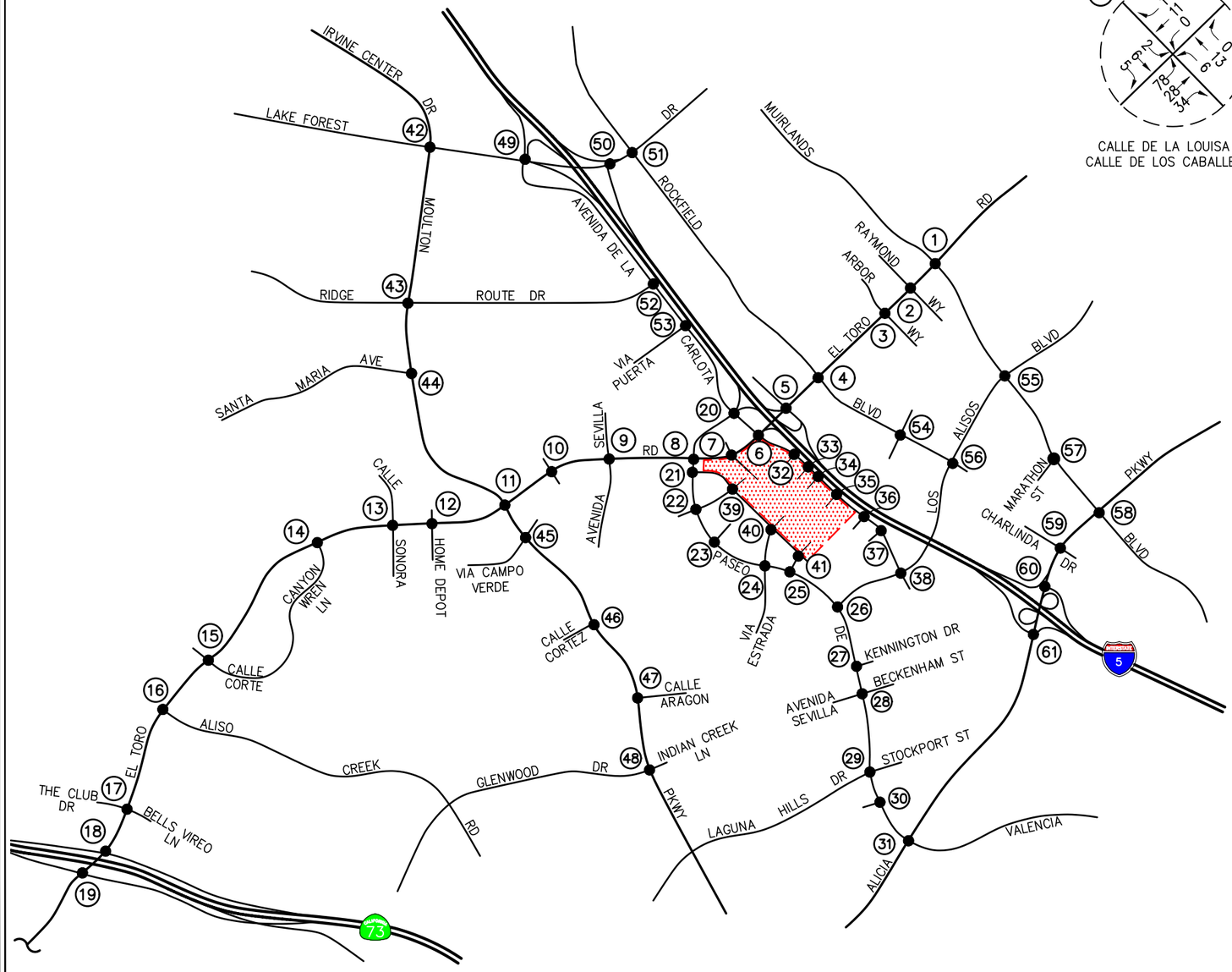
(#) = STUDY INTERSECTION

= PROJECT SITE

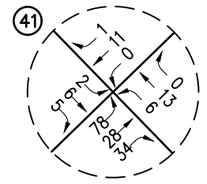
FIGURE 15B

YEAR 2024 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

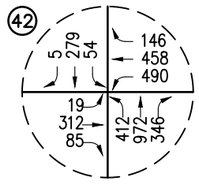
VILLAGE AT LAGUNA HILLS



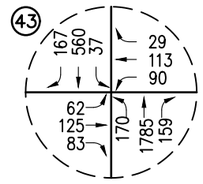
SEE FIGURE 15D FOR INTERSECTIONS #62 – 68



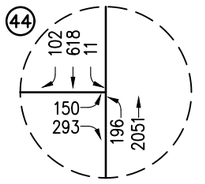
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



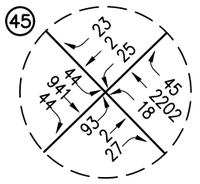
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



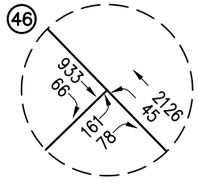
MOULTON PKWY @
RIDGE ROUTE DR



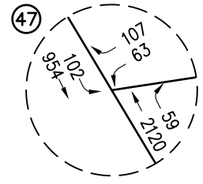
MOULTON PKWY @
SANTA MARIA AVE



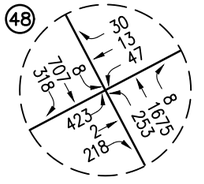
MOULTON PKWY @
VIA CAMPO VERDE



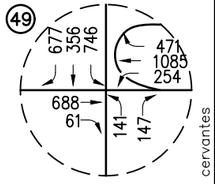
MOULTON PKWY @
CALLE CORTEZ



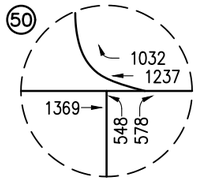
MOULTON PKWY @
CALLE ARAGON



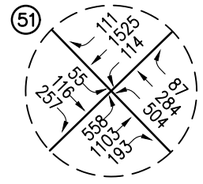
MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



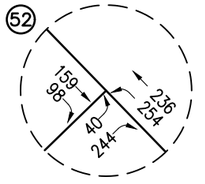
AVENIDA DE LA CARLOTA
I-5 SB RAMPS @
LAKE FOREST DR



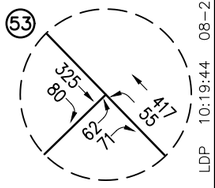
I-5 NB RAMPS @
LAKE FOREST DR



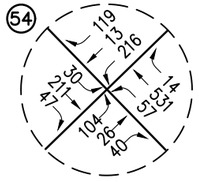
ROCKFIELD BLVD @
LAKE FOREST DR



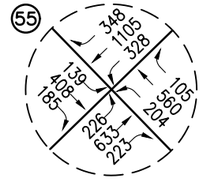
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



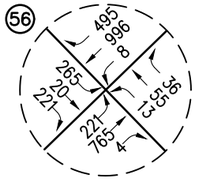
AVENIDA DE LA CARLOTA @
VIA PUERTA



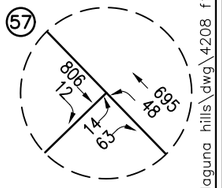
ROCKFIELD BLVD @
LANDISVIEW AVE



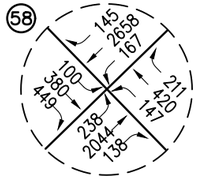
MUIRLANDS BLVD @
LOS ALISOS BLVD



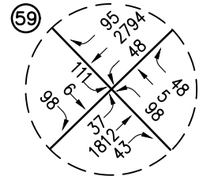
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



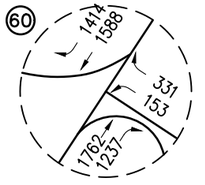
MUIRLANDS BLVD @
MARATHON ST



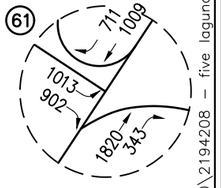
MUIRLANDS BLVD @
ALICIA PKWY



CHARLINDA DR @
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY



I-5 SB RAMPS @
ALICIA PKWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

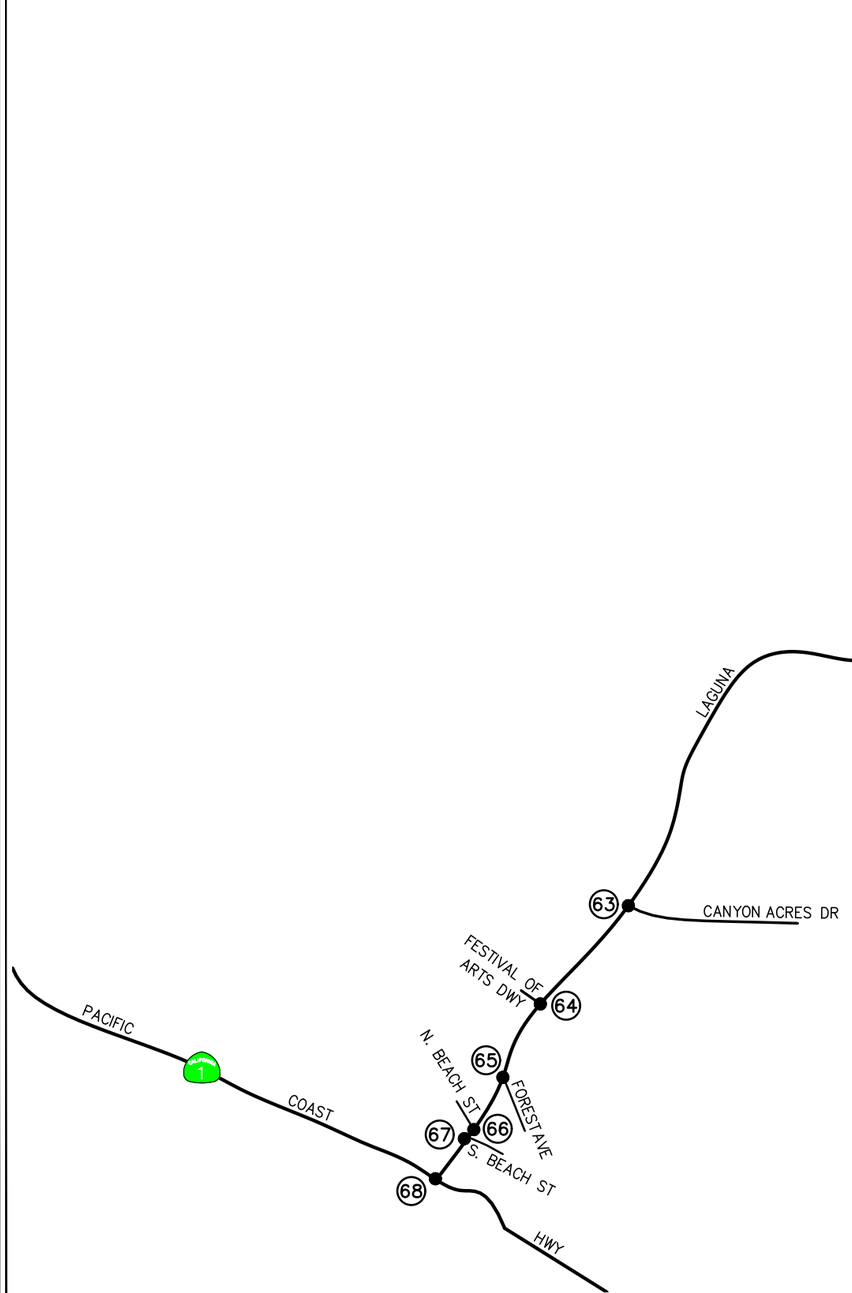
(#) = STUDY INTERSECTION

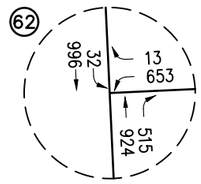
= PROJECT SITE

FIGURE 15C

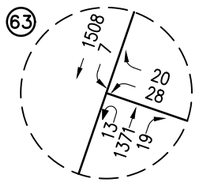
YEAR 2024 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

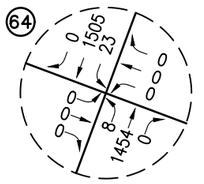




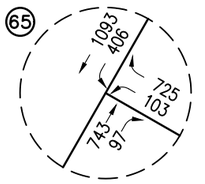
LAGUNA CANYON RD @
EL TORO RD



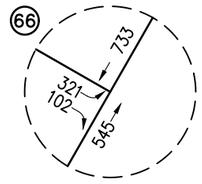
LAGUNA CANYON RD @
CANYON ACRES DR



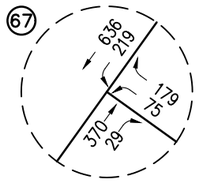
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



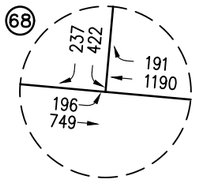
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

n:\4200\2194208 – five lagunas seir, laguna hills\dwg\4208 f15-d.dwg LDP 10:21:01 08-28-2020 cervantes

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

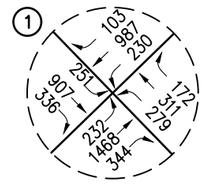
(#) = STUDY INTERSECTION

FIGURE 15D

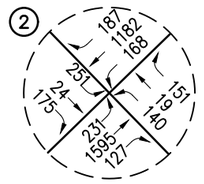
YEAR 2024 CUMULATIVE PLUS PROJECT AM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

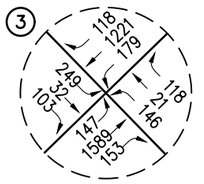
SEE FIGURE 16D FOR INTERSECTIONS #62 – 68



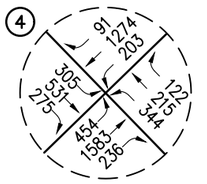
MUIRLANDS BLVD @
EL TORO RD



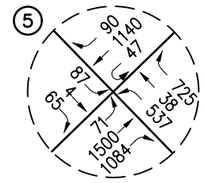
RAYMOND WY @
EL TORO RD



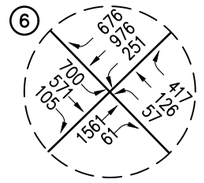
ARBOR WY @
EL TORO RD



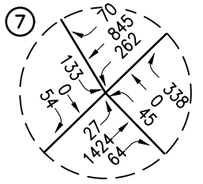
ROCKFIELD BLVD @
EL TORO RD



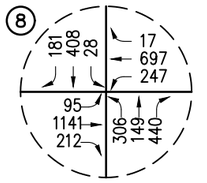
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



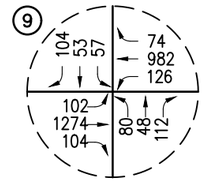
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



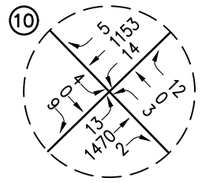
REGIONAL CENTER DR @
EL TORO RD



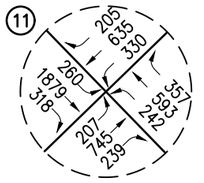
PASEO DE VALENCIA @
EL TORO RD



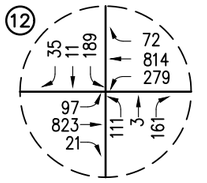
AVENIDA SEVILLA @
EL TORO RD



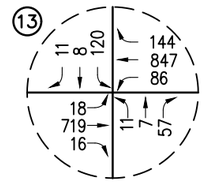
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



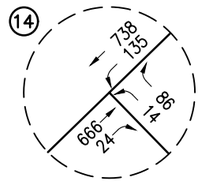
MOULTON PKWY @
EL TORO RD



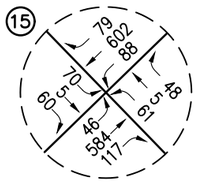
HOME DEPOT/TOWN CENTRE @
EL TORO RD



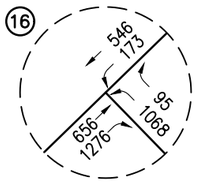
CALLE SONORA @
EL TORO RD



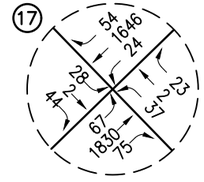
CANYON WREN LN @
EL TORO RD



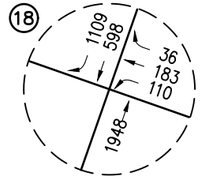
CALLE CORTA @
EL TORO RD



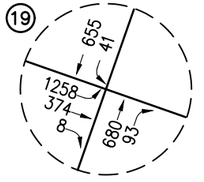
ALISO CREEK RD @
EL TORO RD



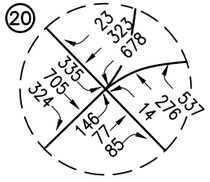
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

= PROJECT SITE

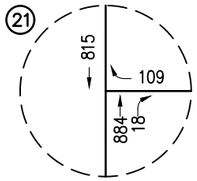
FIGURE 16A

YEAR 2024 CUMULATIVE PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

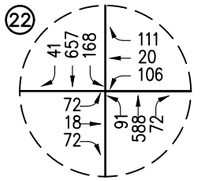
VILLAGE AT LAGUNA HILLS

SEE FIGURE 16D FOR INTERSECTIONS #62 – 68

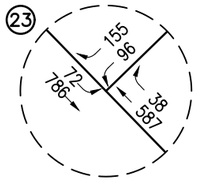
(21) PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



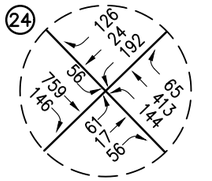
(22) PASEO DE VALENCIA @ CALLE DE LA PLATA



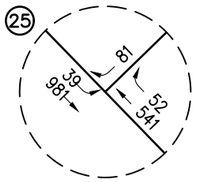
(23) PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



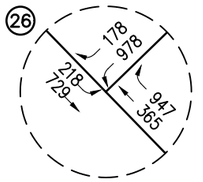
(24) PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



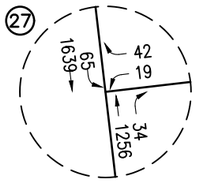
(25) PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



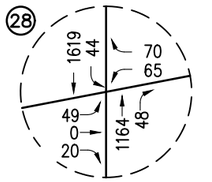
(26) PASEO DE VALENCIA @ LOS ALISOS BLVD



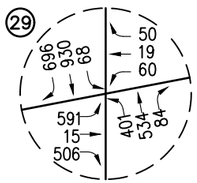
(27) PASEO DE VALENCIA @ KENNINGTON DR



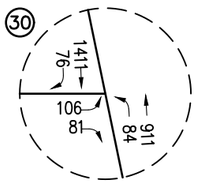
(28) PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



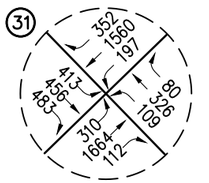
(29) PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



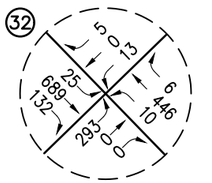
(30) PASEO DE VALENCIA@ HAWK HWY



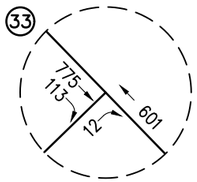
(31) PASEO DE VALENCIA @ ALICIA PKWY



(32) AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE

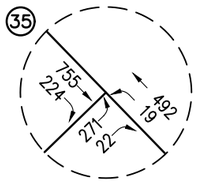


(33) AVENIDA DE LA CARLOTA @ MALL DWY 1

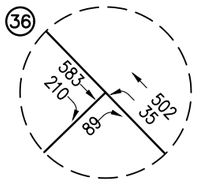


(34) REMOVED STUDY INTERSECTION

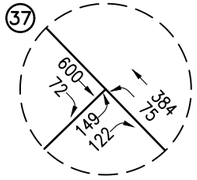
(35) AVENIDA DE LA CARLOTA @ MALL DWY 3



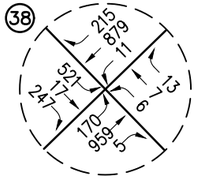
(36) AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



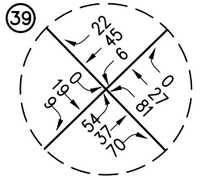
(37) AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 2



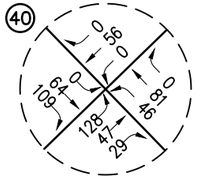
(38) AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



(39) RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



(40) CALLE DE LA LOUISA @ HEALTH CENTER DR



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N NO SCALE

KEY

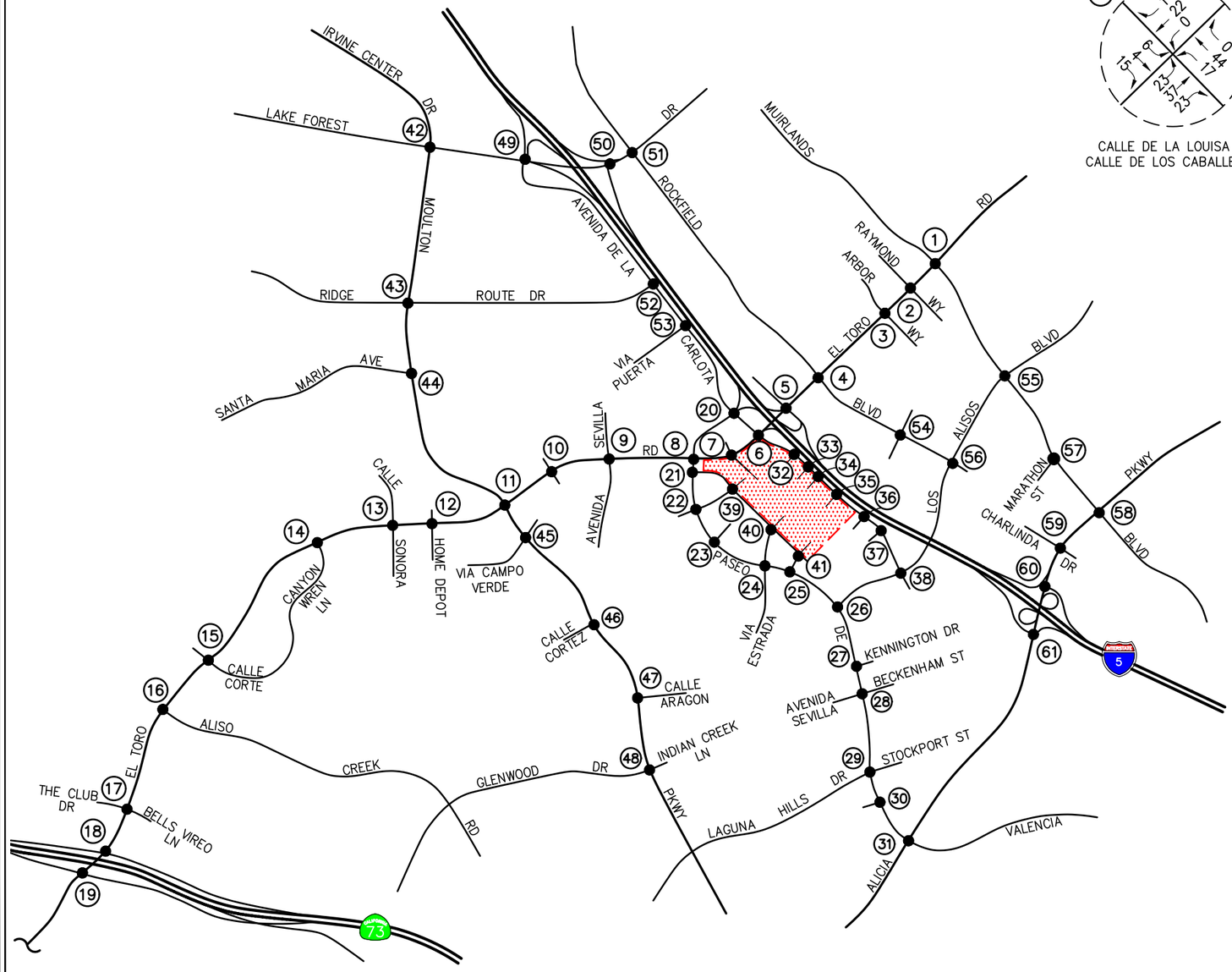
(#) = STUDY INTERSECTION

= PROJECT SITE

FIGURE 16B

YEAR 2024 CUMULATIVE PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS



SEE FIGURE 16D FOR INTERSECTIONS #62 – 68

(41) CALLE DE LA LOUISA @ CALLE DE LOS CABALLEROS

(42) IRVINE CENTER DR/ MOULTON PKWY @ LAKE FOREST DR

(43) MOULTON PKWY @ RIDGE ROUTE DR

(44) MOULTON PKWY @ SANTA MARIA AVE

(45) MOULTON PKWY @ VIA CAMPO VERDE

(46) MOULTON PKWY @ CALLE CORTEZ

(47) MOULTON PKWY @ CALLE ARAGON

(48) MOULTON PKWY @ GLENWOOD DR/ INDIAN CREEK LN

(49) AVENIDA DE LA CARLOTA @ I-5 SB RAMPS @ LAKE FOREST DR

(50) I-5 NB RAMPS @ LAKE FOREST DR

(51) ROCKFIELD BLVD @ LAKE FOREST DR

(52) AVENIDA DE LA CARLOTA @ RIDGE ROUTE DR

(53) AVENIDA DE LA CARLOTA @ VIA PUERTA

(54) ROCKFIELD BLVD @ LANDISVIEW AVE

(55) MUIRLANDS BLVD @ LOS ALISOS BLVD

(56) ROCKFIELD BLVD/FORDVIEW @ LOS ALISOS BLVD

(57) MUIRLANDS BLVD @ MARATHON ST

(58) MUIRLANDS BLVD @ ALICIA PKWY

(59) CHARLINDA DR @ ALICIA PKWY

(60) I-5 NB RAMPS @ ALICIA PKWY

(61) I-5 SB RAMPS @ ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

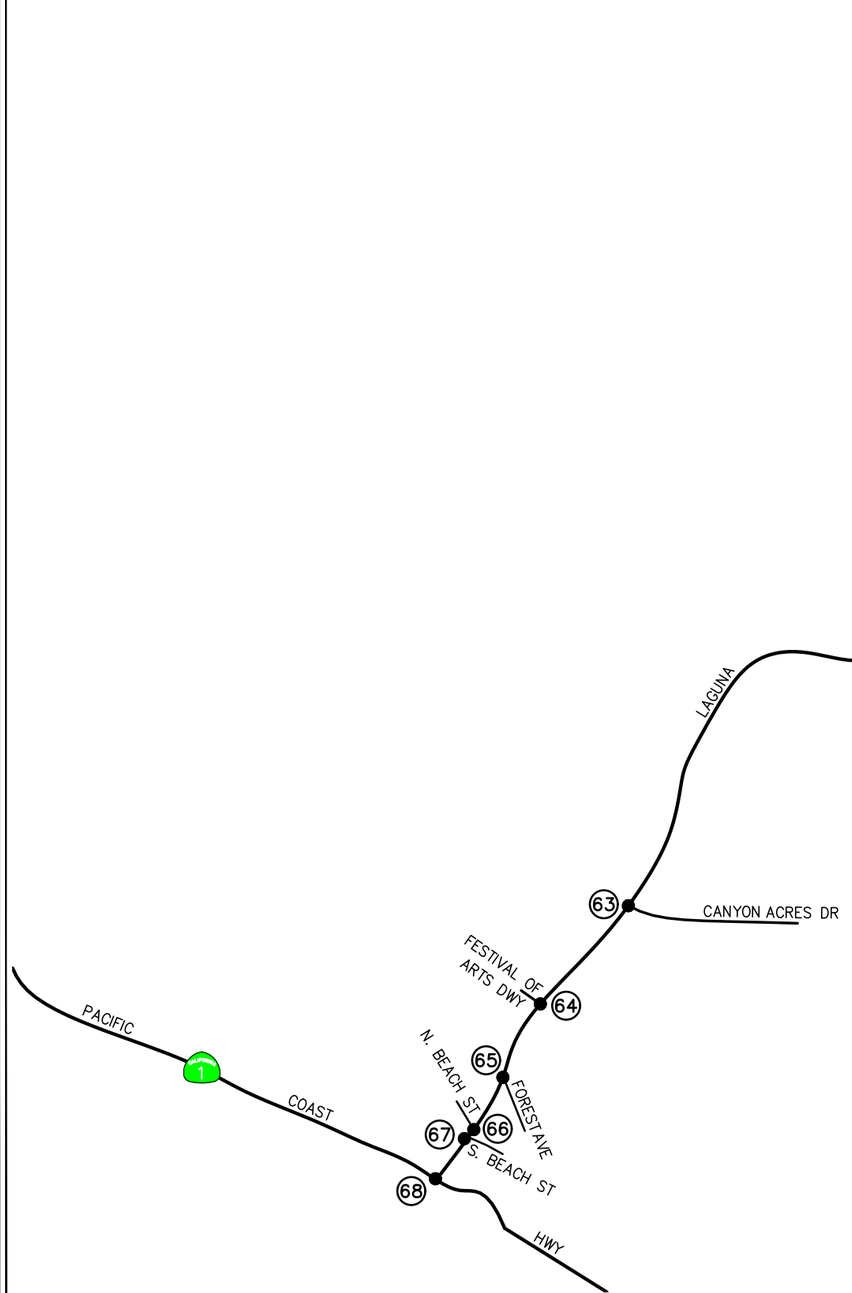
(#) = STUDY INTERSECTION

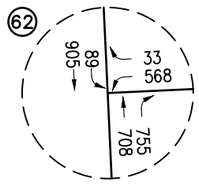
= PROJECT SITE

FIGURE 16C

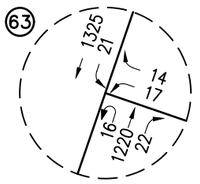
YEAR 2024 CUMULATIVE PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

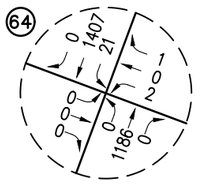




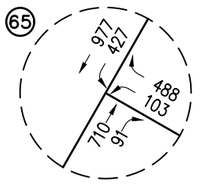
LAGUNA CANYON RD @
EL TORO RD



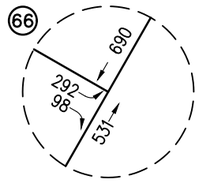
LAGUNA CANYON RD @
CANYON ACRES DR



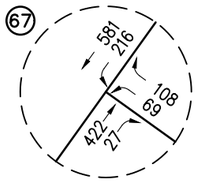
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



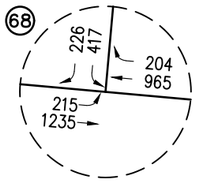
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

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engineers

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NO SCALE

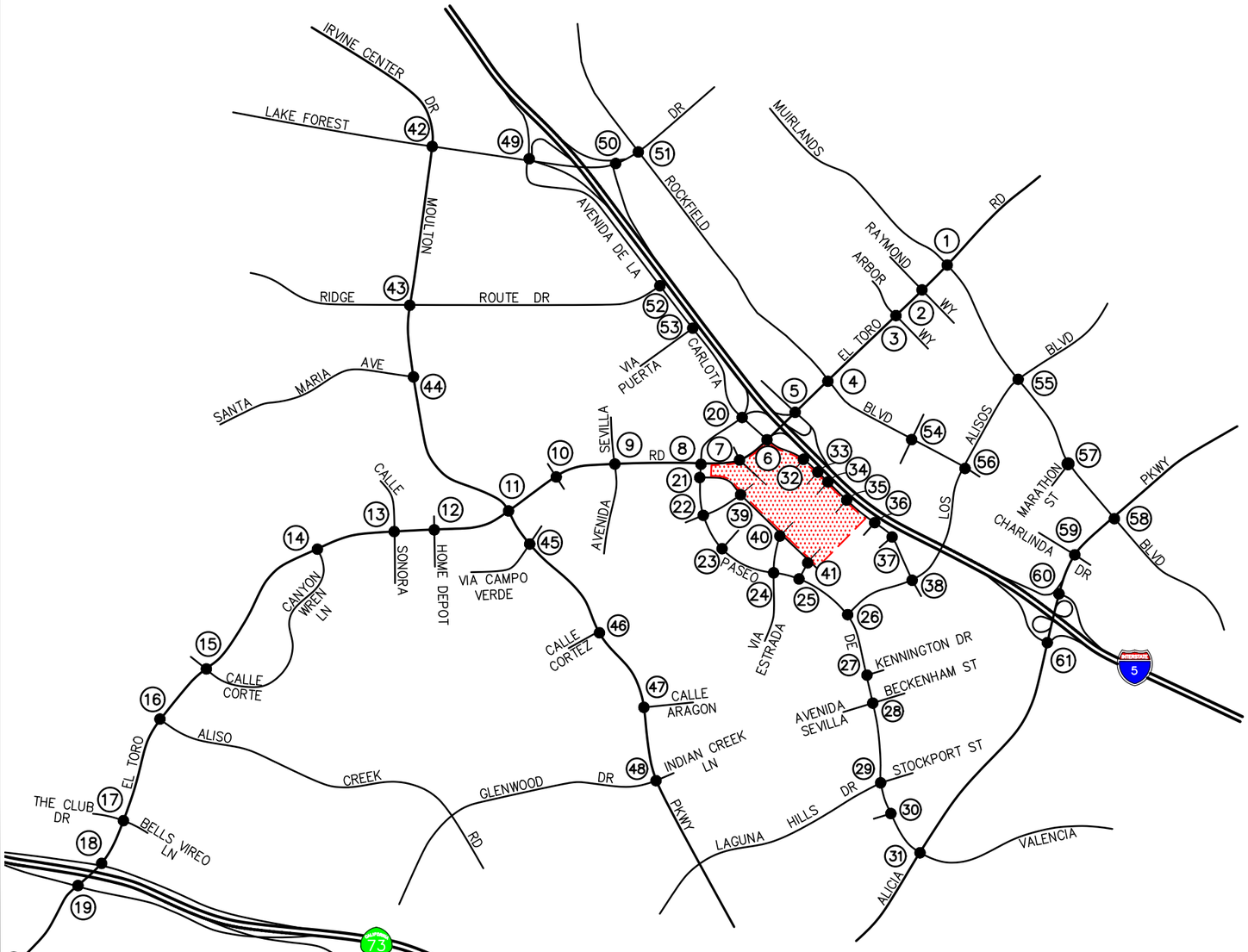
KEY

(#) = STUDY INTERSECTION

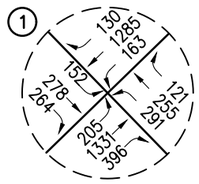
FIGURE 16D

YEAR 2024 CUMULATIVE PLUS PROJECT PM PEAK HOUR TRAFFIC VOLUMES

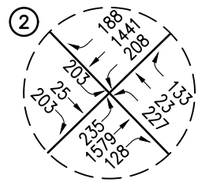
VILLAGE AT LAGUNA HILLS



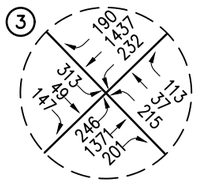
SEE FIGURE 17D FOR INTERSECTIONS #62 – 68



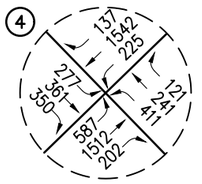
MUIRLANDS BLVD @
EL TORO RD



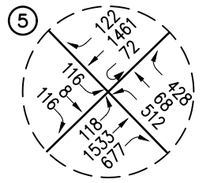
RAYMOND WY @
EL TORO RD



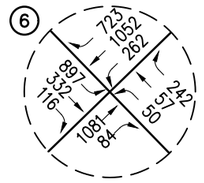
ARBOR WY @
EL TORO RD



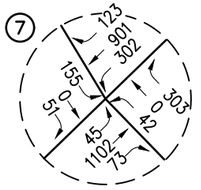
ROCKFIELD BLVD @
EL TORO RD



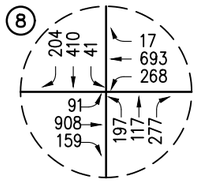
BRIDGER RD/
I-5 NB RAMPS @
EL TORO RD



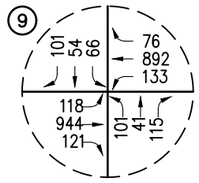
AVENIDA DE LA CARLOTA/
I-5 SB ON-RAMP @
EL TORO RD



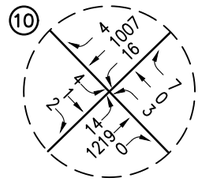
REGIONAL CENTER DR @
EL TORO RD



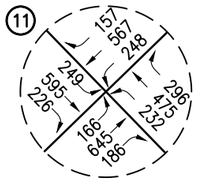
PASEO DE VALENCIA @
EL TORO RD



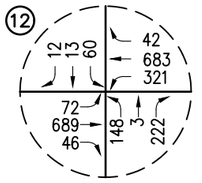
AVENIDA SEVILLA @
EL TORO RD



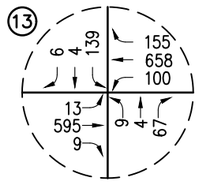
CATHOLIC CHURCH/
LUTHERAN CHURCH @
EL TORO RD



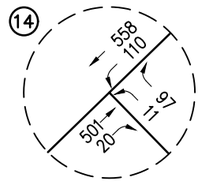
MOULTON PKWY @
EL TORO RD



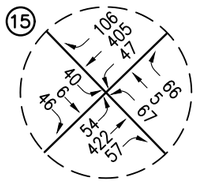
HOME DEPOT/TOWN CENTRE @
EL TORO RD



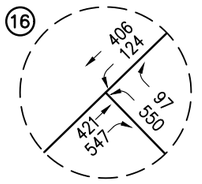
CALLE SONORA @
EL TORO RD



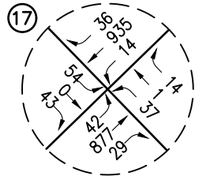
CANYON WREN LN @
EL TORO RD



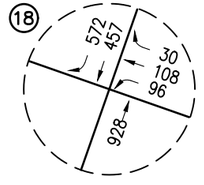
CALLE CORTA @
EL TORO RD



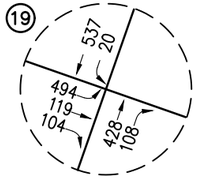
ALISO CREEK RD @
EL TORO RD



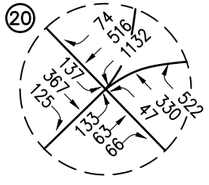
THE CLUB DR/
BELLS VIREO LN @
EL TORO RD



SR-73 NB RAMPS @
EL TORO RD



SR-73 SB RAMPS @
EL TORO RD



AVENIDA DE LA CARLOTA @
PASEO DE VALENCIA/
I-5 SB RAMPS

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N NO SCALE

KEY

(#) = STUDY INTERSECTION

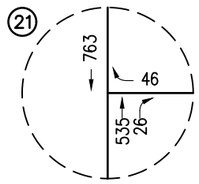
= PROJECT SITE

FIGURE 17A

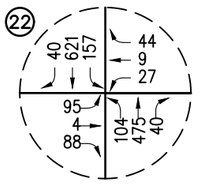
YEAR 2024 CUMULATIVE PLUS PROJECT MIDDAY PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

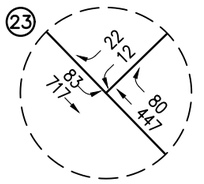
SEE FIGURE 17D FOR INTERSECTIONS #62 – 68



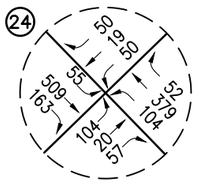
PASEO DE VALENCIA @ RONDA DEL ROSSMOOR



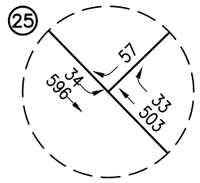
PASEO DE VALENCIA @ CALLE DE LA PLATA



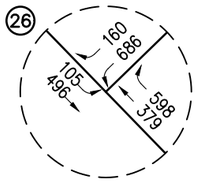
PASEO DE VALENCIA @ CALLE DE LA MAGDALENA



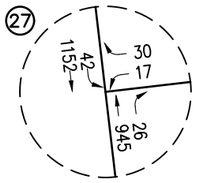
PASEO DE VALENCIA @ VIA ESTRADA/ HEALTH CENTER DR



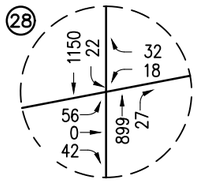
PASEO DE VALENCIA @ CALLE DE LOS CABALLEROS



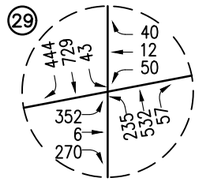
PASEO DE VALENCIA @ LOS ALISOS BLVD



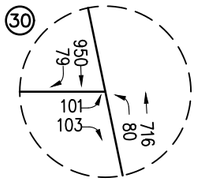
PASEO DE VALENCIA @ KENNINGTON DR



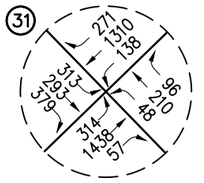
PASEO DE VALENCIA @ AVENIDA SEVILLA/ BECKENHAM ST



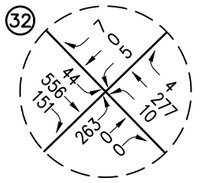
PASEO DE VALENCIA @ LAGUNA HILLS DR/ STOCKPORT ST



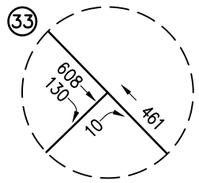
PASEO DE VALENCIA@ HAWK HWY



PASEO DE VALENCIA @ ALICIA PKWY



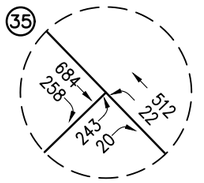
AVENIDA DE LA CARLOTA @ PLAZA LN/MALL ENTRANCE



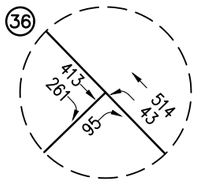
AVENIDA DE LA CARLOTA @ MALL DWY 1

REMOVED STUDY INTERSECTION

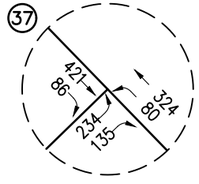
AVENIDA DE LA CARLOTA @ MALL DWY 2



AVENIDA DE LA CARLOTA @ MALL DWY 3



AVENIDA DE LA CARLOTA @ OAKBROOK VILLAGE DWY 1



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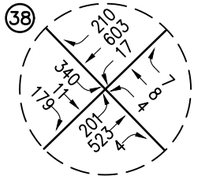
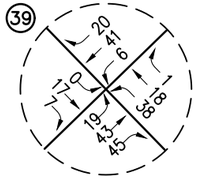
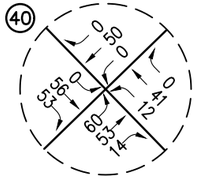


AVENIDA DE LA CARLOTA @ LOS ALISOS BLVD



RONDA DEL ROSSMOOR/ CALLE DE LA LOUISA @ CALLE DE LA PLATA



CALLE DE LA LOUISA @ HEALTH CENTER DR

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

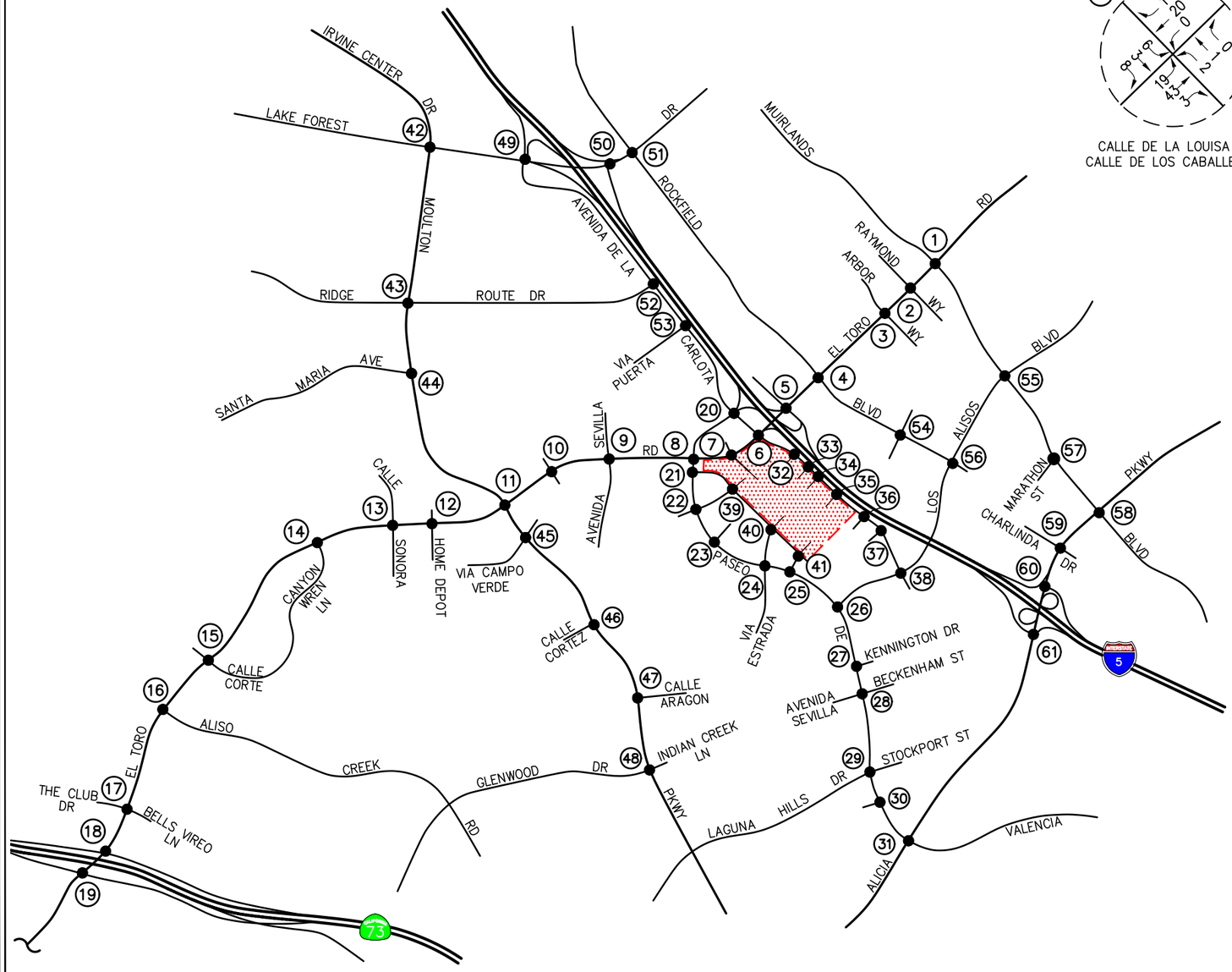
(#) = STUDY INTERSECTION

= PROJECT SITE

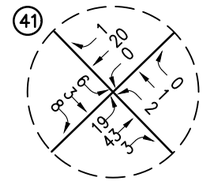
FIGURE 17B

YEAR 2024 CUMULATIVE PLUS PROJECT MIDDAY PEAK HOUR TRAFFIC VOLUMES

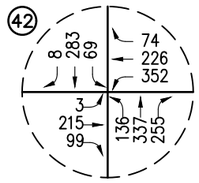
VILLAGE AT LAGUNA HILLS



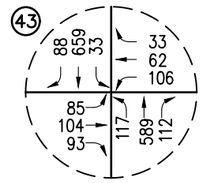
SEE FIGURE 17D FOR INTERSECTIONS #62 – 68



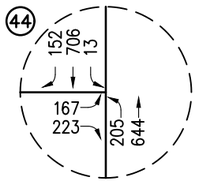
CALLE DE LA LOUISA @
CALLE DE LOS CABALLEROS



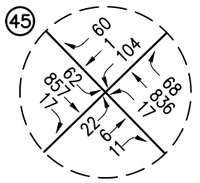
IRVINE CENTER DR/
MOULTON PKWY @
LAKE FOREST DR



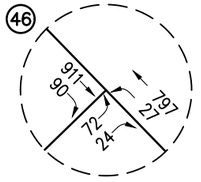
MOULTON PKWY @
RIDGE ROUTE DR



MOULTON PKWY @
SANTA MARIA AVE



MOULTON PKWY @
VIA CAMPO VERDE



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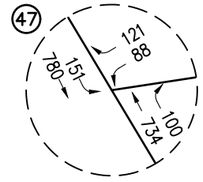
CALLE CORTEZ



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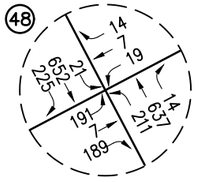
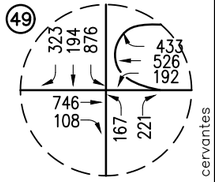
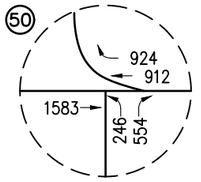


MOULTON PKWY @
GLENWOOD DR/
INDIAN CREEK LN



AVENIDA DE LA CARLOTA
I-5 SB RAMPS @
LAKE FOREST DR



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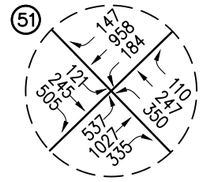
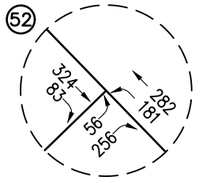
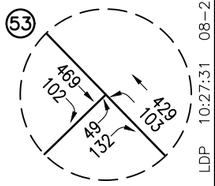


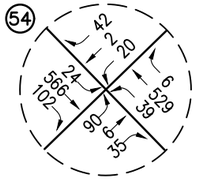
ROCKFIELD BLVD @
LAKE FOREST DR



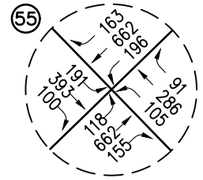
AVENIDA DE LA CARLOTA @
RIDGE ROUTE DR



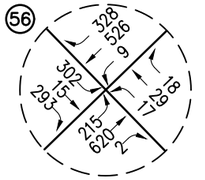
AVENIDA DE LA CARLOTA @
VIA PUERTA



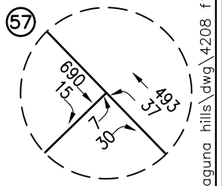
ROCKFIELD BLVD @
LANDISVIEW AVE



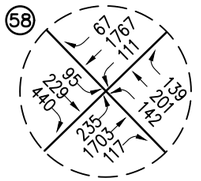
MUIRLANDS BLVD @
LOS ALISOS BLVD



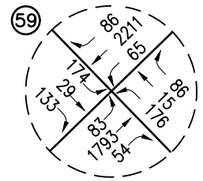
ROCKFIELD BLVD/FORDVIEW @
LOS ALISOS BLVD



MUIRLANDS BLVD @
MARATHON ST



MUIRLANDS BLVD @
ALICIA PKWY



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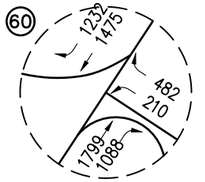
ALICIA PKWY



I-5 NB RAMPS @
ALICIA PKWY

I-5 SB RAMPS @
ALICIA PKWY

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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

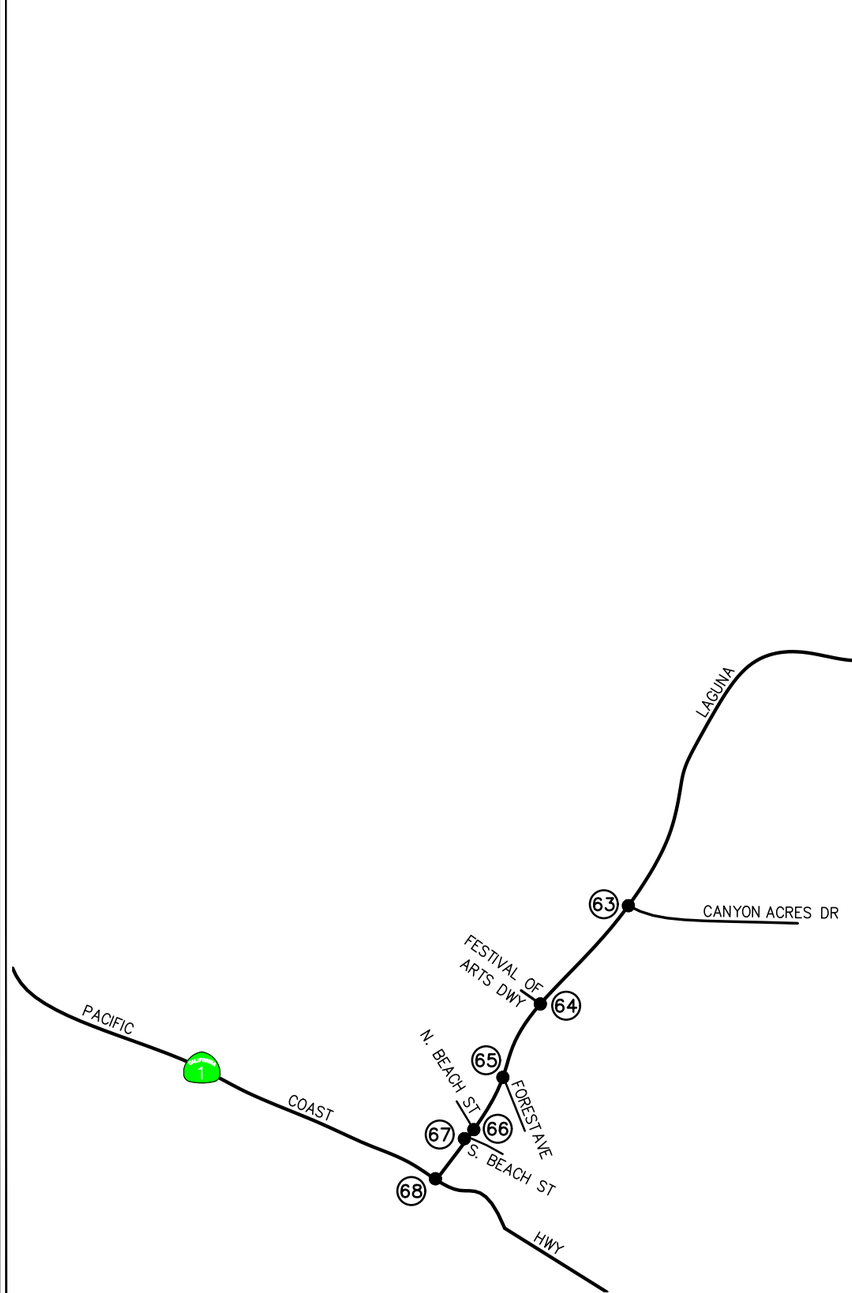
(#) = STUDY INTERSECTION

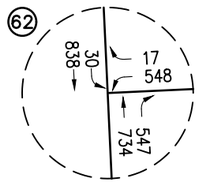
= PROJECT SITE

FIGURE 17C

YEAR 2024 CUMULATIVE PLUS PROJECT MIDDAY PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS





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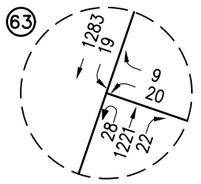
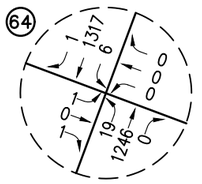
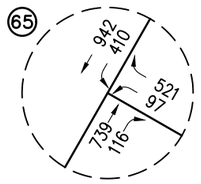
EL TORO RD



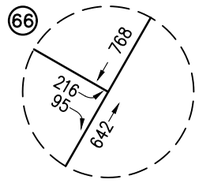
LAGUNA CANYON RD @
CANYON ACRES DR



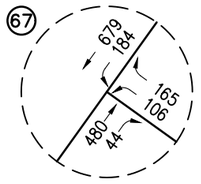
LAGUNA CANYON RD @
FESTIVAL OF ARTS DWY



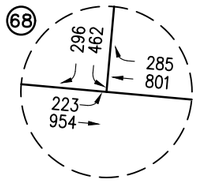
BROADWAY ST @
FOREST AVENUE



BROADWAY ST @
N. BEACH ST



BROADWAY ST @
S. BEACH ST



BROADWAY ST @
PACIFIC COAST HWY

LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

KEY

(#) = STUDY INTERSECTION

FIGURE 17D

YEAR 2024 CUMULATIVE PLUS PROJECT MIDDAY PEAK HOUR TRAFFIC VOLUMES

VILLAGE AT LAGUNA HILLS

TABLE 7
LOCATION AND DESCRIPTION OF CUMULATIVE PROJECTS[4]

No.	Cumulative Project	Location/Address	Description
City of Laguna Hills			
1.	Five Lagunas	Bound by El Toro Road on the northwest, Avenida de la Carlota on the northeast, Calle de la Louisa on the southwest, and Calle de los Caballeros on the southeast	834,706 Shopping Center 45,890 SF Medical Office 988 DU Multifamily
2.	Oakbrook Village	Avenida de la Carlota, north of Los Alisos Boulevard	200 DU Multi-Family (Mid-Rise) 7,476 SF Retail
3.	ActivCare	24888 Alicia Parkway	72 Bed Elderly Care Housing
4.	MNWD Facility Expansion	26161 Gordon Road	64,000 SF MNWD Facility Expansion
5.	24888 Alicia Pkwy Commercial Project	24888 Alicia Parkway	2,500 SF Taco Bell Restaurant w/ Drive-Thru 2,175 SF Starbucks with Drive-Thru 2,507 SF Plant Power w/ Drive-Thru
6.	Expansion of County SSA Building	23330 Moulton Parkway	12,176 SF Office Expansion (52,212 SF Total)
City of Lake Forest			
7.	Kingdom Hall of Jehovah Witness	23061 & 23071 El Toro Road	Two 3,312 SF (6,624 SF) Religion Institution
8.	U-Haul Self-Storage Facility	Orange Avenue and Jeronimo Road	120,172 SF Storage Building 5,350 SF General Warehouse Building
9.	TownePlace Suites by Marriott	23150 Lake Center Drive	112 Room Hotel
10.	Springhill Suites by Marriott	23600 Rockfield Boulevard	102 Room Hotel
11.	Homewood Suites/Hampton Inn	23021 Lake Center Drive	208 Room Hotel
City of Aliso Viejo			
12.	Polaris Office Building	6 Polaris	42,400 SF Office

[4] Source: City of Laguna Hills, Lake Forest, Aliso Viejo, and Mission Viejo Planning Departments.

TABLE 8
CUMULATIVE PROJECTS TRIP GENERATION FORECAST[5]

	Weekday							Saturday			
	Daily	AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour		
Cumulative Project Description	**2-Way**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**2-Way**	**In**	**Out**	**Total**
1. Five Lagunas[6]	6,434	162	396	558	335	234	569	4,919	240	216	456
2. Oakbrook Village	1,342	22	56	78	62	44	106	1,292	56	57	113
3. ActivCare[7]	187	9	5	14	7	12	19	211	9	10	19
4. MNWD Facility Expansion[8]	288	19	7	26	12	24	36	141	18	16	34
5. 24888 Alicia Pkwy Commercial Project[9]	3,107	102	98	200	77	75	152	3,632	142	138	280
6. Expansion of County SSA Building	119	12	2	14	2	12	14	27	3	3	119
7. Kingdom Hall of Jehovah Witness	46	1	1	2	1	2	3	40	11	7	18
8. U-Haul Self-Storage Facility	190	8	5	13	9	12	21	235	22	15	37
9. TownePlace Suites by Marriott	936	31	22	53	34	33	67	917	45	36	81
10. Springhill Suites by Marriott	853	28	20	48	31	30	61	835	41	32	73
11. Homewood Suites/Hampton Inn	1,739	58	40	98	64	61	125	1,704	84	66	150
12. Polaris Office Building	413	42	7	49	8	41	49	94	12	10	22
Cumulative Projects Trip Generation Forecast	**15,654**	**494**	**659**	**1,153**	**642**	**580**	**1,222**	**14,047**	**683**	**606**	**1,289**

[5] Unless otherwise noted, Source: *Trip Generation*, 10th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2017).
[6] Source: *Traffic Impact Analysis Report for the Addendum to the City of Laguna Hills General Plan Program Environmental Impact Report for Five Lagunas*, prepared by LLG Engineers, dated November 13, 2015.
[7] Source: *ActivCare Laguna Hills Trip Generation Evaluation*, prepared by Urban Crossroads, Inc., dated January 4, 2019.
[8] Source: *Traffic Impact Study Moulton Niguel Water District Site Consolidation,* prepared by LSA, dated May 2017.
[9] Source: *Traffic Impact Analysis for Five Lagunas*, prepared by LLG, November 13, 2015.

5.0 TRAFFIC IMPACT ANALYSIS

The relative impact of the Project's incremental trips as compared to the previously approved Five Lagunas during the weekday AM, weekday PM, and Saturday midday, peak hours was evaluated based on analysis of future operating conditions at the 68 key intersections, without, then with, the Project. The previously discussed capacity analysis procedures were utilized to investigate the delay/volume-to-capacity relationships and service level characteristics at each study intersection. The significance of the potential impacts of the Project at each key intersection was then evaluated using the significant traffic impact criteria described below.

5.1 Significant Impact Criteria

In order to provide a quantitative basis for determining the significant traffic impact at a specific location, it was necessary to establish the criteria to be used in the analysis of intersections for this study.

Based on the City's and CMP traffic study guidelines, a project is considered to have a significant impact at an intersection if the following criteria are met:

Non-CMP Signalized, Unsignalized, and Freeway Ramp Intersections

- the Project causes an intersection at LOS D or better to degrade to LOS E or F, and the ICU increase attributable to the Project is 0.01 or greater (or any delay increase per HCM 6)

- or -

- the Project causes an ICU increase of 0.01 or greater (or any delay increase per HCM 6) at an intersection operating at LOS E or F "without project"

CMP Signalized Intersections and Freeway Ramp Intersections

- the Project causes an intersection at LOS E or better to degrade to LOS F, and the ICU increase attributable to the Project is 0.01 or greater (or any delay increase per HCM 6)

- or -

- the Project causes an ICU increase of 0.01 or greater (or any delay increase per HCM 6) at an intersection operating at LOS F "without project"

Tables 9 and ***10*** summarize the Year 2024 Cumulative Base levels of service at the 68 key intersections during the weekday AM and PM, and Saturday midday, peak hours, respectively.

As *Table 9* indicates, under Year 2024 Cumulative Base conditions (i.e., future conditions without the project), 63 of the 68 key intersections are expected to operate at acceptable LOS D or better (LOS E or better at CMP intersections) during the AM and PM peak hours of a typical weekday. Under these future background conditions without the project, the following intersections would operate at a deficient LOS E or F during the PM peak hour (it should be noted that the deficiency for intersections 7, 33, 34 and 35 will be addressed as part of the Project's site access improvements):

7) Regional Center Drive at El Toro Road
33) Avenida de la Carlota at Mall Driveway 1
34) Avenida de la Carlota at Mall Driveway 2
35) Avenida de la Carlota at Mall Driveway 3
58) Muirlands Boulevard at Alicia Parkway

As *Table 10* indicates, under Year 2024 Cumulative Base conditions (i.e., future conditions without the project), 63 of the 68 key intersections are expected to operate at acceptable LOS D or better (LOS E or better at CMP intersections) during the midday peak hour of a typical Saturday. Under these future background conditions without the project, the following intersections would operate at a deficient LOS E or F during the midday peak hour (it should be noted that the deficiency for intersections 7, 33, 34 and 35 will be addressed as part of the project's site access improvements):

7) Regional Center Drive at El Toro Road
20) Avenida de la Carlota at Paseo de Valencia/I-5 SB Ramps
33) Avenida de la Carlota at Mall Driveway 1
34) Avenida de la Carlota at Mall Driveway 2
35) Avenida de la Carlota at Mall Driveway 3

5.2 Year 2024 Cumulative Plus Project Traffic Conditions

Tables 9 and *10* summarize the Year 2024 Cumulative Plus Project levels of service at the 68 key intersections during the weekday AM and PM, and Saturday midday, peak hours, respectively. Based on the application of the significance criteria described previously, the Project is not expected to cause significant traffic impacts at any of the 68 key intersections under Year 2024 Cumulative Plus Project conditions.

Compared to Year 2024 Cumulative Base conditions, the ICU and delay values are less (and corresponding LOS better) under Year 2024 Cumulative Plus Project conditions at the following Project driveway intersections due to site access improvements that would be completed as part of the Project (includes lane geometry, driveway reconfiguration, signalization, which are described in Section 6 of this report):

7) Regional Center Drive at El Toro Road (lane geometry improvements)
32) Avenida de la Carlota at Plaza Lane/Mall Entrance (lane geometry improvements)
33) Avenida de la Carlota at Mall Driveway 1 (driveway converted to right-turn in/out only)
34) Avenida de la Carlota at Mall Driveway 2 (study intersection removed)
35) Avenida de la Carlota at Mall Driveway 3 (new traffic signal)

TABLE 9
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base				Year 2024 Cumulative Plus Project					
		ICU	Delay	LOS	Poor LOS ?	ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
1) Muirlands Boulevard at	AM	0.664	--	B	No	0.666	--	B	No	0.002	No
El Toro Road (LF)	PM	0.758	--	C	No	0.754	--	C	No	-0.004	No
2) Raymond Way at	AM	0.458	--	A	No	0.460	--	A	No	0.002	No
El Toro Road (LF)	PM	0.547	--	A	No	0.544	--	A	No	-0.003	No
3) Arbor Way at	AM	0.418	--	A	No	0.420	--	A	No	0.002	No
El Toro Road (LF)	PM	0.516	--	A	No	0.514	--	A	No	-0.002	No
4) Rockfield Boulevard at	AM	0.557	--	A	No	0.558	--	A	No	0.001	No
El Toro Road (LF)	PM	0.646	--	B	No	0.642	--	B	No	-0.004	No
5) Bridger Road/I-5 Northbound Ramps	AM	0.574	--	A	No	0.581	--	A	No	0.007	No
El Toro Road (CMP/LF)	PM	0.825	--	D	No	0.764	--	C	No	-0.061	No
HCM 6:	AM	--	34.4	C	No	--	34.1	C	No	-0.3	No
HCM 6:	PM	--	40.0	D	No	--	36.6	D	No	-3.4	No
6) Avenida de la Carlota/I-5 Southbound	AM	0.515	--	A	No	0.517	--	A	No	0.002	No
On-Ramp at El Toro Road (CMP)	PM	0.775	--	C	No	0.644	--	B	No	-0.131	No
HCM 6:	AM	--	41.6	D	No	--	40.8	D	No	-0.8	No
HCM 6:	PM	--	40.3	D	No	--	33.7	C	No	-6.6	No
7) Regional Center Drive at	AM	0.415	--	A	No	0.301	--	A	No	-0.114	No
El Toro Road	PM	**0.922**	--	**E**	**Yes**	0.441	--	A	No	-0.481	No
8) Paseo de Valencia at	AM	0.538	--	A	No	0.542	--	A	No	0.004	No
El Toro Road	PM	0.579	--	A	No	0.556	--	A	No	-0.023	No
9) Avenida Sevilla at	AM	0.518	--	A	No	0.517	--	A	No	-0.001	No
El Toro Road (LW)	PM	0.512	--	A	No	0.501	--	A	No	-0.011	No
10) Catholic Church/Lutheran Chuch at	AM	0.359	--	A	No	0.358	--	A	No	-0.001	No
El Toro Road (LW)	PM	0.370	--	A	No	0.359	--	A	No	-0.011	No
11) Moulton Parkway at	AM	0.679	--	B	No	0.678	--	B	No	-0.001	No
El Toro Road (CMP/LW)	PM	0.744	--	C	No	0.733	--	C	No	-0.011	No
12) Home Depot at	AM	0.381	--	A	No	0.383	--	A	No	0.002	No
El Toro Road (LW)	PM	0.505	--	A	No	0.499	--	A	No	-0.006	No
13) Calle Sanora at	AM	0.337	--	A	No	0.339	--	A	No	0.002	No
El Toro Road (LW)	PM	0.330	--	A	No	0.326	--	A	No	-0.004	No
14) Canyon Wren Lane at	AM	0.308	--	A	No	0.310	--	A	No	0.002	No
El Toro Road (AV)	PM	0.321	--	A	No	0.315	--	A	No	-0.006	No

TABLE 9 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base ICU	Delay	LOS	Poor LOS ?	Year 2024 Cumulative Plus Project ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
15) Calle Corta at	AM	0.319	--	A	No	0.319	--	A	No	0.000	No
El Toro Road (LW)	PM	0.316	--	A	No	0.310	--	A	No	-0.006	No
16) Aliso Creek Road at	AM	0.636	--	B	No	0.636	--	B	No	0.000	No
El Toro Road (LW)	PM	0.667	--	B	No	0.659	--	B	No	-0.008	No
17) The Club Drive/Bells Vireo Lane at	AM	0.633	--	B	No	0.632	--	B	No	-0.001	No
El Toro Road (LB)	PM	0.508	--	A	No	0.503	--	A	No	-0.005	No
18) SR-73 Northbound Ramps at	AM	0.699	--	B	No	0.698	--	B	No	-0.001	No
El Toro Road (CMP/LB)	PM	0.682	--	B	No	0.677	--	B	No	-0.005	No
HCM 6:	AM	--	13.6	B	No	--	13.6	B	No	0.0	No
HCM 6:	PM	--	8.9	A	No	--	8.8	A	No	-0.1	No
19) SR-73 Southbound Ramps at	AM	0.461	--	A	No	0.461	--	A	No	0.000	No
El Toro Road (CMP/LB)	PM	0.653	--	B	No	0.644	--	B	No	-0.009	No
HCM 6:	AM	--	20.9	C	No	--	20.9	C	No	0.0	No
HCM 6:	PM	--	28.7	C	No	--	28.4	C	No	-0.3	No
20) Avenida de la Carlota at	AM	0.516	--	A	No	0.528	--	A	No	0.012	No
Paseo de Valencia/I-5 SB Ramps	PM	0.541	--	A	No	0.510	--	A	No	-0.031	No
HCM 6:	AM	--	43.7	D	No	--	47.1	D	No	3.4	No
HCM 6:	PM	--	44.1	D	No	--	42.8	D	No	-1.3	No
21) Paseo de Valencia at	*AM*	--	*15.0*	*C*	*No*	--	*15.1*	*C*	*No*	*0.1*	*No*
Ronda del Rossmoor (LW)	*PM*	--	*16.0*	*C*	*No*	--	*15.5*	*C*	*No*	*-0.5*	*No*
22) Paseo de Valencia at	AM	0.417	--	A	No	0.419	--	A	No	0.002	No
Calle de la Plata (LW)	PM	0.424	--	A	No	0.404	--	A	No	-0.020	No
23) Paseo de Valencia at	AM	0.323	--	A	No	0.322	--	A	No	-0.001	No
Calle de la Magdalena (LW)	PM	0.341	--	A	No	0.330	--	A	No	-0.011	No
24) Paseo de Valencia at	AM	0.354	--	A	No	0.357	--	A	No	0.003	No
Health Center Drive (LW)	PM	0.474	--	A	No	0.465	--	A	No	-0.009	No
25) Paseo de Valencia at	*AM*	--	*13.6*	*B*	*No*	--	*13.6*	*B*	*No*	*0.0*	*No*
Calle de los Caballeros (LW)	*PM*	--	*12.7*	*B*	*No*	--	*12.4*	*B*	*No*	*-0.3*	*No*
26) Paseo de Valencia at	AM	0.442	--	A	No	0.445	--	A	No	0.003	No
Los Alisos Boulevard	PM	0.461	--	A	No	0.456	--	A	No	-0.005	No
27) Paseo de Valencia at	AM	0.425	--	A	No	0.424	--	A	No	-0.001	No
Kennington Drive (LW)	PM	0.562	--	A	No	0.557	--	A	No	-0.005	No
28) Paseo de Valencia at	AM	0.484	--	A	No	0.485	--	A	No	0.001	No
Avenida Sevilla/Beckenham Street	PM	0.601	--	B	No	0.596	--	A	No	-0.005	No

TABLE 9 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base ICU	Delay	LOS	Poor LOS ?	Year 2024 Cumulative Plus Project ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
29) Paseo de Valencia at	AM	0.602	--	B	No	0.602	--	B	No	0.000	No
Laguna Hills Drive/Stockport Street	PM	0.618	--	B	No	0.618	--	B	No	0.000	No
30) Paseo de Valencia at	AM	0.408	--	A	No	0.408	--	A	No	0.000	No
Hawk Highway	PM	0.432	--	A	No	0.429	--	A	No	-0.003	No
31) Paseo de Valencia at	AM	0.704	--	C	No	0.704	--	C	No	0.000	No
Alicia Parkway	PM	0.702	--	C	No	0.700	--	B	No	-0.002	No
32) Avenida de la Carlota at	AM	0.323	--	A	No	0.272	--	A	No	-0.051	No
Plaza Lane/Mall Entrance	PM	0.594	--	A	No	0.355	--	A	No	-0.239	No
33) Avenida de la Carlota at	*AM*	--	*22.2*	*C*	*No*	--	*10.2*	*B*	*No*	*-12.0*	*No*
Mall Driveway 1	*PM*	--	**739.4**	**F**	***Yes***	--	*11.8*	*A*	*No*	*-727.6*	*No*
34) Avenida de la Carlota at	*AM*	--	*15.4*	*C*	*No*	***Removed Study Intersection***					
Mall Driveway 2	*PM*	--	**38.5**	**E**	***Yes***						
35) Avenida de la Carlota at	*AM*	--	*29.1*	*D*	*No*	0.246	--	A	No	--	No
Mall Driveway 3	*PM*	--	***1249.0***	***F***	***Yes***	0.435	--	A	No	--	No
36) Avenida de la Carlota at	*AM*	--	*9.6*	*A*	*No*	--	*9.6*	*A*	*No*	*0.0*	*No*
Oakbrook Village Driveway 1	*PM*	--	*12.4*	*B*	*No*	--	*12.3*	*B*	*No*	*-0.1*	*No*
37) Avenida de la Carlota at	AM	0.241	--	A	No	0.242	--	A	No	0.001	No
Oakbrook Village Driveway 2	PM	0.383	--	A	No	0.379	--	A	No	-0.004	No
38) Avenida de la Carlota at	AM	0.434	--	A	No	0.434	--	A	No	0.000	No
Los Alisos Boulevard	PM	0.535	--	A	No	0.532	--	A	No	-0.003	No
39) Ronda del Rossmoor/Calle de la	*AM*	--	*9.7*	*A*	*No*	--	*8.1*	*A*	*No*	*-1.6*	*No*
Calle de la Plata	*PM*	--	*12.4*	*B*	*No*	--	*8.9*	*A*	*No*	*-3.5*	*No*
40) Calle de la Louisa at	*AM*	--	*8.8*	*A*	*No*	--	*8.8*	*A*	*No*	*0.0*	*No*
Health Center Drive	*PM*	--	*9.9*	*A*	*No*	--	*9.4*	*A*	*No*	*-0.5*	*No*
41) Calle de la Louisa at	*AM*	--	*8.0*	*A*	*No*	--	*8.0*	*A*	*No*	*0.0*	*No*
Calle de los Caballeros	*PM*	--	*10.2*	*B*	*No*	--	*8.0*	*A*	*No*	*-2.2*	*No*
42) Irvine Center Drive/Moulton Parkway	AM	0.475	--	A	No	0.475	--	A	No	0.000	No
Lake Forest Drive	PM	0.703	--	C	No	0.703	--	C	No	0.000	No
43) Moulton Parkway at	AM	0.399	--	A	No	0.399	--	A	No	0.000	No
Ridge Route Drive	PM	0.642	--	B	No	0.642	--	B	No	0.000	No

TABLE 9 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base ICU	Delay	LOS	Poor LOS ?	Year 2024 Cumulative Plus Project ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
44) Moulton Parkway at	AM	0.545	--	A	No	0.545	--	A	No	0.000	No
Santa Maria Avenue	PM	0.684	--	B	No	0.684	--	B	No	0.000	No
45) Moulton Parkway at	AM	0.592	--	A	No	0.594	--	A	No	0.002	No
Via Campo Verde (LW)	PM	0.604	--	B	No	0.601	--	B	No	-0.003	No
46) Moulton Parkway at	AM	0.560	--	A	No	0.562	--	A	No	0.002	No
Calle Cortez (AV)	PM	0.624	--	B	No	0.620	--	B	No	-0.004	No
47) Moulton Parkway at	AM	0.569	--	A	No	0.571	--	A	No	0.002	No
Calle Aragon (AV)	PM	0.541	--	A	No	0.538	--	A	No	-0.003	No
48) Moulton Parkway at	AM	0.545	--	A	No	0.547	--	A	No	0.002	No
Glenwood Drive/Indian Creek Lane	PM	0.700	--	C	No	0.697	--	B	No	-0.003	No
49) Avenida de la Carlota/I-5 Southbound	AM	0.744	--	C	No	0.744	--	C	No	0.000	No
Ramps at Lake Forest Drive	PM	0.761	--	C	No	0.761	--	C	No	0.000	No
HCM 6:	AM	--	44.1	D	No	--	44.1	D	No	0.0	No
HCM 6:	PM	--	39.4	D	No	--	39.4	D	No	0.0	No
50) I-5 Northbound Ramps at	AM	0.462	--	A	No	0.463	--	A	No	0.001	No
Lake Forest Drive (LF)	PM	0.631	--	B	No	0.625	--	B	No	-0.006	No
HCM 6:	AM	--	15.6	B	No	--	15.6	B	No	0.0	No
HCM 6:	PM	--	18.8	B	No	--	18.3	B	No	-0.5	No
51) Rockfield Boulevard at	AM	0.636	--	B	No	0.637	--	B	No	0.001	No
Lake Forest Drive (LF)	PM	0.738	--	C	No	0.735	--	C	No	-0.003	No
52) Avenida de la Carlota at	AM	0.419	--	A	No	0.419	--	A	No	0.000	No
Ridge Route Drive	PM	0.736	--	C	No	0.736	--	C	No	0.000	No
53) Avenida de la Carlota at	AM	0.228	--	A	No	0.228	--	A	No	0.000	No
Via Puerta (LW)	PM	0.531	--	A	No	0.531	--	A	No	0.000	No
54) Rockfield Boulevard at	AM	0.394	--	A	No	0.394	--	A	No	0.000	No
Landisview Avenue (LF)	PM	0.404	--	A	No	0.404	--	A	No	0.000	No
55) Muirlands Boulevard at	AM	0.761	--	C	No	0.762	--	C	No	0.001	No
Los Alisos Boulevard (MV)	PM	0.792	--	C	No	0.790	--	C	No	-0.002	No
56) Rockfield Boulevard/Fordview at	AM	0.778	--	C	No	0.779	--	C	No	0.001	No
Los Alisos Boulevard (LF)	PM	0.656	--	B	No	0.651	--	B	No	-0.005	No
57) Muirlands Boulevard at	AM	0.364	--	A	No	0.364	--	A	No	0.000	No
Marathon Street (MV)	PM	0.445	--	A	No	0.445	--	A	No	0.000	No
58) Muirlands Boulevard at	AM	0.830	--	D	No	0.830	--	D	No	0.000	No
Alicia Parkway (MV)	PM	**0.928**	--	**E**	**Yes**	**0.926**	--	**E**	**Yes**	-0.002	No

TABLE 9 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: WEEKDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base ICU	Delay	LOS	Poor LOS ?	Year 2024 Cumulative Plus Project ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
59) Charlinda Drive at	AM	0.611	--	B	No	0.612	--	B	No	0.001	No
Alicia Parkway (MV)	PM	0.713	--	C	No	0.712	--	C	No	-0.001	No
60) I-5 Northbound Ramps at	AM	0.493	--	A	No	0.493	--	A	No	0.000	No
Alicia Parkway (MV)	PM	0.689	--	B	No	0.687	--	B	No	-0.002	No
HCM 6:	AM	--	13.2	B	No	--	13.2	B	No	0.0	No
HCM 6:	PM	--	21.8	C	No	--	21.7	C	No	-0.1	No
61) I-5 Southbound Ramps at	AM	0.693	--	B	No	0.693	--	B	No	0.000	No
Alicia Parkway	PM	0.802	--	D	No	0.801	--	D	No	-0.001	No
HCM 6:	AM	--	26.0	C	No	--	26.0	C	No	0.0	No
HCM 6:	PM	--	34.0	C	No	--	33.9	C	No	-0.1	No
62) Laguna Canyon Road at	AM	0.724	--	C	No	0.725	--	C	No	0.0	No
El Toro Road (CMP/LB)	PM	0.651	--	B	No	0.650	--	B	No	0.0	No
HCM 6:	AM	--	23.3	C	No	--	23.3	C	No	0.0	No
HCM 6:	PM	--	23.4	C	No	--	23.4	C	No	0.0	No
63) Laguna Canyon Road at	AM	0.518	--	A	No	0.518	--	A	No	0.0	No
Canyon Acres Drive (LB)	PM	0.460	--	A	No	0.459	--	A	No	0.0	No
64) Laguna Canyon Road at	AM	0.491	--	A	No	0.491	--	A	No	0.0	No
Festival of Arts Driveway (LB)	PM	0.465	--	A	No	0.464	--	A	No	0.0	No
65) Broadway Street at	AM	0.596	--	A	No	0.596	--	A	No	0.0	No
Forest Avenue (LB)	PM	0.599	--	A	No	0.597	--	A	No	0.0	No
66) Broadway Street at	AM	0.464	--	A	No	0.465	--	A	No	0.0	No
N Beach Street (LB)	PM	0.452	--	A	No	0.448	--	A	No	0.0	No
67) Broadway Street at	AM	0.456	--	A	No	0.458	--	A	No	0.0	No
S Beach Street (LB)	PM	0.485	--	A	No	0.482	--	A	No	0.0	No
68) Broadway Street at	AM	0.700	--	C	No	0.701	--	C	No	0.0	No
Coast Highway (CMP/LB)	PM	0.649	--	B	No	0.646	--	B	No	0.0	No
HCM 6:	AM	--	23.9	C	No	--	23.9	C	No	0.0	No
HCM 6:	PM	--	19.4	B	No	--	19.3	B	No	-0.1	No

Notes:

Italicized text corresponds to an unsignalized/stop-controlled intersection.

Blue text corresponds to a CMP intersection where LOS E has been established as the minimum acceptable level of service.

CMP = Congestion Management Program; LF = Lake Forest; LW = Laguna Woods; AV = Aliso Viejo;

LB = Laguna Beach; MV = Mission Viejo

TABLE 10
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base				Year 2024 Cumulative Plus Project					
		ICU	Delay	LOS	Poor LOS ?	ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
1) Muirlands Boulevard at El Toro Road (LF)	Sat Midday	0.611	--	B	No	0.603	--	B	No	-0.008	No
2) Raymond Way at El Toro Road (LF)	Sat Midday	0.562	--	A	No	0.556	--	A	No	-0.006	No
3) Arbor Way at El Toro Road (LF)	Sat Midday	0.548	--	A	No	0.542	--	A	No	-0.006	No
4) Rockfield Boulevard at El Toro Road (LF)	Sat Midday	0.702	--	C	No	0.697	--	B	No	-0.005	No
5) Bridger Road/I-5 Northbound Ramps El Toro Road (CMP/LF)	Sat Midday	0.800	--	D	No	0.683	--	B	No	-0.117	No
HCM 6:	Sat Midday	--	38.7	D	No	--	35.6	D	No	-3.1	No
6) Avenida de la Carlota/I-5 Southbound On-Ramp at El Toro Road (CMP)	Sat Midday	0.723	--	C	No	0.533	--	A	No	-0.190	No
HCM 6:	Sat Midday	--	40.7	D	No	--	33.3	C	No	-7.4	No
7) Regional Center Drive at El Toro Road	Sat Midday	**0.913**	--	**E**	**Yes**	0.417	--	A	No	-0.496	No
8) Paseo de Valencia at El Toro Road	Sat Midday	0.522	--	A	No	0.485	--	A	No	-0.037	No
9) Avenida Sevilla at El Toro Road (LW)	Sat Midday	0.455	--	A	No	0.440	--	A	No	-0.015	No
10) Catholic Church/Lutheran Chuch at El Toro Road (LW)	Sat Midday	0.320	--	A	No	0.305	--	A	No	-0.015	No
11) Moulton Parkway at El Toro Road (CMP/LW)	Sat Midday	0.540	--	A	No	0.497	--	A	No	-0.043	No
12) Home Depot at El Toro Road (LW)	Sat Midday	0.453	--	A	No	0.445	--	A	No	-0.008	No
13) Calle Sanora at El Toro Road (LW)	Sat Midday	0.316	--	A	No	0.309	--	A	No	-0.007	No
14) Canyon Wren Lane at El Toro Road (AV)	Sat Midday	0.281	--	A	No	0.274	--	A	No	-0.007	No

TABLE 10 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base				Year 2024 Cumulative Plus Project					
		ICU	Delay	LOS	Poor LOS ?	ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
15) Calle Corta at El Toro Road (LW)	Sat Midday	0.245	--	A	No	0.238	--	A	No	-0.007	No
16) Aliso Creek Road at El Toro Road (LW)	Sat Midday	0.420	--	A	No	0.409	--	A	No	-0.011	No
17) The Club Drive/Bells Vireo Lane at El Toro Road (LB)	Sat Midday	0.346	--	A	No	0.337	--	A	No	-0.009	No
18) SR-73 Northbound Ramps at El Toro Road (CMP/LB)	Sat Midday	0.361	--	A	No	0.355	--	A	No	-0.006	No
HCM 6:	Sat Midday	--	9.5	A	No	--	9.5	A	No	0.0	No
19) SR-73 Southbound Ramps at El Toro Road (CMP/LB)	Sat Midday	0.360	--	A	No	0.353	--	A	No	-0.007	No
HCM 6:	Sat Midday	--	23.5	C	No	--	22.7	C	No	-0.8	No
20) Avenida de la Carlota at Paseo de Valencia/I-5 SB Ramps	Sat Midday	0.531	--	A	No	0.480	--	A	No	-0.051	No
HCM 6:	Sat Midday	--	**72.1**	**E**	**Yes**	--	42.8	D	No	-29.3	No
21) Paseo de Valencia at Ronda del Rossmoor (LW)	*Sat Midday*	--	*13.4*	*B*	*No*	--	*13.0*	*B*	*No*	*-0.4*	*No*
22) Paseo de Valencia at Calle de la Plata (LW)	Sat Midday	0.398	--	A	No	0.376	--	A	No	-0.022	No
23) Paseo de Valencia at Calle de la Magdalena (LW)	Sat Midday	0.284	--	A	No	0.268	--	A	No	-0.016	No
24) Paseo de Valencia at Health Center Drive (LW)	Sat Midday	0.348	--	A	No	0.327	--	A	No	-0.021	No
25) Paseo de Valencia at Calle de los Caballeros (LW)	*Sat Midday*	--	*11.9*	*B*	*No*	--	*11.4*	*B*	*No*	*-0.5*	*No*
26) Paseo de Valencia at Los Alisos Boulevard	Sat Midday	0.344	--	A	No	0.330	--	A	No	-0.014	No
27) Paseo de Valencia at Kennington Drive (LW)	Sat Midday	0.420	--	A	No	0.406	--	A	No	-0.014	No
28) Paseo de Valencia at Avenida Sevilla/Beckenham Street	Sat Midday	0.454	--	A	No	0.440	--	A	No	-0.014	No

TABLE 10 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base				Year 2024 Cumulative Plus Project					
		ICU	Delay	LOS	Poor LOS ?	ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
29) Paseo de Valencia at Laguna Hills Drive/Stockport Street	Sat Midday	0.411	--	A	No	0.411	--	A	No	0.000	No
30) Paseo de Valencia at Hawk Highway	Sat Midday	0.345	--	A	No	0.336	--	A	No	-0.009	No
31) Paseo de Valencia at Alicia Parkway	Sat Midday	0.573	--	A	No	0.573	--	A	No	0.000	No
32) Avenida de la Carlota at Plaza Lane/Mall Entrance	Sat Midday	0.721	--	C	No	0.304	--	A	No	-0.417	No
33) Avenida de la Carlota at Mall Driveway 1	*Sat Midday*	--	**1006.8**	**F**	**Yes**	--	*11.0*	B	No	*-995.8*	*No*
34) Avenida de la Carlota at Mall Driveway 2	*Sat Midday*	--	**68.8**	**F**	**Yes**	***Removed Study Intersection***					
35) Avenida de la Carlota at Mall Driveway 3	*Sat Midday*	--	**2072.6**	**F**	**Yes**	0.417	--	A	No	--	No
36) Avenida de la Carlota at Oakbrook Village Driveway 1	*Sat Midday*	--	*12.6*	*B*	*No*	--	*12.3*	*B*	*No*	*-0.3*	*No*
37) Avenida de la Carlota at Oakbrook Village Driveway 2	Sat Midday	0.392	--	A	No	0.384	--	A	No	-0.008	No
38) Avenida de la Carlota at Los Alisos Boulevard	Sat Midday	0.409	--	A	No	0.403	--	A	No	-0.006	No
39) Ronda del Rossmoor/Calle de la Calle de la Plata	*Sat Midday*	--	*9.7*	*A*	*No*	--	*8.2*	*A*	*No*	*-1.5*	*No*
40) Calle de la Louisa at Health Center Drive	*Sat Midday*	--	*9.1*	*A*	*No*	--	*8.3*	*A*	*No*	*-0.8*	*No*
41) Calle de la Louisa at Calle de los Caballeros	*Sat Midday*	--	*9.1*	*A*	*No*	--	*7.7*	*A*	*No*	*-1.4*	*No*
42) Irvine Center Drive/Moulton Parkway Lake Forest Drive	Sat Midday	0.382	--	A	No	0.382	--	A	No	0.000	No
43) Moulton Parkway at Ridge Route Drive	Sat Midday	0.300	--	A	No	0.300	--	A	No	0.000	No

TABLE 10 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base				Year 2024 Cumulative Plus Project					
		ICU	Delay	LOS	Poor LOS ?	ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
44) Moulton Parkway at Santa Maria Avenue	Sat Midday	0.385	--	A	No	0.385	--	A	No	0.000	No
45) Moulton Parkway at Via Campo Verde (LW)	Sat Midday	0.342	--	A	No	0.335	--	A	No	-0.007	No
46) Moulton Parkway at Calle Cortez (AV)	Sat Midday	0.314	--	A	No	0.305	--	A	No	-0.009	No
47) Moulton Parkway at Calle Aragon (AV)	Sat Midday	0.351	--	A	No	0.343	--	A	No	-0.008	No
48) Moulton Parkway at Glenwood Drive/Indian Creek Lane	Sat Midday	0.376	--	A	No	0.366	--	A	No	-0.010	No
49) Avenida de la Carlota/I-5 Southbound Ramps at Lake Forest Drive	Sat Midday	0.520	--	A	No	0.520	--	A	No	0.000	No
HCM 6:	Sat Midday	--	34.1	C	No	--	34.1	C	No	0.0	No
50) I-5 Northbound Ramps at Lake Forest Drive (LF)	Sat Midday	0.460	--	A	No	0.446	--	A	No	-0.014	No
HCM 6:	Sat Midday	--	17.8	B	No	--	17.0	B	No	-0.8	No
51) Rockfield Boulevard at Lake Forest Drive (LF)	Sat Midday	0.551	--	A	No	0.545	--	A	No	-0.006	No
52) Avenida de la Carlota at Ridge Route Drive	Sat Midday	0.427	--	A	No	0.427	--	A	No	0.000	No
53) Avenida de la Carlota at Via Puerta (LW)	Sat Midday	0.317	--	A	No	0.317	--	A	No	0.000	No
54) Rockfield Boulevard at Landisview Avenue (LF)	Sat Midday	0.348	--	A	No	0.348	--	A	No	0.000	No
55) Muirlands Boulevard at Los Alisos Boulevard (MV)	Sat Midday	0.507	--	A	No	0.502	--	A	No	-0.005	No
56) Rockfield Boulevard/Fordview at Los Alisos Boulevard (LF)	Sat Midday	0.626	--	B	No	0.619	--	B	No	-0.007	No
57) Muirlands Boulevard at Marathon Street (MV)	Sat Midday	0.301	--	A	No	0.301	--	A	No	0.000	No
58) Muirlands Boulevard at Alicia Parkway (MV)	Sat Midday	0.726	--	C	No	0.722	--	C	No	-0.004	No

TABLE 10 (CONTINUED)
YEAR 2024 INTERSECTION PEAK HOUR LEVELS OF SERVICE: SATURDAY CONDITIONS

Key Intersections (Jurisdiction)	Peak Hour	Year 2024 Cumulative Base				Year 2024 Cumulative Plus Project					
		ICU	Delay	LOS	Poor LOS ?	ICU	Delay	LOS	Poor LOS ?	ICU or Delay Diff	Proj Sig Imp?
59) Charlinda Drive at Alicia Parkway (MV)	Sat Midday	0.625	--	B	No	0.618	--	B	No	-0.007	No
60) I-5 Northbound Ramps at Alicia Parkway (MV)	Sat Midday	0.548	--	A	No	0.545	--	A	No	-0.003	No
HCM 6:	Sat Midday	--	19.3	B	No	--	19.2	B	No	-0.1	No
61) I-5 Southbound Ramps at Alicia Parkway	Sat Midday	0.710	--	C	No	0.706	--	C	No	-0.004	No
HCM 6:	Sat Midday	--	31.4	C	No	--	31.3	C	No	-0.1	No
62) Laguna Canyon Road at El Toro Road (CMP/LB)	Sat Midday	0.621	--	B	No	0.619	--	B	No	-0.002	No
HCM 6:	Sat Midday	--	28.0	C	No	--	28.0	C	No	0.000	No
63) Laguna Canyon Road at Canyon Acres Drive (LB)	Sat Midday	0.458	--	A	No	0.456	--	A	No	-0.002	No
64) Laguna Canyon Road at Festival of Arts Driveway (LB)	Sat Midday	0.452	--	A	No	0.449	--	A	No	-0.003	No
65) Broadway Street at Forest Avenue (LB)	Sat Midday	0.602	--	B	No	0.600	--	A	No	-0.002	No
66) Broadway Street at N Beach Street (LB)	Sat Midday	0.496	--	A	No	0.491	--	A	No	-0.005	No
67) Broadway Street at S Beach Street (LB)	Sat Midday	0.534	--	A	No	0.529	--	A	No	-0.005	No
68) Broadway Street at Coast Highway (CMP/LB)	Sat Midday	0.653	--	B	No	0.649	--	B	No	-0.004	No
HCM 6:	Sat Midday	--	21.4	C	No	--	21.2	C	No	-0.200	No

Notes:

Italicized text corresponds to an unsignalized/stop-controlled intersection.

Blue text corresponds to a CMP intersection where LOS E has been established as the minimum acceptable level of service.

CMP = Congestion Management Program; LF = Lake Forest; LW = Laguna Woods; AV = Aliso Viejo;

LB = Laguna Beach; MV = Mission Viejo

5.3 Freeway Mainline Level of Service Analysis

5.3.1 *Year 2024 Cumulative Plus Project*

Table 11 summarizes the freeway mainline segment levels of service for Year 2024 Cumulative Plus Project traffic conditions during the weekday AM and PM peak hours. To maintain consistency with the *I-5 Widening Project Study Report* (prepared by Stantec in June 2012), its Year 2011 capacities and traffic volumes were used as the starting point for this evaluation. The Year 2022 traffic volumes from the *I-5 Widening Project Study Report* (prepared by Stantec in June 2012) were adjusted to reflect Year 2024 conditions (by deriving an appropriate growth adjustment factor).

The 2013 CMP (in its Appendix B-1) states that: "the level of service on the CMP network at buildout of the proposed development will be: (1) LOS E or better, or (2) will not result in a cumulative increase of more than 0.10 in v/c ratio if the established LOS standard is worse than LOS E." These criteria were applied in the analysis of potential traffic impacts of the Project on freeway mainline operations.

Based on the application of the 2013 CMP criteria, *Table 11* indicates that the proposed project is not expected to cause significant impacts along mainline freeway segments within the study area under Year 2024 Cumulative Plus Project conditions.

TABLE 11
YEAR 2024
FREEWAY MAINLINE SEGMENT PEAK HOUR LEVELS OF SERVICE

Freeway Mainline Segment	Peak Hour	Freeway Capacity (vph) NB	Freeway Capacity (vph) SB	Year 2024 Cumulative Base [a] NB Vol	NB V/C (1)	NB LOS [b]	Year 2024 Cumulative Base [a] SB Vol	SB V/C (2)	SB LOS [b]	Year 2024 Cumulative + Project NB Vol	NB V/C (3)	NB LOS [b]	NB V/C Diff (3)-(1)	NB Proj Sig Imp?	Year 2024 Cumulative + Project SB Vol	SB V/C (4)	SB LOS [b]	SB V/C Diff (4)-(2)	SB Proj Sig Imp?
A. I-5 Freeway between	AM	10,472	10,554	11,066	1.06	F	9,100	0.86	C	11,120	1.06	F	0.00	No	9,081	0.86	C	0.00	No
La Paz Rd & Alicia Pkwy	PM	10,326	10,400	10,081	0.98	E	11,789	1.13	E	9,915	0.96	E	-0.02	No	11,682	1.12	E	-0.01	No
B. I-5 Freeway between	AM	12,351	9,680	13,069	1.06	F	9,884	1.02	C	13,127	1.06	F	0.00	No	9,864	1.02	C	0.00	No
Alicia Pkwy & El Toro Rd	PM	9,635	11,065	10,702	1.11	E	12,282	1.11	F	10,525	1.09	E	-0.02	No	12,167	1.10	F	-0.01	No
C. I-5 Freeway between	AM	12,440	12,320	14,548	1.17	E	10,654	0.86	C	14,520	1.17	E	0.00	No	10,735	0.87	C	0.01	No
El Toro Rd & Lake Forest Dr	PM	12,497	12,235	11,284	0.90	E	12,732	1.04	F	11,123	0.89	E	-0.01	No	12,484	1.02	F	-0.02	No
D. I-5 Freeway between	AM	11,806	11,811	11,064	0.94	D	9,409	0.80	D	11,039	0.94	D	0.00	No	9,481	0.80	D	0.00	No
Lake Forest Dr & Bake Pkwy	PM	11,804	11,811	8,971	0.76	C	10,210	0.86	D	8,828	0.75	C	-0.01	No	9,989	0.85	D	-0.01	No

Notes:

[a] Freeway mainline volumes (adjusted to reflect 2019 conditions), capacity, V/C ratios and LOS were derived from the *I-5 Widening Project from SR-73 to El Toro Road PA/ED (EA 0K0200, EFIS 1200000318) Traffic Report* prepared by Stantec in June 2012.

[b] Consistent with the HCM methodology, the LOS reported is based on Basic Freeway Segment Density (pc/mi/ln), not the V/C ratio.

6.0 SITE ACCESS

Figure 18 illustrates the site access features that have been incorporated into the design of the Project site plan. These physical enhancements to the proposed site plan were identified based on the following:

- Evaluation of on-site circulation aspects of the Project (i.e., driveway and internal roadway orientation, commercial and residential building layout, parking configuration, parking accessibility, pedestrian and bicycle connections on site and with surrounding uses, bus/shuttle stop locations and accessibility to public transit, passenger loading/unloading locations, delivery/service operations and expected drop-off/pick-up travel routes).

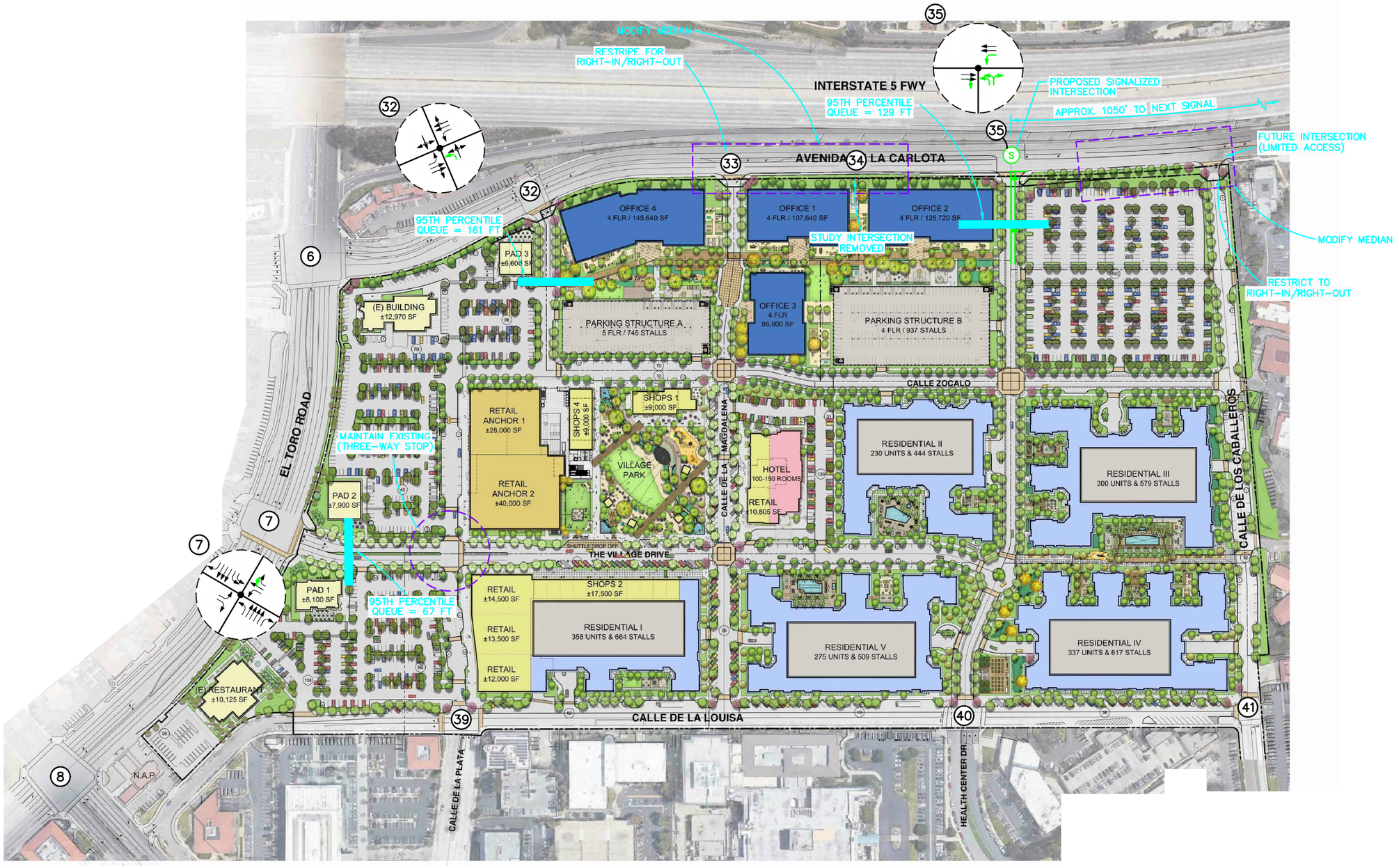
- Detailed traffic operational queuing analysis at all of the Project driveway intersections along Avenida de la Carlota, El Toro Road, Calle de la Louisa-Ronda del Rossmoor, and Calle de los Caballeros. ***Table 12*** presents the level of service results.

- Detailed traffic operational and queuing analysis at all internal intersections and parking structure access points.

- Traffic signal warrant analysis at all unsignalized Project driveways, with the results indicating that peak hour traffic signal warrants were not met at any of the intersections analyzed, with the one exception of the proposed new signal at the Project driveway along Avenida de la Carlota (Intersection 35).

Based on the above, the Project's site plan was designed to include a new signal along Avenida de la Carlota (at Intersection 35), right-turn in/out restrictions (at Intersection 33) and related median modifications along Avenida de la Carlota, lane geometry restriping/improvements at Intersections 7 and 32, and provision of adequate driveway "throat" lengths and vehicle storage lengths to address 95th percentile queues at all Project driveway locations. It should be noted that Intersection 34 will be removed with the Project.

Figure 18 also shows that the proposed traffic signal for the Project will be located a distance of 1,050 feet from the newly constructed traffic signal by Oakbrook Village along Avenue de la Carlota (i.e. Intersection 37). This distance meets MUTCD standards, and exceeds queue storage requirements based on the HCM 6 queueing analysis.



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LINSCOTT LAW & GREENSPAN engineers

N NO SCALE

SOURCE: MERLONE GEIER PARTNERS

KEY

(#) = STUDY INTERSECTION

FIGURE 18

PROJECT SITE ACCESS DESIGN FEATURES

VILLAGE AT LAGUNA HILLS

TABLE 12
PROJECT DRIVEWAY INTERSECTION LEVEL OF SERVICE (HCM 6)

Key Intersections (Jurisdiction)	Peak Hour	Existing (2019)		Year 2024 Cumulative Base		Year 2024 Cumulative Base Plus Project	
		Delay	LOS	Delay	LOS	Delay	LOS
7) Regional Center Drive at El Toro Road	AM	36.9	D	44.0	D	36.6	D
	PM	**60.6**	**E**	**197.9**	**F**	41.4	D
	Midday	43.7	D	**194.9**	**F**	36.6	D
32) Avenida de la Carlota at Plaza Lane/Mall Entrance	AM	4.5	A	8.2	A	8.7	A
	PM	15.4	B	27.4	C	14.0	B
	Midday	28.1	C	37.4	D	15.1	B
35) Avenida de la Carlota at Mall Driveway 3	AM	--	--	--	--	9.3	A
	PM	--	--	--	--	12.3	B
	Midday	--	--	--	--	12.0	B

7.0 SUMMARY OF FINDINGS AND CONCLUSIONS

Project Description – The Project includes modifications to the 2016 Five Lagunas approvals. As contemplated by the Project, the existing central mall facility would be demolished. The project applicant would reconstruct new facilities in what is currently the southern portion of the central mall building, along with new commercial spaces in the out lots and the development of high-density multi-family dwelling units, as further described below:

- 250,000 SF GLA of shopping center/mall uses, consisting of:
  - 99,305 SF GLA of retail
  - 60,695 SF GLA of restaurants
  - 40,000 SF GLA for a health club
  - 50,000 SF GLA for a 1,200-seat cinema
- 150-room hotel
- 465,000 SF GFA of general office
- 1,500 DU multifamily (mid-rise)

Study Area – A total of 68 key intersections were selected for detailed peak hour traffic impact/level of service analysis during the weekday AM and PM, and Saturday midday, peak hours under each of three traffic scenarios (Existing, Year 2024 Cumulative Base, and Year 2024 Cumulative Plus Project).

Project Trip Generation – The net Project trips are estimated to be 9,970 fewer than for Five Lagunas on a typical weekday. During the AM peak hour, weekday trips would be 119 more than for Five Lagunas. During the PM peak hour, weekday trips would be 910 fewer than for Five Lagunas.

On Saturdays, the net Project trips are estimated to be 15,542 fewer than for Five Lagunas. During the Saturday midday peak hour, net Project trips would be 1,704 fewer than for Five Lagunas.

The reductions in all trip generation categories other than the weekday AM peak is explained by the Project's substantial rebalancing of square footage, creating more residential and less retail use than Five Lagunas.

The potential impact of any added/incremental trips generated by the Project (Village at Laguna Hills) are assessed in this report as compared to background conditions that include the previously approved Five Lagunas; specifically, the incremental trips assigned to the street system within the study area and evaluated in this traffic impact analysis correspond to the "Project versus Five Lagunas" line item on *Table 6* (highlighted in blue), which indicates a reduction of 9,970 weekday daily trips, an increase of 119 AM peak hour trips, and reduction of 910, 15,542, and 1,704 trips during the PM peak hour. Saturday daily, and Saturday midday peak hour, respectively.

UVSP Trip Budget Assessment - A trip budget assessment was conducted, given the Project's location within the UVSP area. City staff identified development projects that have been assigned

UVSP trips subsequent to the certification of the Program EIR. After deducting the assigned UVSP trips (including Five Lagunas), 335 AM peak hour trips and 1,680 PM peak hour trips remain unassigned and available for redevelopment in the UVSP. Deducting the incremental trips between the Project and Five Lagunas from the unassigned UVSP trips results in 216 AM peak hour trips and 2,590 PM peak hour trips remaining in the UVSP budget.

Project Traffic Impacts - Based on the application of the City's impact criteria for LOS analysis described previously, the Project is not expected to cause traffic impacts at any of the 68 key intersections under Existing (2019) and Year 2024 conditions, and at any of the freeway mainline segments analyzed.

Site Access - Site access features have been incorporated into the design of the Project site plan. These project traffic-related improvements include a new signal along Avenida de la Carlota, right-turn in/out restrictions and related median modifications along Avenida de la Carlota, provision of adequate driveway "throat" lengths to address 95th percentile queues, and lane geometry restriping at specific driveway locations.

Appendix C

Urban Village Specific Plan (UVSP)
Trip Budget Information

RK19036.2
JN: 2939-2022-01

REMAINING UVSP TRIP CREDITS

USE #	LAND USE	AM Peak Hour	PM Peak Hour
UVSP Trip Budgets	Per June 2009 GP Update EIR	**1243**	**2272**
No. 2-11-1877	Chevron (approved 5/11)	0	27
	Taj Mahal (approved 6/11)	-12	-49
No. 3-11-1917	Ash./Chick-fil-A (approved 7/11)	-128	-12
No. 12-11-2137	Oakbrook Village (approved 11/12)*	-102	37
No.10-14-3013	Raising Cane's (approved 4/15)	-32	3
	Five Lagunas (approved 3/16)	-558	-569
No. 2-16-3436	Farmer Boys (approved 9/16)	-49	-25
USE-0010-2019	Village at Laguna Hills (approved 8/20)	-119	910
USE-0072-2021	Women's Health Pavillion (approved 4/22)	7	21
No. 0130-2023	Taj Mahal PUP	-24	-38
	Saddleback Professional/Financial Center	-45	-50
	Remaining Trip Credits	**181**	**2527**

NOTES:

* This does not include Phase II of the approved Oakbrook Village Project as pursuant to Section 5.4.4 of the Development Agreement, in the event the Owners elect to proceed with the development of Phase 2, they must apply for all Phase 2 Project Approvals simultaneously.

Appendix D

Existing Conditions
Level of Service Analysis Worksheets

RK19036.3
JN: 2939-2022-01

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	22.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	65	992	779	26	0	1264	103	35	1	50	527	54	386
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	992	779	26	0	1264	103	35	1	50	527	54	386
Peak Hour Factor	0.9510	0.9510	0.9510	0.951	0.950	0.951	0.951	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	261	205	7	0	332	27	9	0	13	139	14	101
Total Analysis Volume [veh/h]	68	1043	819	27	0	1329	108	37	1	53	554	57	406
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	41.0	0.0	0.0	0.0	30.0	0.0	0.0	11.0	11.0	0.0	48.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	5.9	56.5	56.5	56.5	46.6	46.6	46.6	6.4	6.4	16.4	25.1	25.1	25.1
g / C, Green / Cycle	0.06	0.57	0.57	0.57	0.47	0.47	0.47	0.06	0.06	0.16	0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.04	0.27	0.28	0.28	0.11	0.17	0.17	0.02	0.00	0.03	0.19	0.19	0.21
s, saturation flow rate [veh/h]	1781	3560	1628	1589	246	6792	1757	1781	1870	1589	1781	1753	1589
c, Capacity [veh/h]	106	2010	920	898	138	3159	817	115	121	261	447	440	399
d1, Uniform Delay [s]	45.98	13.03	13.10	13.11	30.15	17.19	17.22	44.69	43.78	36.14	34.66	34.79	35.67
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.30	0.83	1.86	1.92	3.15	0.32	1.26	1.60	0.03	0.38	2.67	2.89	5.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.48	0.49	0.49	0.20	0.36	0.36	0.32	0.01	0.20	0.76	0.77	0.85
d, Delay for Lane Group [s/veh]	52.27	13.86	14.96	15.02	33.30	17.51	18.48	46.29	43.81	36.52	37.33	37.68	40.82
Lane Group LOS	D	B	B	B	C	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.83	6.38	6.20	6.08	0.64	4.01	4.41	0.92	0.02	1.14	7.84	7.89	8.30
50th-Percentile Queue Length [ft/ln]	45.72	159.4	155.0	152.0	15.91	100.24	110.24	23.10	0.60	28.57	196.02	197.26	207.44
95th-Percentile Queue Length [veh/ln]	3.29	10.52	10.28	10.13	1.15	7.22	7.85	1.66	0.04	2.06	12.43	12.50	13.02
95th-Percentile Queue Length [ft/ln]	82.29	262.9	257.1	253.2	28.64	180.43	196.33	41.58	1.08	51.42	310.83	312.43	325.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.27	13.94	15.00	33.30	0.00	17.65	18.48	46.29	43.81	36.52	37.47	37.68	40.30
Movement LOS	D	B	B	C		B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	15.74			18.00				40.57			38.61		
Approach LOS	B			B				D			D		
d_I, Intersection Delay [s/veh]	22.14												
Intersection LOS	C												
Intersection V/C	0.620												

Emissions

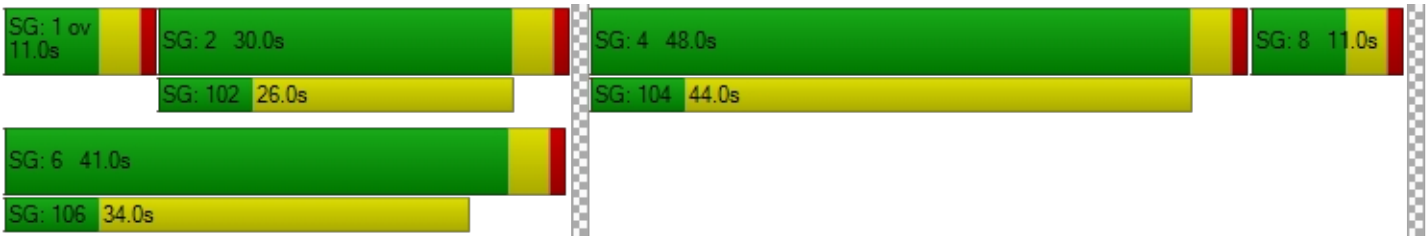
Vehicle Miles Traveled [mph]	9.67	138.1	64.03	62.64	1.44	60.61	15.84	1.85	0.05	2.64	15.41	15.41	15.41
Stops [stops/h]	65.83	459.0	223.2	218.9	22.91	577.37	158.74	33.26	0.86	41.14	282.27	284.06	298.72
Fuel consumption [US gal/h]	1.49	10.96	5.24	5.14	0.46	11.90	3.25	0.61	0.02	0.73	4.77	4.80	5.10
CO [g/h]	103.8	766.3	366.2	358.9	32.12	832.04	226.90	42.52	1.10	51.03	333.38	335.75	356.52
NOx [g/h]	20.20	149.1	71.27	69.84	6.25	161.88	44.15	8.27	0.21	9.93	64.86	65.33	69.37
VOC [g/h]	24.06	177.6	84.89	83.19	7.44	192.83	52.59	9.85	0.26	11.83	77.26	77.81	82.63

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61	39.61	39.61
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.319	2.510	2.663
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	520	140	880
d_b, Bicycle Delay [s]	19.85	27.38	43.25	15.68
l_b,int, Bicycle LOS Score for Intersection	2.621	2.043	1.710	3.238
Bicycle LOS	B	B	A	C

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

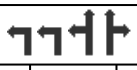


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	42.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	158	30	19	876	852	34	167	192	96	10	347	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	30	19	876	852	34	167	192	96	10	347	523
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	8	5	228	222	9	44	50	25	3	90	136
Total Analysis Volume [veh/h]	165	31	20	913	888	35	174	200	100	10	362	545
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	36.0	0.0	12.0	35.0	35.0	11.0	34.0	34.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	44.6	44.6	50.7	38.5	38.5	38.5	8.0	23.9	78.5	2.1	18.0	60.4
g / C, Green / Cycle	0.36	0.36	0.41	0.31	0.31	0.31	0.06	0.19	0.63	0.02	0.14	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.01	0.26	0.25	0.25	0.05	0.06	0.06	0.01	0.10	0.34
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1867	1846	3459	3560	1589	1295	3560	1589
c, Capacity [veh/h]	1235	668	645	1062	573	567	221	680	1000	61	513	768
d1, Uniform Delay [s]	27.14	26.28	22.33	40.58	40.07	40.19	57.66	43.34	9.18	62.43	50.98	25.42
k, delay calibration	0.50	0.50	0.50	0.11	0.25	0.26	0.11	0.11	0.50	0.11	0.11	0.45
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.13	0.09	1.99	6.53	7.03	6.07	0.24	0.20	1.23	1.80	4.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.05	0.03	0.85	0.82	0.82	0.79	0.29	0.10	0.16	0.71	0.71
d, Delay for Lane Group [s/veh]	27.36	26.41	22.42	42.57	46.60	47.22	63.73	43.58	9.38	63.66	52.77	30.37
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.70	0.63	0.37	13.17	14.27	14.34	2.86	2.64	1.08	0.34	5.45	13.16
50th-Percentile Queue Length [ft/ln]	42.61	15.76	9.28	329.22	356.71	358.57	71.46	66.12	26.91	8.41	136.14	329.09
95th-Percentile Queue Length [veh/ln]	3.07	1.13	0.67	19.12	20.46	20.55	5.14	4.76	1.94	0.61	9.27	19.11
95th-Percentile Queue Length [ft/ln]	76.70	28.37	16.70	478.01	511.58	513.85	128.62	119.02	48.44	15.14	231.81	477.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.36	26.41	22.42	42.57	46.90	47.22	63.73	43.58	9.38	63.66	52.77	30.37
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	C
d_A, Approach Delay [s/veh]	26.77			44.78			43.76			39.58		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	42.12											
Intersection LOS	D											
Intersection V/C	0.615											

Emissions

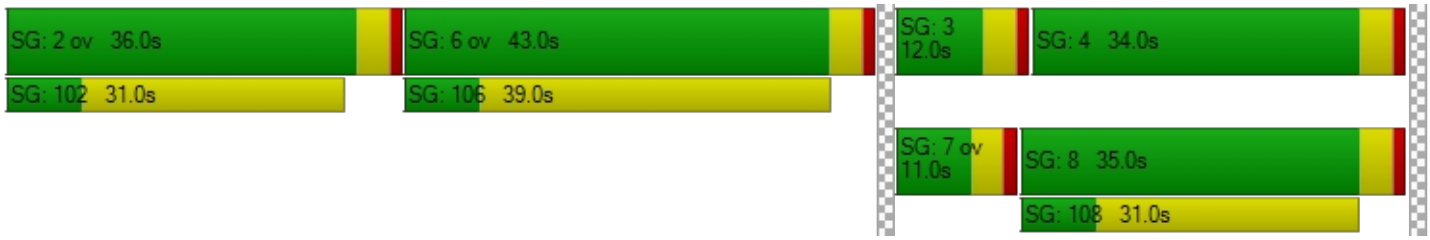
Vehicle Miles Traveled [mph]	11.64	2.19	1.41	34.94	18.18	18.13	9.61	11.04	5.52	1.22	44.12	66.43
Stops [stops/h]	98.18	18.16	10.69	758.53	410.93	413.08	164.63	152.34	31.00	9.69	313.66	379.11
Fuel consumption [US gal/h]	2.10	0.39	0.23	13.43	7.46	7.52	4.22	3.67	0.69	0.27	8.55	9.47
CO [g/h]	146.84	27.02	15.76	938.56	521.44	525.53	294.82	256.23	48.45	18.76	597.56	662.06
NOx [g/h]	28.57	5.26	3.07	182.61	101.45	102.25	57.36	49.85	9.43	3.65	116.26	128.81
VOC [g/h]	34.03	6.26	3.65	217.52	120.85	121.80	68.33	59.38	11.23	4.35	138.49	153.44

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.713	0.000	2.802	3.074
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	512	496	480
d_b, Bicycle Delay [s]	29.58	34.60	35.34	36.10
l_b,int, Bicycle LOS Score for Intersection	1.916	3.074	1.951	2.316
Bicycle LOS	A	C	A	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	24.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.431

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	855	37	148	1005	747	638	261	119	39	126	319
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	855	37	148	1005	747	638	261	119	39	126	319
Peak Hour Factor	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	224	10	39	264	196	167	68	31	10	33	84
Total Analysis Volume [veh/h]	0	897	39	155	1055	784	669	274	125	41	132	335
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	11.0	49.0	49.0	0.0	47.0	0.0	0.0	19.0	19.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	45.4	45.4	10.3	59.7	94.1	30.4	30.4	30.4	12.9	61.6
g / C, Green / Cycle	0.39	0.39	0.09	0.52	0.82	0.26	0.26	0.26	0.11	0.54
(v / s)_i Volume / Saturation Flow Rate	0.13	0.02	0.04	0.21	0.49	0.22	0.08	0.08	0.09	0.12
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	3044	3560	1589	1848	2813
c, Capacity [veh/h]	2681	627	310	2645	1300	799	940	420	208	1507
d1, Uniform Delay [s]	24.27	21.59	49.89	16.77	3.76	40.04	33.75	33.81	49.96	14.07
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.21	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.34	0.19	1.25	0.45	2.08	2.42	0.17	0.39	15.16	0.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.33	0.06	0.50	0.40	0.60	0.84	0.29	0.30	0.83	0.22
d, Delay for Lane Group [s/veh]	24.61	21.78	51.14	17.22	5.84	42.46	33.92	34.20	65.12	14.15
Lane Group LOS	C	C	D	B	A	D	C	C	E	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.25	0.68	2.16	5.55	4.94	5.95	3.02	2.78	5.65	2.20
50th-Percentile Queue Length [ft/ln]	106.35	17.04	54.03	138.64	123.40	148.83	75.39	69.55	141.25	55.03
95th-Percentile Queue Length [veh/ln]	7.64	1.23	3.89	9.41	8.58	9.95	5.43	5.01	9.55	3.96
95th-Percentile Queue Length [ft/ln]	190.92	30.68	97.26	235.19	214.49	248.87	135.71	125.19	238.70	99.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	24.61	21.78	51.14	17.22	5.84	42.46	33.92	34.20	65.12	65.12	14.15
Movement LOS		C	C	D	B	A	D	C	C	E	E	B
d_A, Approach Delay [s/veh]	24.49			15.38			39.30			31.51		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	24.76											
Intersection LOS	C											
Intersection V/C	0.431											

Emissions

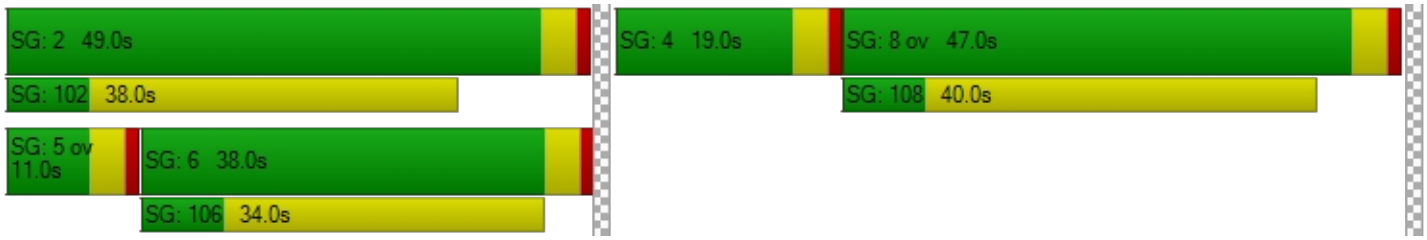
Vehicle Miles Traveled [mph]	49.51	2.15	22.04	150.03	111.49	81.54	33.40	15.24	12.87	24.92
Stops [stops/h]	532.69	21.34	135.32	520.80	154.52	559.10	188.81	87.09	176.87	137.82
Fuel consumption [US gal/h]	10.38	0.42	3.47	13.33	6.34	14.19	4.94	2.27	4.49	3.21
CO [g/h]	725.90	29.04	242.60	931.91	443.44	992.11	345.46	158.76	313.91	224.46
NOx [g/h]	141.23	5.65	47.20	181.31	86.28	193.03	67.21	30.89	61.08	43.67
VOC [g/h]	168.23	6.73	56.23	215.98	102.77	229.93	80.06	36.79	72.75	52.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	0.00	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersectio	3.044	0.000	3.060	2.565
Crosswalk LOS	C	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	783	748	261
d_b, Bicycle Delay [s]	28.53	21.30	22.54	43.48
l_b,int, Bicycle LOS Score for Intersection	1.946	2.656	2.441	2.398
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	25.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.050

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	8	0	47	2	0	279	23	233	0	29	471	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	47	2	0	279	23	233	0	29	471	2
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	14	1	0	81	7	68	0	8	137	1
Total Analysis Volume [veh/h]	9	0	55	2	0	324	27	271	0	34	547	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.06	0.01	0.00	0.45	0.03	0.00	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	25.76	20.32	9.84	23.96	23.67	14.14	8.64	0.00	0.00	7.87	0.00	0.00
Movement LOS	D	C	A	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.38	2.40	2.40	2.40	0.08	0.00	0.00	0.08	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.39	9.39	9.39	59.99	59.99	59.99	2.04	0.00	0.00	2.03	0.00	0.00
d_A, Approach Delay [s/veh]	12.08			14.20			0.78			0.46		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.64											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	19.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	2	3	36	233	471	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	3	36	233	471	23
Peak Hour Factor	0.7370	0.7370	0.7370	0.7370	0.7370	0.7370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	12	79	160	8
Total Analysis Volume [veh/h]	3	4	49	316	639	31
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.05	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	19.05	10.61	9.15	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.17	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.34	1.34	4.23	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.23		1.23		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.53					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	65	992	779	26	0	1264	103	35	1	50	527	54	386
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	992	779	26	0	1264	103	35	1	50	527	54	386
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	248	195	7	0	316	26	9	0	13	132	14	97
Total Analysis Volume [veh/h]	65	992	779	26	0	1264	103	35	1	50	527	54	386
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

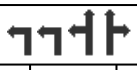
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.26	0.26	0.02	0.00	0.16	0.16	0.02	0.00	0.00	0.16	0.19	0.19
Intersection LOS	A												
Intersection V/C	0.536												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.508

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	158	30	19	876	852	34	167	192	96	10	347	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	30	19	876	852	34	167	192	96	10	347	523
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	8	5	219	213	9	42	48	24	3	87	131
Total Analysis Volume [veh/h]	158	30	19	876	852	34	167	192	96	10	347	523
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.01	0.26	0.26	0.26	0.05	0.06	0.01	0.01	0.10	0.05
Intersection LOS	A											
Intersection V/C	0.508											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.586

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	855	37	148	1005	747	638	261	119	39	126	319
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	855	37	148	1005	747	638	261	119	39	126	319
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	214	9	37	251	187	160	65	30	10	32	80
Total Analysis Volume [veh/h]	0	855	37	148	1005	747	638	261	119	39	126	319
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.13	0.02	0.04	0.20	0.31	0.13	0.08	0.07	0.02	0.10	0.05
Intersection LOS	A											
Intersection V/C	0.586											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.780

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	223	745	4	8	991	494	264	20	223	13	55	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	223	745	4	8	991	494	264	20	223	13	55	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	186	1	2	248	124	66	5	56	3	14	9
Total Analysis Volume [veh/h]	223	745	4	8	991	494	264	20	223	13	55	36
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.22	0.22	0.00	0.44	0.44	0.08	0.08	0.13	0.01	0.03	0.03
Intersection LOS	C											
Intersection V/C	0.780											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	164	841	2	10	922	296	144	6	83	6	11	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	164	841	2	10	922	296	144	6	83	6	11	7
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	210	1	3	231	74	36	2	21	2	3	2
Total Analysis Volume [veh/h]	164	841	2	10	922	296	144	6	83	6	11	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.17	0.17	0.01	0.27	0.13	0.04	0.04	0.05	0.00	0.01	0.01
Intersection LOS	A											
Intersection V/C	0.432											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	796	279	68	353	710	954
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	796	279	68	353	710	954
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	199	70	17	88	178	239
Total Analysis Volume [veh/h]	796	279	68	353	710	954
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.14	0.02	0.10	0.21	0.12
Intersection LOS	A					
Intersection V/C	0.435					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	34.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.989

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	72	1507	1145	47	0	1155	91	88	4	66	611	38	731
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	1507	1145	47	0	1155	91	88	4	66	611	38	731
Peak Hour Factor	0.9710	0.9710	0.9710	0.971	0.950	0.971	0.971	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	388	295	12	0	297	23	23	1	17	157	10	188
Total Analysis Volume [veh/h]	74	1552	1179	48	0	1189	94	91	4	68	629	39	753
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13.0	44.0	0.0	0.0	0.0	31.0	0.0	0.0	11.0	11.0	0.0	60.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.4	56.3	56.3	56.3	45.9	45.9	45.9	8.0	8.0	18.4	38.7	38.7	38.7
g / C, Green / Cycle	0.06	0.49	0.49	0.49	0.40	0.40	0.40	0.07	0.07	0.16	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.04	0.38	0.42	0.43	0.46	0.15	0.15	0.05	0.00	0.04	0.27	0.28	0.30
s, saturation flow rate [veh/h]	1781	3560	1663	1589	104	6792	1760	1781	1870	1589	1781	1669	1589
c, Capacity [veh/h]	99	1744	814	778	64	2711	703	123	130	254	599	562	535
d1, Uniform Delay [s]	53.48	24.08	25.71	26.43	57.48	24.42	24.47	52.49	49.91	42.39	34.48	35.34	36.05
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.13	0.16	0.18
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.41	3.39	10.98	14.05	56.66	0.40	1.56	8.26	0.10	0.56	2.84	5.06	8.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.77	0.85	0.89	0.75	0.37	0.38	0.74	0.03	0.27	0.79	0.84	0.89
d, Delay for Lane Group [s/veh]	63.88	27.48	36.69	40.48	114.14	24.81	26.03	60.75	50.01	42.95	37.32	40.39	44.11
Lane Group LOS	E	C	D	D	F	C	C	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.39	15.36	18.49	19.37	2.38	4.81	5.28	2.86	0.11	1.74	12.29	12.90	13.56
50th-Percentile Queue Length [ft/ln]	59.86	383.9	462.1	484.1	59.45	120.25	132.10	71.42	2.78	43.53	307.31	322.57	338.90
95th-Percentile Queue Length [veh/ln]	4.31	21.79	25.54	26.58	4.28	8.41	9.05	5.14	0.20	3.13	18.04	18.79	19.59
95th-Percentile Queue Length [ft/ln]	107.7	544.6	638.4	664.5	107.01	210.17	226.34	128.56	5.00	78.35	451.06	469.84	489.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.88	28.69	38.88	114.1	0.00	24.99	26.03	60.75	50.01	42.95	38.08	40.39	42.73
Movement LOS	E	C	D	F		C	C	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	33.91			28.28				53.06			40.61		
Approach LOS	C			C				D			D		
d_I, Intersection Delay [s/veh]	34.81												
Intersection LOS	C												
Intersection V/C	0.989												

Emissions

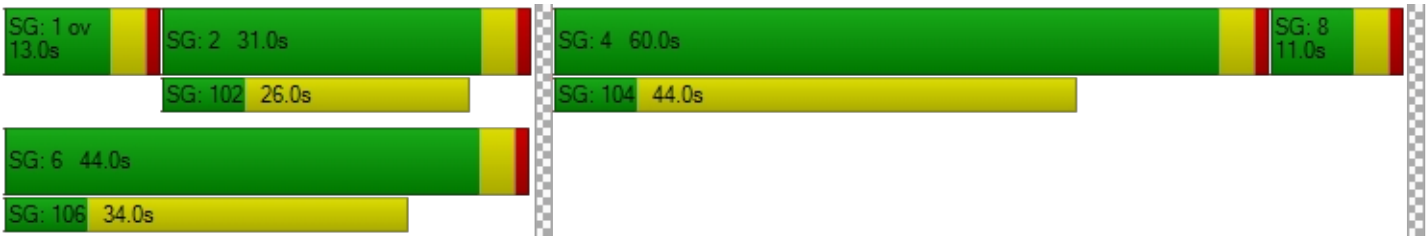
Vehicle Miles Traveled [mph]	10.52	191.5	98.78	98.02	2.55	54.07	14.19	4.54	0.20	3.39	21.53	21.53	21.53
Stops [stops/h]	74.95	961.6	578.6	606.2	74.44	602.29	165.41	89.43	3.48	54.50	384.81	403.91	424.36
Fuel consumption [US gal/h]	1.81	20.73	12.45	13.06	1.94	12.99	3.55	1.81	0.07	1.04	6.61	7.01	7.48
CO [g/h]	126.4	1449.	870.1	913.0	135.43	907.68	247.81	126.23	4.76	72.35	462.01	490.09	523.02
NOx [g/h]	24.61	281.9	169.3	177.6	26.35	176.60	48.21	24.56	0.93	14.08	89.89	95.35	101.76
VOC [g/h]	29.31	335.8	201.6	211.6	31.39	210.36	57.43	29.25	1.10	16.77	107.08	113.58	121.22

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	47.03	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.468	2.525	2.819
Crosswalk LOS	F	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	696	470	122	974
d_b, Bicycle Delay [s]	24.46	33.67	50.71	15.13
l_b,int, Bicycle LOS Score for Intersection	3.102	1.999	1.829	3.904
Bicycle LOS	C	A	A	D

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

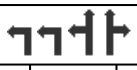


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	41.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.486

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	147	77	84	757	335	23	338	696	328	14	278	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	77	84	757	335	23	338	696	328	14	278	558
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	20	22	199	88	6	89	183	86	4	73	146
Total Analysis Volume [veh/h]	154	81	88	794	352	24	355	730	344	15	292	586
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	35.0	0.0	36.0	35.0	35.0	12.0	11.0	11.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	43.5	43.5	50.4	28.8	28.8	28.8	15.5	33.8	88.2	2.9	21.2	54.0
g / C, Green / Cycle	0.35	0.35	0.40	0.23	0.23	0.23	0.12	0.27	0.71	0.02	0.17	0.43
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.06	0.16	0.16	0.16	0.10	0.21	0.22	0.01	0.08	0.37
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1802	1844	3459	3560	1589	1036	3560	1589
c, Capacity [veh/h]	1205	651	641	794	414	424	428	965	1123	65	606	686
d1, Uniform Delay [s]	27.78	27.74	23.56	44.40	44.40	44.39	53.47	41.77	6.88	62.25	46.89	31.96
k, delay calibration	0.50	0.50	0.50	0.11	0.18	0.17	0.11	0.11	0.50	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.39	0.45	1.23	3.75	3.65	4.18	1.24	0.71	1.76	0.60	12.81
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.12	0.14	0.72	0.72	0.72	0.83	0.76	0.31	0.23	0.48	0.85
d, Delay for Lane Group [s/veh]	28.00	28.13	24.01	45.63	48.15	48.04	57.65	43.01	7.59	64.01	47.48	44.77
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	D
Critical Lane Group	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.61	1.72	1.72	8.27	8.90	9.09	5.61	10.26	3.24	0.51	4.10	17.64
50th-Percentile Queue Length [ft/ln]	40.26	43.11	43.03	206.67	222.48	227.16	140.17	256.48	81.08	12.64	102.59	441.03
95th-Percentile Queue Length [veh/ln]	2.90	3.10	3.10	12.98	13.79	14.03	9.49	15.51	5.84	0.91	7.39	24.53
95th-Percentile Queue Length [ft/ln]	72.46	77.59	77.46	324.56	344.79	350.75	237.26	387.80	145.94	22.76	184.66	613.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.00	28.13	24.01	46.32	48.06	48.04	57.65	43.01	7.59	64.01	47.48	44.77
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	D
d_A, Approach Delay [s/veh]	26.94			46.89			38.12			45.98		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	41.70											
Intersection LOS	D											
Intersection V/C	0.486											

Emissions

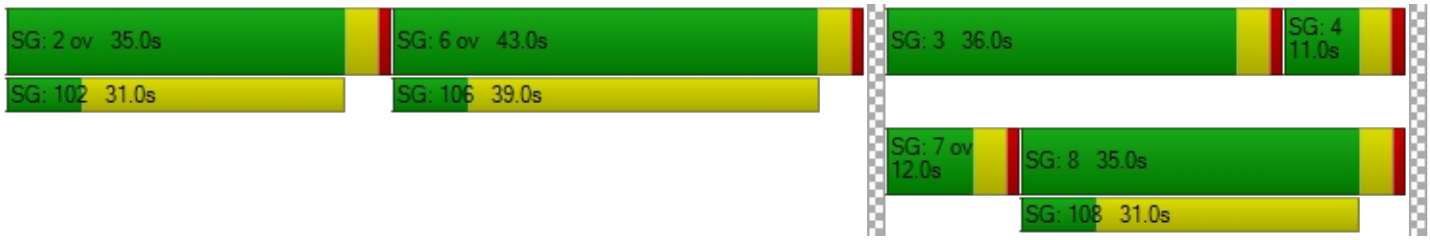
Vehicle Miles Traveled [mph]	10.86	5.71	6.21	22.11	11.51	11.77	19.60	40.31	19.00	1.83	35.59	71.42
Stops [stops/h]	92.76	49.66	49.57	476.18	256.30	261.69	322.96	590.93	93.40	14.56	236.36	508.07
Fuel consumption [US gal/h]	1.99	1.05	1.04	8.83	4.80	4.90	8.04	13.64	2.13	0.40	6.42	12.89
CO [g/h]	139.03	73.74	72.65	617.36	335.33	342.26	561.93	953.30	148.82	28.24	448.61	900.86
NOx [g/h]	27.05	14.35	14.14	120.12	65.24	66.59	109.33	185.48	28.96	5.49	87.28	175.27
VOC [g/h]	32.22	17.09	16.84	143.08	77.72	79.32	130.23	220.94	34.49	6.54	103.97	208.78

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.686	0.000	2.962	3.148
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	496	496	112
d_b, Bicycle Delay [s]	29.58	35.34	35.34	55.70
l_b,int, Bicycle LOS Score for Intersection	2.093	2.525	2.739	2.296
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	30.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.858

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1612	64	302	1012	682	706	599	140	58	142	444
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1612	64	302	1012	682	706	599	140	58	142	444
Peak Hour Factor	0.9500	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	413	16	77	259	175	181	153	36	15	36	114
Total Analysis Volume [veh/h]	0	1652	66	309	1037	699	723	614	143	59	145	455
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	11.0	49.0	49.0	0.0	46.0	0.0	0.0	20.0	20.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	35.8	35.8	12.8	52.6	92.2	35.5	35.5	35.5	14.8	71.2
g / C, Green / Cycle	0.31	0.31	0.11	0.46	0.80	0.31	0.31	0.31	0.13	0.62
(v / s)_i Volume / Saturation Flow Rate	0.24	0.04	0.09	0.20	0.44	0.27	0.17	0.09	0.11	0.16
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	2726	3560	1589	1843	2813
c, Capacity [veh/h]	2115	495	387	2333	1274	843	1099	491	238	1742
d1, Uniform Delay [s]	36.03	28.45	49.80	21.21	4.05	37.52	33.21	30.20	49.05	9.95
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.27	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.95	0.56	3.82	0.62	1.70	2.67	0.45	0.33	19.03	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.78	0.13	0.80	0.44	0.55	0.86	0.56	0.29	0.86	0.26
d, Delay for Lane Group [s/veh]	38.98	29.01	53.63	21.82	5.75	40.19	33.66	30.53	68.08	10.04
Lane Group LOS	D	C	D	C	A	D	C	C	E	B
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.74	1.38	4.49	6.30	4.64	6.37	7.02	2.99	6.87	2.42
50th-Percentile Queue Length [ft/ln]	268.40	34.42	112.34	157.50	115.90	159.16	175.52	74.73	171.85	60.51
95th-Percentile Queue Length [veh/ln]	16.11	2.48	7.97	10.42	8.17	10.50	11.37	5.38	11.17	4.36
95th-Percentile Queue Length [ft/ln]	402.74	61.96	199.25	260.41	204.17	262.61	284.16	134.52	279.35	108.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	38.98	29.01	53.63	21.82	5.75	40.19	33.66	30.53	68.08	68.08	10.04
Movement LOS		D	C	D	C	A	D	C	C	E	E	B
d_A, Approach Delay [s/veh]	38.60			21.13			36.55			28.01		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	30.85											
Intersection LOS	C											
Intersection V/C	0.858											

Emissions

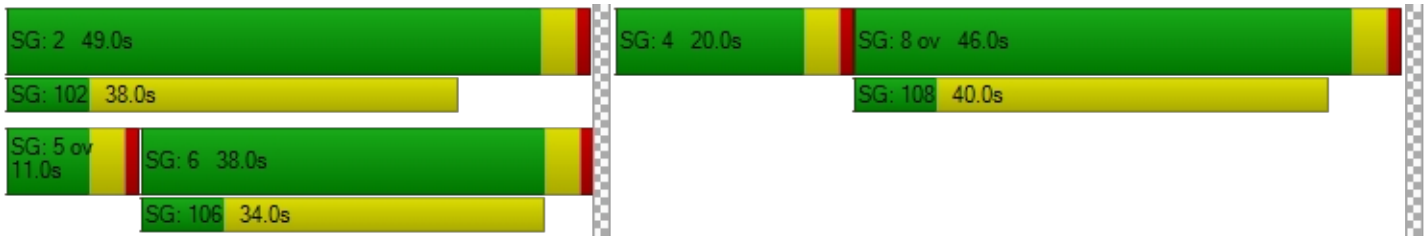
Vehicle Miles Traveled [mph]	91.18	3.64	43.94	147.47	99.41	88.12	74.83	17.43	15.18	33.85
Stops [stops/h]	1344.34	43.10	281.34	591.66	145.12	597.90	439.56	93.58	215.19	151.54
Fuel consumption [US gal/h]	26.69	0.85	7.16	14.68	5.70	14.94	11.20	2.43	5.48	3.63
CO [g/h]	1865.58	59.59	500.67	1025.84	398.33	1044.53	783.20	170.00	383.31	253.82
NOx [g/h]	362.97	11.59	97.41	199.59	77.50	203.23	152.38	33.08	74.58	49.38
VOC [g/h]	432.37	13.81	116.03	237.75	92.32	242.08	181.51	39.40	88.84	58.83

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	0.00	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersectio	3.158	0.000	3.115	2.740
Crosswalk LOS	C	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	783	730	278
d_b, Bicycle Delay [s]	28.53	21.30	23.17	42.61
l_b,int, Bicycle LOS Score for Intersection	2.268	2.684	2.781	2.647
Bicycle LOS	B	B	C	B

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	32.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.117

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	16	0	48	3	0	29	1	777	0	40	385	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	0	48	3	0	29	1	777	0	40	385	1
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	13	1	0	8	0	208	0	11	103	0
Total Analysis Volume [veh/h]	17	0	51	3	0	31	1	830	0	43	411	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.00	0.09	0.02	0.00	0.04	0.00	0.01	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	32.47	32.55	13.88	23.63	30.12	9.82	8.15	0.00	0.00	9.77	0.00	0.00
Movement LOS	D	D	B	C	D	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.75	0.75	0.75	0.17	0.17	0.17	0.00	0.00	0.00	0.17	0.00	0.00
95th-Percentile Queue Length [ft/ln]	18.77	18.77	18.77	4.27	4.27	4.27	0.07	0.00	0.00	4.27	0.00	0.00
d_A, Approach Delay [s/veh]	18.53			11.04			0.01			0.92		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	1.49											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	20.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.100

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	22	17	10	777	385	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	17	10	777	385	6
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	5	3	229	114	2
Total Analysis Volume [veh/h]	26	20	12	916	454	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.03	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	20.29	11.08	8.32	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.43	0.43	0.03	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.71	10.71	0.83	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.29		0.11		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.59					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	72	1507	1145	47	0	1155	91	88	4	66	611	38	731
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	1507	1145	47	0	1155	91	88	4	66	611	38	731
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	377	286	12	0	289	23	22	1	17	153	10	183
Total Analysis Volume [veh/h]	72	1507	1145	47	0	1155	91	88	4	66	611	38	731
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

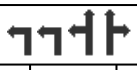
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.39	0.39	0.03	0.00	0.15	0.15	0.05	0.00	0.00	0.18	0.27	0.27
Intersection LOS	C												
Intersection V/C	0.790												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.538

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	147	77	84	757	335	23	338	696	328	14	278	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	77	84	757	335	23	338	696	328	14	278	558
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	19	21	189	84	6	85	174	82	4	70	140
Total Analysis Volume [veh/h]	147	77	84	757	335	23	338	696	328	14	278	558
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.05	0.04	0.15	0.16	0.16	0.10	0.20	0.15	0.01	0.08	0.18
Intersection LOS	A											
Intersection V/C	0.538											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.670

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1612	64	302	1012	682	706	599	140	58	142	444
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1612	64	302	1012	682	706	599	140	58	142	444
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	403	16	76	253	171	177	150	35	15	36	111
Total Analysis Volume [veh/h]	0	1612	64	302	1012	682	706	599	140	58	142	444
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.24	0.04	0.09	0.20	0.26	0.14	0.18	0.08	0.03	0.12	0.04
Intersection LOS	B											
Intersection V/C	0.670											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.653

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	179	1292	5	29	734	273	417	33	314	16	21	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	179	1292	5	29	734	273	417	33	314	16	21	21
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	323	1	7	184	68	104	8	79	4	5	5
Total Analysis Volume [veh/h]	179	1292	5	29	734	273	417	33	314	16	21	21
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.38	0.38	0.02	0.30	0.30	0.12	0.13	0.18	0.01	0.02	0.02
Intersection LOS	B											
Intersection V/C	0.653											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.531

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	164	968	5	11	887	213	516	17	244	6	7	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	164	968	5	11	887	213	516	17	244	6	7	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	242	1	3	222	53	129	4	61	2	2	3
Total Analysis Volume [veh/h]	164	968	5	11	887	213	516	17	244	6	7	13
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.19	0.19	0.01	0.26	0.00	0.15	0.16	0.14	0.00	0.02	0.02
Intersection LOS	A											
Intersection V/C	0.531											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.461

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	984	179	219	742	379	950
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	984	179	219	742	379	950
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	246	45	55	186	95	238
Total Analysis Volume [veh/h]	984	179	219	742	379	950
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.04	0.06	0.22	0.11	0.09
Intersection LOS	A					
Intersection V/C	0.461					

Appendix E

Existing Plus Project Conditions
Level of Service Analysis Worksheets

RK19036.3
JN: 2939-2022-01

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.630

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	65	995	799	26	0	1269	103	35	1	50	547	54	386
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	995	799	26	0	1269	103	35	1	50	547	54	386
Peak Hour Factor	0.9510	0.9510	0.9510	0.951	0.950	0.951	0.951	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	262	210	7	0	334	27	9	0	13	144	14	101
Total Analysis Volume [veh/h]	68	1046	840	27	0	1334	108	37	1	53	575	57	406
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	41.0	0.0	0.0	0.0	30.0	0.0	0.0	11.0	11.0	0.0	48.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	56.0	56.0	56.0	46.0	46.0	46.0	6.4	6.4	16.4	25.5	25.5	25.5
g / C, Green / Cycle	0.06	0.56	0.56	0.56	0.46	0.46	0.46	0.06	0.06	0.16	0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.04	0.28	0.28	0.28	0.11	0.17	0.17	0.02	0.00	0.03	0.19	0.20	0.22
s, saturation flow rate [veh/h]	1781	3560	1623	1589	241	6792	1758	1781	1870	1589	1781	1758	1589
c, Capacity [veh/h]	106	1991	907	889	131	3121	808	115	121	261	456	450	407
d1, Uniform Delay [s]	45.96	13.42	13.50	13.51	31.93	17.57	17.60	44.68	43.77	36.12	34.33	34.44	35.36
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.23	0.88	1.98	2.03	3.50	0.33	1.30	1.60	0.03	0.38	2.61	2.79	5.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.49	0.50	0.50	0.21	0.37	0.37	0.32	0.01	0.20	0.76	0.77	0.85
d, Delay for Lane Group [s/veh]	52.19	14.30	15.48	15.54	35.43	17.90	18.90	46.27	43.80	36.50	36.94	37.23	40.38
Lane Group LOS	D	B	B	B	D	B	B	D	D	D	D	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.83	6.59	6.41	6.31	0.66	4.08	4.48	0.92	0.02	1.14	7.97	8.02	8.44
50th-Percentile Queue Length [ft/ln]	45.68	164.7	160.2	157.6	16.54	101.89	112.11	23.10	0.60	28.56	199.35	200.39	211.00
95th-Percentile Queue Length [veh/ln]	3.29	10.80	10.56	10.42	1.19	7.34	7.96	1.66	0.04	2.06	12.60	12.66	13.20
95th-Percentile Queue Length [ft/ln]	82.22	269.9	263.9	260.5	29.78	183.41	198.93	41.57	1.08	51.41	315.12	316.47	330.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.19	14.37	15.52	35.43	0.00	18.04	18.90	46.27	43.80	36.50	37.06	37.23	39.92
Movement LOS	D	B	B	D		B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	16.18			18.42				40.55			38.19		
Approach LOS	B			B				D			D		
d_I, Intersection Delay [s/veh]	22.41												
Intersection LOS	C												
Intersection V/C	0.630												

Emissions

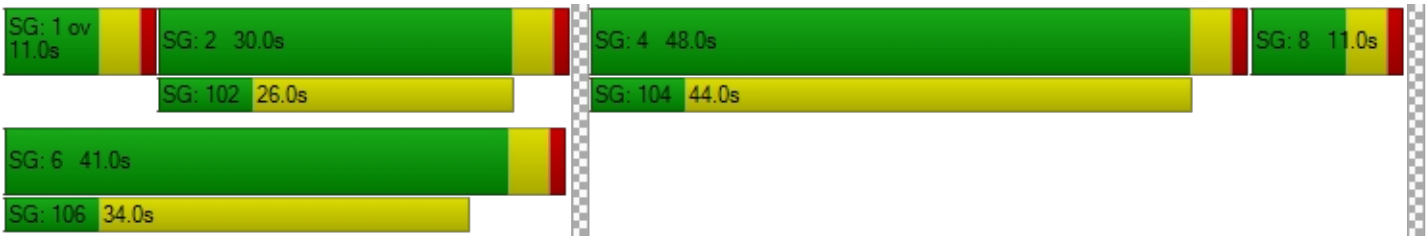
Vehicle Miles Traveled [mph]	9.67	139.9	64.75	63.55	1.44	60.82	15.89	1.85	0.05	2.64	15.73	15.73	15.73
Stops [stops/h]	65.78	474.4	230.6	227.0	23.82	586.90	161.43	33.26	0.86	41.13	287.06	288.57	303.84
Fuel consumption [US gal/h]	1.48	11.24	5.37	5.28	0.48	12.11	3.30	0.61	0.02	0.73	4.83	4.86	5.17
CO [g/h]	103.7	785.9	375.6	369.3	33.56	846.38	230.95	42.51	1.10	51.01	337.95	339.92	361.35
NOx [g/h]	20.18	152.9	73.09	71.86	6.53	164.67	44.94	8.27	0.21	9.92	65.75	66.14	70.31
VOC [g/h]	24.04	182.1	87.07	85.60	7.78	196.16	53.53	9.85	0.26	11.82	78.32	78.78	83.75

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61	39.61	39.61
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.320	2.510	2.671
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	520	140	880
d_b, Bicycle Delay [s]	19.85	27.38	43.25	15.68
l_b,int, Bicycle LOS Score for Intersection	2.634	2.044	1.710	3.272
Bicycle LOS	B	B	A	C

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

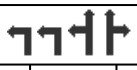


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	42.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	158	30	19	905	852	34	167	197	96	10	350	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	30	19	905	852	34	167	197	96	10	350	523
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	8	5	236	222	9	44	51	25	3	91	136
Total Analysis Volume [veh/h]	165	31	20	944	888	35	174	205	100	10	365	545
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	36.0	0.0	12.0	35.0	35.0	11.0	34.0	34.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	44.2	44.2	50.3	38.9	38.9	38.9	8.0	23.8	78.1	2.1	17.9	60.8
g / C, Green / Cycle	0.35	0.35	0.40	0.31	0.31	0.31	0.06	0.19	0.62	0.02	0.14	0.49
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.01	0.27	0.26	0.26	0.05	0.06	0.06	0.01	0.10	0.34
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1865	1846	3459	3560	1589	1295	3560	1589
c, Capacity [veh/h]	1224	662	640	1075	580	574	221	677	994	61	510	773
d1, Uniform Delay [s]	27.40	26.53	22.57	40.39	39.85	39.96	57.66	43.48	9.37	62.43	51.11	25.12
k, delay calibration	0.50	0.50	0.50	0.11	0.26	0.26	0.11	0.11	0.50	0.11	0.11	0.45
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.13	0.09	2.03	6.79	7.26	6.07	0.25	0.20	1.23	1.89	4.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.05	0.03	0.85	0.82	0.83	0.79	0.30	0.10	0.16	0.72	0.71
d, Delay for Lane Group [s/veh]	27.63	26.67	22.66	42.42	46.64	47.22	63.73	43.73	9.57	63.66	53.00	29.92
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.71	0.63	0.37	13.41	14.51	14.59	2.86	2.72	1.09	0.34	5.51	13.05
50th-Percentile Queue Length [ft/ln]	42.86	15.86	9.34	335.32	362.74	364.80	71.46	67.96	27.28	8.41	137.64	326.19
95th-Percentile Queue Length [veh/ln]	3.09	1.14	0.67	19.42	20.76	20.86	5.14	4.89	1.96	0.61	9.35	18.97
95th-Percentile Queue Length [ft/ln]	77.15	28.54	16.81	485.48	518.91	521.42	128.62	122.32	49.11	15.14	233.85	474.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	27.63	26.67	22.66	42.47	46.93	47.22	63.73	43.73	9.57	63.66	53.00	29.92
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	C
d_A, Approach Delay [s/veh]	27.03			44.72			43.87			39.44		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	42.11											
Intersection LOS	D											
Intersection V/C	0.620											

Emissions

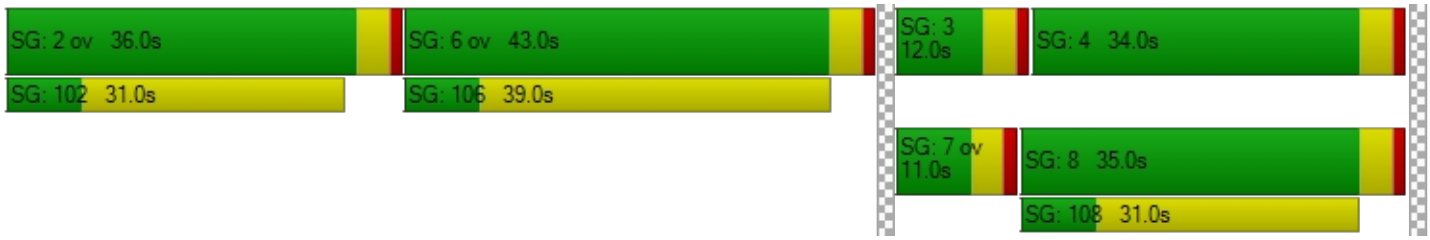
Vehicle Miles Traveled [mph]	11.64	2.19	1.41	35.57	18.45	18.42	9.61	11.32	5.52	1.22	44.49	66.43
Stops [stops/h]	98.75	18.27	10.76	772.59	417.88	420.25	164.63	156.57	31.43	9.69	317.13	375.77
Fuel consumption [US gal/h]	2.11	0.39	0.23	13.65	7.58	7.64	4.22	3.77	0.70	0.27	8.65	9.39
CO [g/h]	147.77	27.19	15.86	953.89	529.89	534.20	294.82	263.37	49.03	18.76	604.29	656.29
NOx [g/h]	28.75	5.29	3.09	185.59	103.10	103.94	57.36	51.24	9.54	3.65	117.57	127.69
VOC [g/h]	34.25	6.30	3.68	221.07	122.81	123.81	68.33	61.04	11.36	4.35	140.05	152.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.713	0.000	2.804	3.081
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	512	496	480
d_b, Bicycle Delay [s]	29.58	34.60	35.34	36.10
l_b,int, Bicycle LOS Score for Intersection	1.916	3.100	1.955	2.319
Bicycle LOS	A	C	A	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	855	42	173	1005	747	638	295	119	42	129	356
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	855	42	173	1005	747	638	295	119	42	129	356
Peak Hour Factor	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	224	11	45	264	196	167	77	31	11	34	93
Total Analysis Volume [veh/h]	0	897	44	182	1055	784	669	310	125	44	135	374
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	11.0	49.0	49.0	0.0	47.0	0.0	0.0	19.0	19.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	43.3	43.3	11.1	58.4	93.7	31.3	31.3	31.3	13.3	63.7
g / C, Green / Cycle	0.38	0.38	0.10	0.51	0.81	0.27	0.27	0.27	0.12	0.55
(v / s)_i Volume / Saturation Flow Rate	0.13	0.03	0.05	0.21	0.49	0.23	0.09	0.08	0.10	0.13
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	2937	3560	1589	1847	2813
c, Capacity [veh/h]	2556	598	335	2588	1295	794	968	432	214	1559
d1, Uniform Delay [s]	25.77	23.00	49.50	17.55	3.89	39.58	33.39	33.08	49.79	13.19
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.23	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.38	0.24	1.37	0.48	2.11	2.54	0.19	0.37	16.34	0.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.35	0.07	0.54	0.41	0.61	0.84	0.32	0.29	0.84	0.24
d, Delay for Lane Group [s/veh]	26.15	23.24	50.87	18.03	6.00	42.12	33.57	33.45	66.13	13.27
Lane Group LOS	C	C	D	B	A	D	C	C	E	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.41	0.80	2.54	5.71	5.10	5.95	3.41	2.74	5.91	2.37
50th-Percentile Queue Length [ft/ln]	110.26	20.01	63.43	142.74	127.47	148.65	85.14	68.62	147.69	59.25
95th-Percentile Queue Length [veh/ln]	7.85	1.44	4.57	9.63	8.80	9.94	6.13	4.94	9.89	4.27
95th-Percentile Queue Length [ft/ln]	196.36	36.01	114.18	240.71	220.04	248.62	153.25	123.52	247.34	106.65

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.15	23.24	50.87	18.03	6.00	42.12	33.57	33.45	66.13	66.13	13.27
Movement LOS		C	C	D	B	A	D	C	C	E	E	B
d_A, Approach Delay [s/veh]	26.01			16.32			38.74			30.38		
Approach LOS	C			B			D			C		
d_I, Intersection Delay [s/veh]	25.34											
Intersection LOS	C											
Intersection V/C	0.438											

Emissions

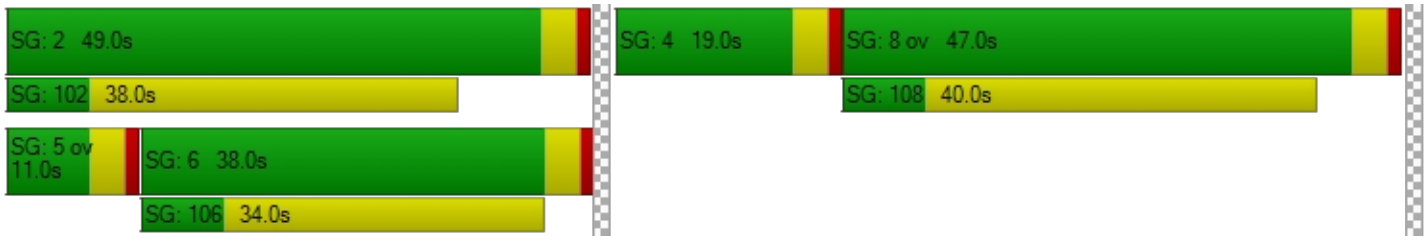
Vehicle Miles Traveled [mph]	49.51	2.43	25.88	150.03	111.49	81.54	37.78	15.24	13.32	27.83
Stops [stops/h]	552.23	25.05	158.86	536.20	159.61	558.40	213.22	85.93	184.93	148.39
Fuel consumption [US gal/h]	10.81	0.49	4.07	13.62	6.41	14.14	5.57	2.24	4.70	3.46
CO [g/h]	755.83	34.18	284.16	952.20	447.89	988.42	389.05	156.61	328.69	242.14
NOx [g/h]	147.06	6.65	55.29	185.26	87.14	192.31	75.70	30.47	63.95	47.11
VOC [g/h]	175.17	7.92	65.86	220.68	103.80	229.07	90.17	36.30	76.18	56.12

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	0.00	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersectio	3.045	0.000	3.066	2.595
Crosswalk LOS	C	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	783	748	261
d_b, Bicycle Delay [s]	28.53	21.30	22.54	43.48
l_b,int, Bicycle LOS Score for Intersection	1.948	2.671	2.470	2.472
Bicycle LOS	A	B	B	B

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	31.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	8	0	47	10	0	30	86	333	0	29	506	29
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	47	10	0	30	86	333	0	29	506	29
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	14	3	0	9	25	97	0	8	147	8
Total Analysis Volume [veh/h]	9	0	55	12	0	35	100	387	0	34	588	34
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.07	0.08	0.00	0.05	0.10	0.00	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	26.18	30.96	10.30	31.78	31.09	11.86	9.21	0.00	0.00	8.17	0.00	0.00
Movement LOS	D	D	B	D	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.40	0.40	0.40	0.46	0.46	0.46	0.35	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	9.99	9.99	9.99	11.56	11.56	11.56	8.74	0.00	0.00	2.25	0.00	0.00
d_A, Approach Delay [s/veh]	12.54			16.95			1.89			0.42		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	2.23											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	33.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.215

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	25	36	99	243	500	72
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	36	99	243	500	72
Peak Hour Factor	0.7370	0.7370	0.7370	0.7370	0.7370	0.7370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	12	34	82	170	24
Total Analysis Volume [veh/h]	34	49	134	330	678	98
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.08	0.16	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	32.98	16.15	10.13	0.00	0.00	0.00
Movement LOS	D	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	1.20	1.20	0.57	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.91	29.91	14.23	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	23.05		2.92		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.47					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	65	995	799	26	0	1269	103	35	1	50	547	54	386
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	995	799	26	0	1269	103	35	1	50	547	54	386
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	249	200	7	0	317	26	9	0	13	137	14	97
Total Analysis Volume [veh/h]	65	995	799	26	0	1269	103	35	1	50	547	54	386
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.26	0.26	0.02	0.00	0.16	0.16	0.02	0.00	0.00	0.16	0.19	0.19
Intersection LOS	A												
Intersection V/C	0.543												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	158	30	19	905	852	34	167	197	96	10	350	523
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	30	19	905	852	34	167	197	96	10	350	523
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	8	5	226	213	9	42	49	24	3	88	131
Total Analysis Volume [veh/h]	158	30	19	905	852	34	167	197	96	10	350	523
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.01	0.27	0.26	0.26	0.05	0.06	0.01	0.01	0.10	0.04
Intersection LOS	A											
Intersection V/C	0.515											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.590

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	855	42	173	1005	747	638	295	119	42	129	356
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	855	42	173	1005	747	638	295	119	42	129	356
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	214	11	43	251	187	160	74	30	11	32	89
Total Analysis Volume [veh/h]	0	855	42	173	1005	747	638	295	119	42	129	356
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.13	0.02	0.05	0.20	0.31	0.13	0.09	0.07	0.02	0.10	0.05
Intersection LOS	A											
Intersection V/C	0.590											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.784

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	223	755	4	8	1006	494	264	20	223	13	55	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	223	755	4	8	1006	494	264	20	223	13	55	36
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	189	1	2	252	124	66	5	56	3	14	9
Total Analysis Volume [veh/h]	223	755	4	8	1006	494	264	20	223	13	55	36
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.13	0.22	0.22	0.00	0.44	0.44	0.08	0.08	0.13	0.01	0.03	0.03
Intersection LOS	C											
Intersection V/C	0.784											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	184	841	2	10	922	311	154	6	96	6	11	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	841	2	10	922	311	154	6	96	6	11	7
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	210	1	3	231	78	39	2	24	2	3	2
Total Analysis Volume [veh/h]	184	841	2	10	922	311	154	6	96	6	11	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.17	0.17	0.01	0.27	0.14	0.05	0.05	0.06	0.00	0.01	0.01
Intersection LOS	A											
Intersection V/C	0.446											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	806	282	73	353	710	969
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	806	282	73	353	710	969
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	71	18	88	178	242
Total Analysis Volume [veh/h]	806	282	73	353	710	969
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.14	0.02	0.10	0.21	0.13
Intersection LOS	A					
Intersection V/C	0.438					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.023

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	72	1514	1188	47	0	1160	91	88	4	66	631	38	731
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	1514	1188	47	0	1160	91	88	4	66	631	38	731
Peak Hour Factor	0.9710	0.9710	0.9710	0.971	0.950	0.971	0.971	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	390	306	12	0	299	23	23	1	17	162	10	188
Total Analysis Volume [veh/h]	74	1559	1223	48	0	1195	94	91	4	68	650	39	753
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	13.0	44.0	0.0	0.0	0.0	31.0	0.0	0.0	11.0	11.0	0.0	60.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.4	55.8	55.8	55.8	45.4	45.4	45.4	8.0	8.0	18.4	39.2	39.2	39.2
g / C, Green / Cycle	0.06	0.49	0.49	0.49	0.39	0.39	0.39	0.07	0.07	0.16	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.04	0.38	0.43	0.44	0.49	0.15	0.15	0.05	0.00	0.04	0.27	0.29	0.30
s, saturation flow rate [veh/h]	1781	3560	1657	1589	99	6792	1761	1781	1870	1589	1781	1673	1589
c, Capacity [veh/h]	99	1728	804	771	63	2680	695	123	130	254	607	571	542
d1, Uniform Delay [s]	53.48	24.71	26.64	27.43	57.50	24.80	24.85	52.49	49.92	42.39	34.19	35.03	35.79
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.14	0.16	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.41	3.78	13.40	17.45	60.08	0.41	1.62	8.28	0.10	0.56	2.95	5.11	8.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.79	0.88	0.92	0.77	0.38	0.39	0.74	0.03	0.27	0.79	0.84	0.89
d, Delay for Lane Group [s/veh]	63.88	28.49	40.04	44.88	117.58	25.21	26.47	60.77	50.01	42.95	37.14	40.13	44.09
Lane Group LOS	E	C	D	D	F	C	C	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.39	15.93	19.82	21.00	2.42	4.88	5.36	2.86	0.11	1.74	12.46	13.06	13.77
50th-Percentile Queue Length [ft/ln]	59.86	398.1	495.4	524.8	60.45	122.03	134.12	71.44	2.78	43.53	311.53	326.60	344.28
95th-Percentile Queue Length [veh/ln]	4.31	22.47	27.12	28.51	4.35	8.50	9.16	5.14	0.20	3.13	18.25	18.99	19.86
95th-Percentile Queue Length [ft/ln]	107.7	561.8	678.0	712.7	108.81	212.61	229.08	128.59	5.00	78.35	456.26	474.79	496.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	63.88	29.92	42.79	117.5	0.00	25.40	26.47	60.77	50.01	42.95	37.92	40.13	42.66
Movement LOS	E	C	D	F		C	C	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	36.33			28.78				53.07			40.46		
Approach LOS	D			C				D			D		
d_I, Intersection Delay [s/veh]	36.09												
Intersection LOS	D												
Intersection V/C	1.023												

Emissions

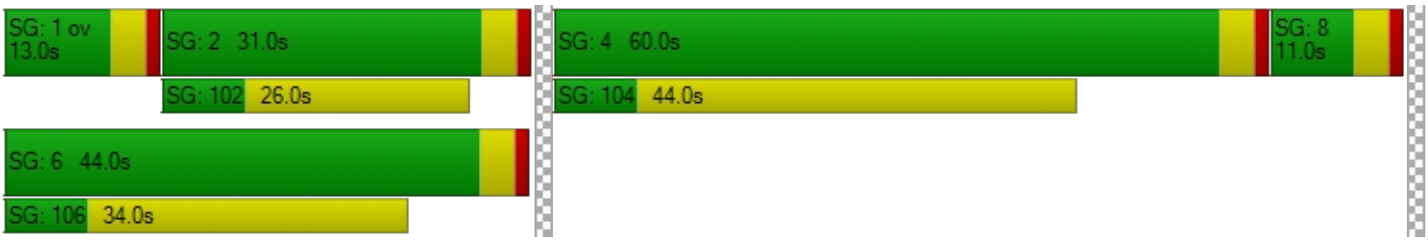
Vehicle Miles Traveled [mph]	10.52	194.2	100.9	100.5	2.55	54.32	14.25	4.54	0.20	3.39	21.85	21.85	21.85
Stops [stops/h]	74.95	997.1	620.4	657.2	75.70	611.20	167.94	89.45	3.48	54.50	390.09	408.96	431.10
Fuel consumption [US gal/h]	1.81	21.42	13.36	14.22	1.98	13.19	3.60	1.81	0.07	1.04	6.69	7.08	7.59
CO [g/h]	126.4	1497.	934.0	994.2	138.64	921.92	251.88	126.26	4.76	72.35	467.48	495.19	530.81
NOx [g/h]	24.61	291.3	181.7	193.4	26.98	179.37	49.01	24.57	0.93	14.08	90.96	96.35	103.28
VOC [g/h]	29.31	347.0	216.4	230.4	32.13	213.66	58.38	29.26	1.10	16.77	108.34	114.77	123.02

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	47.03	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.469	2.525	2.832
Crosswalk LOS	F	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	696	470	122	974
d_b, Bicycle Delay [s]	24.46	33.67	50.71	15.13
l_b,int, Bicycle LOS Score for Intersection	3.130	2.001	1.829	3.939
Bicycle LOS	C	B	A	D

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

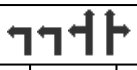


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	42.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.721

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	147	77	84	788	335	23	338	701	328	14	285	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	77	84	788	335	23	338	701	328	14	285	558
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	20	22	207	88	6	89	184	86	4	75	146
Total Analysis Volume [veh/h]	154	81	88	827	352	24	355	736	344	15	299	586
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	35.0	0.0	36.0	35.0	35.0	12.0	11.0	11.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	43.4	43.4	50.3	28.9	28.9	28.9	15.5	33.8	88.1	2.9	21.2	54.1
g / C, Green / Cycle	0.35	0.35	0.40	0.23	0.23	0.23	0.12	0.27	0.71	0.02	0.17	0.43
(v / s)_i Volume / Saturation Flow Rate	0.04	0.04	0.06	0.17	0.17	0.17	0.10	0.21	0.22	0.01	0.08	0.37
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1799	1845	3459	3560	1589	1036	3560	1589
c, Capacity [veh/h]	1203	650	640	797	414	425	428	965	1122	65	605	687
d1, Uniform Delay [s]	27.82	27.79	23.60	44.58	44.57	44.56	53.47	41.88	6.91	62.25	47.00	31.90
k, delay calibration	0.50	0.50	0.50	0.11	0.19	0.19	0.11	0.11	0.50	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.39	0.45	1.34	4.38	4.24	4.18	1.28	0.71	1.76	0.63	12.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.12	0.14	0.74	0.74	0.73	0.83	0.76	0.31	0.23	0.49	0.85
d, Delay for Lane Group [s/veh]	28.04	28.18	24.05	45.92	48.95	48.80	57.65	43.16	7.62	64.01	47.63	44.62
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	D
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.61	1.73	1.72	8.55	9.24	9.45	5.61	10.37	3.25	0.51	4.21	17.61
50th-Percentile Queue Length [ft/ln]	40.29	43.14	43.07	213.85	231.04	236.17	140.17	259.29	81.30	12.64	105.32	440.31
95th-Percentile Queue Length [veh/ln]	2.90	3.11	3.10	13.35	14.23	14.49	9.49	15.65	5.85	0.91	7.58	24.49
95th-Percentile Queue Length [ft/ln]	72.53	77.66	77.53	333.77	355.68	362.19	237.26	391.33	146.34	22.76	189.47	612.37

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.04	28.18	24.05	46.77	48.82	48.80	57.65	43.16	7.62	64.01	47.63	44.62
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	D
d_A, Approach Delay [s/veh]	26.99			47.43			38.23			45.94		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	41.95											
Intersection LOS	D											
Intersection V/C	0.721											

Emissions

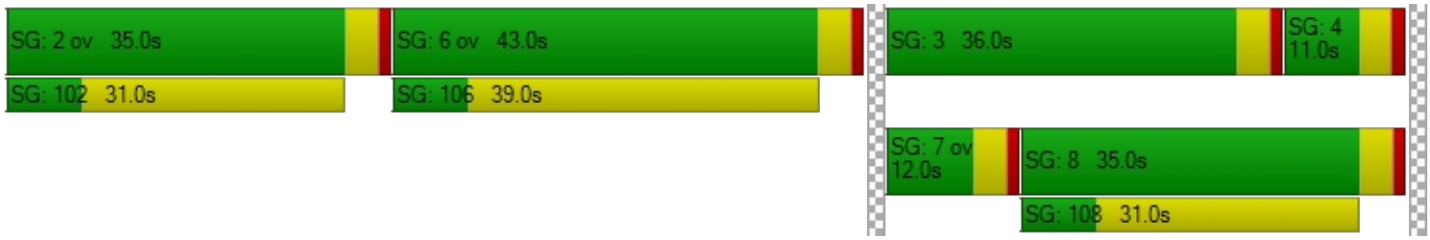
Vehicle Miles Traveled [mph]	10.86	5.71	6.21	22.75	11.82	12.11	19.60	40.64	19.00	1.83	36.44	71.42
Stops [stops/h]	92.83	49.70	49.62	492.71	266.16	272.07	322.96	597.40	93.66	14.56	242.65	507.23
Fuel consumption [US gal/h]	1.99	1.06	1.04	9.14	4.99	5.10	8.04	13.79	2.13	0.40	6.59	12.86
CO [g/h]	139.17	73.82	72.73	638.60	348.97	356.52	561.93	963.83	149.16	28.24	460.42	899.05
NOx [g/h]	27.08	14.36	14.15	124.25	67.90	69.37	109.33	187.53	29.02	5.49	89.58	174.92
VOC [g/h]	32.25	17.11	16.86	148.00	80.88	82.63	130.23	223.38	34.57	6.54	106.71	208.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.686	0.000	2.965	3.156
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	496	496	112
d_b, Bicycle Delay [s]	29.58	35.34	35.34	55.70
l_b,int, Bicycle LOS Score for Intersection	2.093	2.552	2.743	2.302
Bicycle LOS	B	B	B	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	33.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.940

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1612	69	328	1012	682	706	635	140	65	149	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1612	69	328	1012	682	706	635	140	65	149	522
Peak Hour Factor	0.9500	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	413	18	84	259	175	181	163	36	17	38	134
Total Analysis Volume [veh/h]	0	1652	71	336	1037	699	723	651	143	67	153	535
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	11.0	49.0	49.0	0.0	46.0	0.0	0.0	20.0	20.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	33.3	33.3	14.0	51.3	91.4	36.0	36.0	36.0	15.6	71.0
g / C, Green / Cycle	0.29	0.29	0.12	0.45	0.79	0.31	0.31	0.31	0.14	0.62
(v / s)_i Volume / Saturation Flow Rate	0.24	0.04	0.10	0.20	0.44	0.29	0.18	0.09	0.12	0.19
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	2532	3560	1589	1842	2813
c, Capacity [veh/h]	2066	483	432	2362	1263	714	1054	470	250	1762
d1, Uniform Delay [s]	36.79	29.14	48.78	20.76	4.34	39.89	34.88	31.32	48.75	9.92
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.31	0.19
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.35	0.64	3.07	0.59	1.75	18.83	0.59	0.36	22.96	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.15	0.78	0.44	0.55	1.01	0.62	0.30	0.88	0.30
d, Delay for Lane Group [s/veh]	40.14	29.78	51.86	21.36	6.09	58.72	35.48	31.68	71.71	10.09
Lane Group LOS	D	C	D	C	A	F	D	C	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes
50th-Percentile Queue Length [veh/ln]	11.17	1.54	4.83	6.46	4.93	6.38	7.49	2.97	7.66	2.98
50th-Percentile Queue Length [ft/ln]	279.16	38.53	120.65	161.45	123.16	159.42	187.34	74.22	191.49	74.52
95th-Percentile Queue Length [veh/ln]	16.65	2.77	8.43	10.63	8.57	10.59	11.98	5.34	12.20	5.37
95th-Percentile Queue Length [ft/ln]	416.17	69.35	210.71	265.64	214.16	264.78	299.57	133.60	304.96	134.14

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	40.14	29.78	51.86	21.36	6.09	58.72	35.48	31.68	71.71	71.71	10.09
Movement LOS		D	C	D	C	A	F	D	C	E	E	B
d_A, Approach Delay [s/veh]	39.71			21.15			46.20			28.04		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	33.54											
Intersection LOS	C											
Intersection V/C	0.940											

Emissions

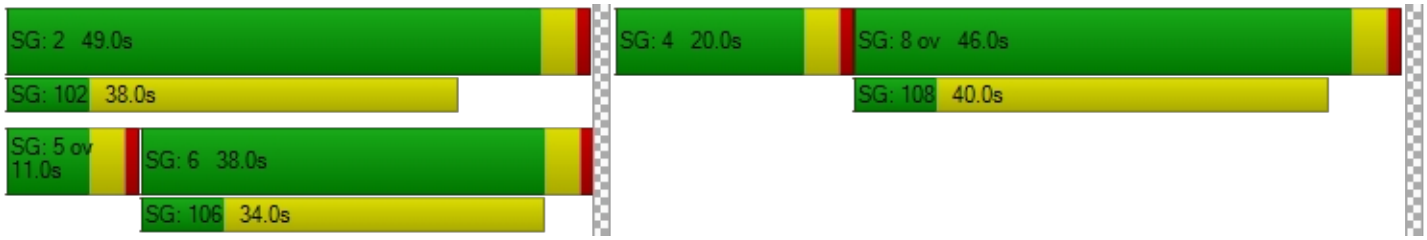
Vehicle Miles Traveled [mph]	91.18	3.92	47.78	147.47	99.41	88.12	79.34	17.43	16.37	39.81
Stops [stops/h]	1398.24	48.24	302.14	606.50	154.21	598.87	469.16	92.94	239.78	186.63
Fuel consumption [US gal/h]	27.49	0.94	7.64	14.69	5.82	17.68	12.15	2.46	6.15	4.36
CO [g/h]	1921.22	65.88	533.97	1026.79	406.47	1235.72	849.34	171.90	430.02	304.60
NOx [g/h]	373.80	12.82	103.89	199.78	79.08	240.43	165.25	33.45	83.67	59.26
VOC [g/h]	445.26	15.27	123.75	237.97	94.20	286.39	196.84	39.84	99.66	70.59

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	47.03	0.00	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersectio	3.159	0.000	3.122	2.783
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	591	783	730	278
d_b, Bicycle Delay [s]	28.53	21.30	23.17	42.61
l_b,int, Bicycle LOS Score for Intersection	2.270	2.699	2.811	2.805
Bicycle LOS	B	B	C	C

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	53.5
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.200

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	16	0	48	32	0	97	47	831	0	40	498	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	0	48	32	0	97	47	831	0	40	498	16
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	13	9	0	26	13	222	0	11	133	4
Total Analysis Volume [veh/h]	17	0	51	34	0	104	50	888	0	43	532	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.00	0.09	0.28	0.00	0.14	0.05	0.01	0.00	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	53.47	50.65	17.59	42.82	51.98	17.96	8.72	0.00	0.00	10.03	0.00	0.00
Movement LOS	F	F	C	E	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.16	1.16	1.16	2.04	2.04	2.04	0.15	0.00	0.00	0.18	0.00	0.00
95th-Percentile Queue Length [ft/ln]	29.08	29.08	29.08	51.09	51.09	51.09	3.87	0.00	0.00	4.50	0.00	0.00
d_A, Approach Delay [s/veh]	26.56			24.09			0.47			0.73		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	3.45											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	42.9
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	81	113	53	809	401	39
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	113	53	809	401	39
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	33	16	239	118	11
Total Analysis Volume [veh/h]	96	133	63	954	473	46
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.49	0.18	0.06	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	42.87	29.22	8.67	0.00	0.00	0.00
Movement LOS	E	D	A	A	A	A
95th-Percentile Queue Length [veh/ln]	4.64	4.64	0.19	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	116.09	116.09	4.81	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.94		0.54		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	4.84					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	72	1514	1188	47	0	1160	91	88	4	66	631	38	731
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	1514	1188	47	0	1160	91	88	4	66	631	38	731
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	379	297	12	0	290	23	22	1	17	158	10	183
Total Analysis Volume [veh/h]	72	1514	1188	47	0	1160	91	88	4	66	631	38	731
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

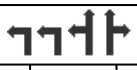
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.40	0.40	0.03	0.00	0.15	0.15	0.05	0.00	0.00	0.19	0.27	0.27
Intersection LOS	D												
Intersection V/C	0.801												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.537

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	147	77	84	788	335	23	338	701	328	14	285	558
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	77	84	788	335	23	338	701	328	14	285	558
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	37	19	21	197	84	6	85	175	82	4	71	140
Total Analysis Volume [veh/h]	147	77	84	788	335	23	338	701	328	14	285	558
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.05	0.04	0.15	0.17	0.17	0.10	0.21	0.15	0.01	0.08	0.17
Intersection LOS	A											
Intersection V/C	0.537											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.696

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1612	69	328	1012	682	706	635	140	65	149	522
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1612	69	328	1012	682	706	635	140	65	149	522
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	403	17	82	253	171	177	159	35	16	37	131
Total Analysis Volume [veh/h]	0	1612	69	328	1012	682	706	635	140	65	149	522
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.24	0.04	0.10	0.20	0.26	0.14	0.19	0.08	0.04	0.13	0.06
Intersection LOS	B											
Intersection V/C	0.696											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	179	1313	5	29	749	273	417	33	314	16	21	21
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	179	1313	5	29	749	273	417	33	314	16	21	21
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	328	1	7	187	68	104	8	79	4	5	5
Total Analysis Volume [veh/h]	179	1313	5	29	749	273	417	33	314	16	21	21
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.39	0.39	0.02	0.30	0.30	0.12	0.13	0.18	0.01	0.02	0.02
Intersection LOS	B											
Intersection V/C	0.658											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	184	968	5	11	887	228	537	17	272	6	7	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	968	5	11	887	228	537	17	272	6	7	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	242	1	3	222	57	134	4	68	2	2	3
Total Analysis Volume [veh/h]	184	968	5	11	887	228	537	17	272	6	7	13
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.19	0.19	0.01	0.26	0.00	0.16	0.16	0.16	0.00	0.02	0.02
Intersection LOS	A											
Intersection V/C	0.543											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	1005	186	224	742	379	965
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1005	186	224	742	379	965
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	251	47	56	186	95	241
Total Analysis Volume [veh/h]	1005	186	224	742	379	965
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.04	0.07	0.22	0.11	0.09
Intersection LOS	A					
Intersection V/C	0.465					

Appendix F

Project Opening Year (2028) Without Project Conditions
Level of Service Analysis Worksheets

RK19036.3
JN: 2939-2022-01

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	24.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.726

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	67	1063	1002	26	0	1333	106	36	1	52	658	56	402
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1063	1002	26	0	1333	106	36	1	52	658	56	402
Peak Hour Factor	0.9510	0.9510	0.9510	0.951	0.950	0.951	0.951	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	279	263	7	0	350	28	9	0	14	173	15	106
Total Analysis Volume [veh/h]	70	1118	1054	27	0	1402	111	38	1	55	692	59	423
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	41.0	0.0	0.0	0.0	30.0	0.0	0.0	11.0	11.0	0.0	48.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	53.0	53.0	53.0	43.0	43.0	43.0	6.5	6.5	16.5	28.5	28.5	28.5
g / C, Green / Cycle	0.06	0.53	0.53	0.53	0.43	0.43	0.43	0.06	0.06	0.17	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.33	0.33	0.15	0.18	0.18	0.02	0.00	0.03	0.22	0.22	0.25
s, saturation flow rate [veh/h]	1781	3560	1589	1589	182	6792	1760	1781	1870	1589	1781	1776	1589
c, Capacity [veh/h]	107	1884	841	841	101	2913	755	116	122	263	509	508	454
d1, Uniform Delay [s]	45.96	16.15	16.58	16.58	41.52	19.80	19.84	44.66	43.73	36.08	32.69	32.72	33.84
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.51	1.38	3.51	3.51	6.39	0.43	1.68	1.63	0.03	0.39	2.49	2.52	6.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.59	0.63	0.63	0.27	0.41	0.42	0.33	0.01	0.21	0.77	0.77	0.86
d, Delay for Lane Group [s/veh]	52.47	17.53	20.09	20.09	47.91	20.23	21.52	46.29	43.76	36.47	35.18	35.24	39.94
Lane Group LOS	D	B	C	C	D	C	C	D	D	D	D	D	D
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	8.65	8.84	8.84	0.81	4.64	5.12	0.95	0.02	1.19	8.86	8.87	9.58
50th-Percentile Queue Length [ft/ln]	47.16	216.3	221.1	221.1	20.34	116.06	127.99	23.73	0.60	29.64	221.56	221.81	239.48
95th-Percentile Queue Length [veh/ln]	3.40	13.48	13.72	13.72	1.46	8.18	8.83	1.71	0.04	2.13	13.74	13.76	14.66
95th-Percentile Queue Length [ft/ln]	84.88	336.9	343.0	343.0	36.60	204.40	220.76	42.71	1.08	53.35	343.61	343.93	366.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.47	17.53	20.09	47.91	0.00	20.42	21.52	46.29	43.76	36.47	35.20	35.24	39.59
Movement LOS	D	B	C	D		C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	19.83			20.98				40.52			36.78		
Approach LOS	B			C				D			D		
d_I, Intersection Delay [s/veh]	24.51												
Intersection LOS	C												
Intersection V/C	0.726												

Emissions

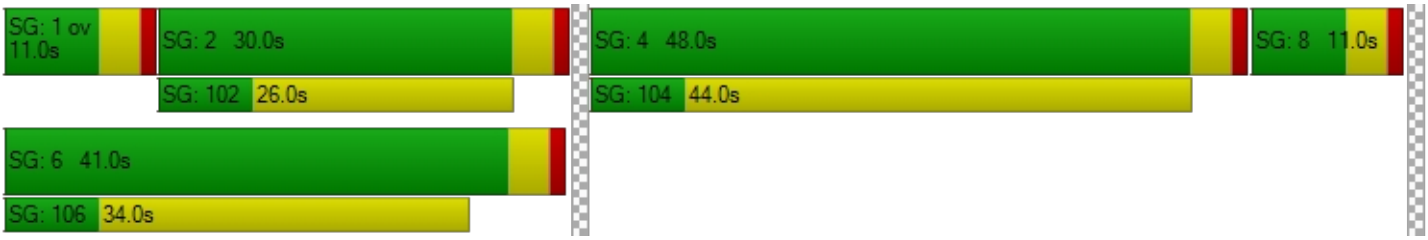
Vehicle Miles Traveled [mph]	9.95	158.9	74.95	74.95	1.44	63.82	16.67	1.90	0.05	2.74	17.79	17.79	17.79
Stops [stops/h]	67.91	623.1	318.4	318.4	29.28	668.49	184.31	34.16	0.86	42.68	319.04	319.40	344.86
Fuel consumption [US gal/h]	1.53	13.98	7.00	7.00	0.60	13.79	3.78	0.62	0.02	0.76	5.30	5.30	5.82
CO [g/h]	107.1	977.0	489.2	489.2	42.11	964.12	264.21	43.67	1.10	52.91	370.22	370.67	406.69
NOx [g/h]	20.84	190.0	95.19	95.19	8.19	187.58	51.41	8.50	0.21	10.30	72.03	72.12	79.13
VOC [g/h]	24.82	226.4	113.3	113.3	9.76	223.44	61.23	10.12	0.25	12.26	85.80	85.91	94.26

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61	39.61	39.61
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.343	2.512	2.739
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	520	140	880
d_b, Bicycle Delay [s]	19.85	27.38	43.25	15.68
l_b,int, Bicycle LOS Score for Intersection	2.793	2.068	1.715	3.497
Bicycle LOS	C	B	A	C

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

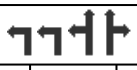


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	44.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.686

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	163	34	20	1050	892	35	172	200	99	10	365	613
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	34	20	1050	892	35	172	200	99	10	365	613
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	9	5	274	233	9	45	52	26	3	95	160
Total Analysis Volume [veh/h]	170	35	21	1095	930	36	179	209	103	10	381	639
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	36.0	0.0	12.0	35.0	35.0	11.0	34.0	34.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	39.8	39.8	45.9	39.8	39.8	39.8	8.0	27.3	77.2	2.1	21.3	65.2
g / C, Green / Cycle	0.32	0.32	0.37	0.32	0.32	0.32	0.06	0.22	0.62	0.02	0.17	0.52
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.01	0.29	0.28	0.28	0.05	0.06	0.06	0.01	0.11	0.40
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1856	1848	3459	3560	1589	1291	3560	1589
c, Capacity [veh/h]	1103	597	584	1100	590	588	221	777	982	59	609	828
d1, Uniform Delay [s]	30.48	29.54	25.33	41.15	40.47	40.54	57.74	40.57	9.75	62.49	48.11	23.98
k, delay calibration	0.50	0.50	0.50	0.11	0.36	0.37	0.11	0.11	0.50	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.19	0.11	3.82	13.63	14.14	6.88	0.18	0.21	1.33	1.06	6.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.06	0.04	0.92	0.89	0.89	0.81	0.27	0.10	0.17	0.63	0.77
d, Delay for Lane Group [s/veh]	30.78	29.72	25.44	44.97	54.10	54.68	64.62	40.75	9.97	63.82	49.17	30.87
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.88	0.76	0.42	15.51	17.35	17.45	2.96	2.66	1.15	0.34	5.52	15.77
50th-Percentile Queue Length [ft/ln]	47.06	19.10	10.50	387.77	433.85	436.36	74.10	66.58	28.86	8.45	138.02	394.37
95th-Percentile Queue Length [veh/ln]	3.39	1.38	0.76	21.97	24.19	24.31	5.34	4.79	2.08	0.61	9.37	22.29
95th-Percentile Queue Length [ft/ln]	84.71	34.38	18.90	549.24	604.65	607.65	133.38	119.84	51.96	15.20	234.35	557.21

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.78	29.72	25.44	45.52	54.41	54.68	64.62	40.75	9.97	63.82	49.17	30.87
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	C
d_A, Approach Delay [s/veh]	30.12			49.75			43.00			37.96		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	44.52											
Intersection LOS	D											
Intersection V/C	0.686											

Emissions

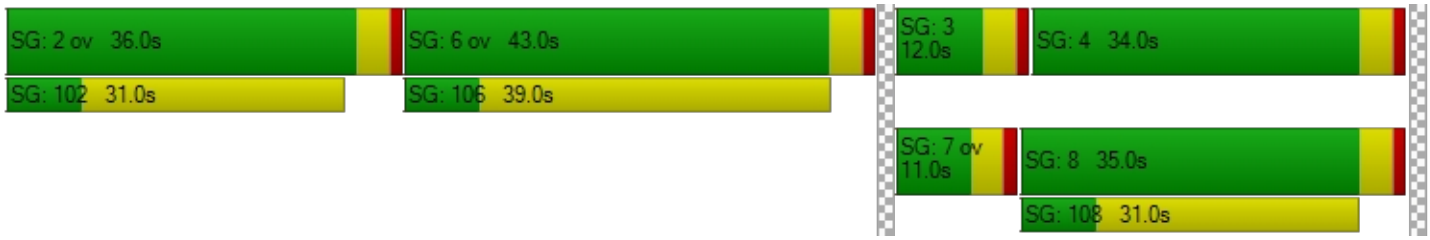
Vehicle Miles Traveled [mph]	11.99	2.47	1.48	39.40	20.29	20.29	9.88	11.54	5.69	1.22	46.44	77.88
Stops [stops/h]	108.43	22.01	12.10	893.42	499.80	502.68	170.72	153.39	33.25	9.73	318.00	454.31
Fuel consumption [US gal/h]	2.34	0.47	0.26	15.85	9.35	9.43	4.38	3.65	0.74	0.27	8.60	11.27
CO [g/h]	163.38	32.94	17.91	1107.84	653.71	659.16	306.50	255.36	51.68	18.81	601.07	787.53
NOx [g/h]	31.79	6.41	3.48	215.55	127.19	128.25	59.63	49.68	10.05	3.66	116.95	153.22
VOC [g/h]	37.86	7.64	4.15	256.75	151.50	152.77	71.03	59.18	11.98	4.36	139.30	182.52

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.723	0.000	2.810	3.124
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	512	496	480
d_b, Bicycle Delay [s]	29.58	34.60	35.34	36.10
l_b,int, Bicycle LOS Score for Intersection	1.933	3.260	1.965	2.409
Bicycle LOS	A	C	A	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.496

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1000	46	233	1093	773	658	363	178	54	206	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1000	46	233	1093	773	658	363	178	54	206	536
Peak Hour Factor	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	262	12	61	287	203	173	95	47	14	54	141
Total Analysis Volume [veh/h]	0	1049	48	244	1147	811	690	381	187	57	216	562
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	11.0	49.0	49.0	0.0	44.0	0.0	0.0	27.0	27.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	40.6	40.6	13.6	58.2	91.7	29.5	29.5	29.5	20.3	71.4
g / C, Green / Cycle	0.34	0.34	0.11	0.49	0.76	0.25	0.25	0.25	0.17	0.60
(v / s)_i Volume / Saturation Flow Rate	0.15	0.03	0.07	0.23	0.51	0.13	0.11	0.12	0.15	0.20
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	5188	3560	1589	1851	2813
c, Capacity [veh/h]	1877	439	406	2176	1215	1577	1082	483	313	1771
d1, Uniform Delay [s]	37.15	32.39	50.29	25.42	6.80	33.53	32.55	32.95	48.61	10.30
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.27	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.21	0.50	1.43	0.92	2.92	0.19	0.20	0.51	16.62	0.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.56	0.11	0.60	0.53	0.67	0.44	0.35	0.39	0.87	0.32
d, Delay for Lane Group [s/veh]	38.36	32.89	51.73	26.34	9.72	33.72	32.75	33.45	65.22	10.40
Lane Group LOS	D	C	D	C	A	C	C	C	E	B
Critical Lane Group	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.03	1.00	3.55	7.12	8.84	6.93	4.68	4.69	9.25	3.59
50th-Percentile Queue Length [ft/ln]	150.85	24.98	88.78	178.00	221.02	173.17	116.98	117.19	231.14	89.82
95th-Percentile Queue Length [veh/ln]	10.06	1.80	6.39	11.50	13.72	11.24	8.23	8.24	14.23	6.47
95th-Percentile Queue Length [ft/ln]	251.56	44.96	159.81	287.40	342.92	281.08	205.67	205.96	355.80	161.67

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	38.36	32.89	51.73	26.34	9.72	33.72	32.75	33.45	65.22	65.22	10.40
Movement LOS		D	C	D	C	A	C	C	C	E	E	B
d_A, Approach Delay [s/veh]	38.12			23.03			33.39			28.32		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	29.34											
Intersection LOS	C											
Intersection V/C	0.496											

Emissions

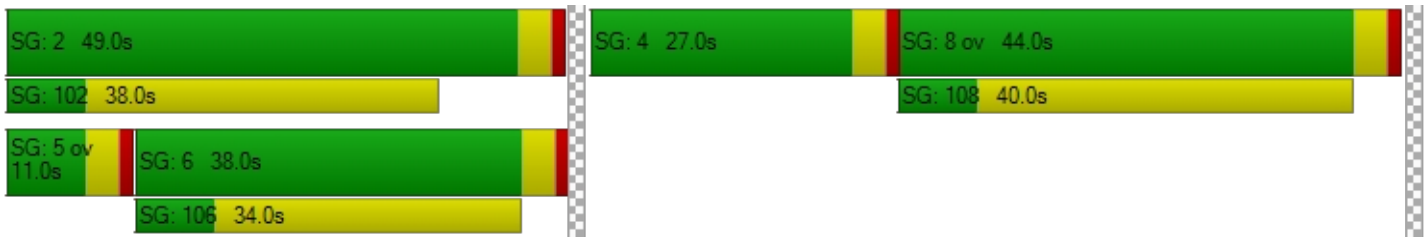
Vehicle Miles Traveled [mph]	57.90	2.65	34.70	163.12	115.33	84.10	46.44	22.79	20.31	41.81
Stops [stops/h]	724.07	29.97	213.08	640.80	265.22	623.43	280.75	140.63	277.36	215.56
Fuel consumption [US gal/h]	15.84	0.65	5.49	17.18	8.00	13.87	6.96	3.47	7.08	4.80
CO [g/h]	1107.23	45.27	383.99	1201.13	558.86	969.64	486.54	242.62	494.56	335.86
NOx [g/h]	215.43	8.81	74.71	233.70	108.73	188.66	94.66	47.20	96.22	65.35
VOC [g/h]	256.61	10.49	88.99	278.37	129.52	224.72	112.76	56.23	114.62	77.84

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.093	0.000	3.111	2.706
Crosswalk LOS	C	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	750	667	383
d_b, Bicycle Delay [s]	30.82	23.44	26.67	39.20
l_b,int, Bicycle LOS Score for Intersection	2.012	2.771	2.597	2.937
Bicycle LOS	B	C	B	C

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	30.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.060

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	8	0	48	2	0	287	24	289	0	30	499	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	48	2	0	287	24	289	0	30	499	2
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	14	1	0	83	7	84	0	9	145	1
Total Analysis Volume [veh/h]	9	0	56	2	0	333	28	336	0	35	580	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.07	0.01	0.00	0.47	0.03	0.00	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	30.17	22.77	10.26	26.48	26.44	14.81	8.75	0.00	0.00	8.04	0.00	0.00
Movement LOS	D	C	B	D	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.43	0.43	0.43	2.63	2.63	2.63	0.09	0.00	0.00	0.09	0.00	0.00
95th-Percentile Queue Length [ft/ln]	10.78	10.78	10.78	65.76	65.76	65.76	2.19	0.00	0.00	2.21	0.00	0.00
d_A, Approach Delay [s/veh]	13.02			14.88			0.67			0.46		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.60											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	20.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	2	3	37	289	499	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	3	37	289	499	24
Peak Hour Factor	0.7370	0.7370	0.7370	0.7370	0.7370	0.7370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	13	98	169	8
Total Analysis Volume [veh/h]	3	4	50	392	677	33
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.06	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	20.86	10.81	9.31	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.06	0.06	0.18	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.47	1.47	4.48	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.12		1.05		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.49					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	67	1063	1002	26	0	1333	106	36	1	52	658	56	402
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1063	1002	26	0	1333	106	36	1	52	658	56	402
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	266	251	7	0	333	27	9	0	13	165	14	101
Total Analysis Volume [veh/h]	67	1063	1002	26	0	1333	106	36	1	52	658	56	402
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

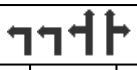
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.30	0.30	0.02	0.00	0.17	0.17	0.02	0.00	0.00	0.19	0.22	0.22
Intersection LOS	B												
Intersection V/C	0.609												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.594

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	163	34	20	1050	892	35	172	200	99	10	365	613
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	34	20	1050	892	35	172	200	99	10	365	613
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	9	5	263	223	9	43	50	25	3	91	153
Total Analysis Volume [veh/h]	163	34	20	1050	892	35	172	200	99	10	365	613
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.01	0.21	0.29	0.29	0.05	0.06	0.01	0.01	0.11	0.15
Intersection LOS	A											
Intersection V/C	0.594											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.658

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1000	46	233	1093	773	658	363	178	54	206	536
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1000	46	233	1093	773	658	363	178	54	206	536
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	250	12	58	273	193	165	91	45	14	52	134
Total Analysis Volume [veh/h]	0	1000	46	233	1093	773	658	363	178	54	206	536
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.15	0.03	0.07	0.21	0.33	0.13	0.11	0.10	0.03	0.15	0.09
Intersection LOS	B											
Intersection V/C	0.658											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.808

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	230	804	4	8	1035	515	276	21	230	13	57	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	804	4	8	1035	515	276	21	230	13	57	37
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	201	1	2	259	129	69	5	58	3	14	9
Total Analysis Volume [veh/h]	230	804	4	8	1035	515	276	21	230	13	57	37
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.24	0.24	0.00	0.46	0.46	0.08	0.09	0.14	0.01	0.03	0.03
Intersection LOS	D											
Intersection V/C	0.808											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	171	868	2	10	952	317	183	6	99	6	11	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	171	868	2	10	952	317	183	6	99	6	11	7
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	43	217	1	3	238	79	46	2	25	2	3	2
Total Analysis Volume [veh/h]	171	868	2	10	952	317	183	6	99	6	11	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.17	0.17	0.01	0.28	0.13	0.05	0.06	0.06	0.00	0.01	0.01
Intersection LOS	A											
Intersection V/C	0.453											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	832	291	70	390	755	987
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	832	291	70	390	755	987
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	208	73	18	98	189	247
Total Analysis Volume [veh/h]	832	291	70	390	755	987
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.15	0.02	0.11	0.22	0.13
Intersection LOS	A					
Intersection V/C	0.456					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	35.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.993

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	74	1552	1119	47	0	1192	94	91	4	68	567	39	759
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1552	1119	47	0	1192	94	91	4	68	567	39	759
Peak Hour Factor	0.9710	0.9710	0.9710	0.971	0.950	0.971	0.971	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	400	288	12	0	307	24	23	1	18	146	10	195
Total Analysis Volume [veh/h]	76	1598	1152	48	0	1228	97	94	4	70	584	40	782
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	41.0	0.0	0.0	0.0	30.0	0.0	0.0	11.0	11.0	0.0	68.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.8	59.6	59.6	59.6	48.8	48.8	48.8	8.5	8.5	19.3	39.9	39.9	39.9
g / C, Green / Cycle	0.06	0.50	0.50	0.50	0.41	0.41	0.41	0.07	0.07	0.16	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.04	0.38	0.42	0.44	0.47	0.15	0.16	0.05	0.00	0.04	0.26	0.28	0.29
s, saturation flow rate [veh/h]	1781	3560	1677	1589	102	6792	1760	1781	1870	1589	1781	1654	1589
c, Capacity [veh/h]	100	1769	833	790	63	2764	717	126	132	255	593	551	529
d1, Uniform Delay [s]	55.80	24.51	26.10	27.02	59.92	24.96	25.01	54.73	51.95	44.26	36.25	37.27	37.88
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.12	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.94	3.22	10.04	13.49	60.33	0.40	1.56	8.57	0.09	0.58	2.42	4.22	6.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.77	0.84	0.88	0.77	0.38	0.38	0.75	0.03	0.27	0.79	0.85	0.89
d, Delay for Lane Group [s/veh]	66.75	27.73	36.14	40.52	120.25	25.35	26.56	63.30	52.04	44.84	38.67	41.49	44.30
Lane Group LOS	E	C	D	D	F	C	C	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.57	15.96	19.05	20.15	2.49	5.18	5.67	3.09	0.12	1.88	12.72	13.31	13.82
50th-Percentile Queue Length [ft/ln]	64.33	398.9	476.2	503.6	62.19	129.43	141.73	77.16	2.90	46.96	317.93	332.75	345.38
95th-Percentile Queue Length [veh/ln]	4.63	22.51	26.21	27.51	4.48	8.91	9.57	5.56	0.21	3.38	18.57	19.29	19.91
95th-Percentile Queue Length [ft/ln]	115.8	562.7	655.2	687.7	111.94	222.72	239.35	138.89	5.22	84.53	464.14	482.33	497.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.75	29.02	38.74	120.2	0.00	25.53	26.56	63.30	52.04	44.84	39.23	41.49	43.17
Movement LOS	E	C	D	F		C	C	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	34.01			28.91				55.34			41.49		
Approach LOS	C			C				E			D		
d_I, Intersection Delay [s/veh]	35.24												
Intersection LOS	D												
Intersection V/C	0.993												

Emissions

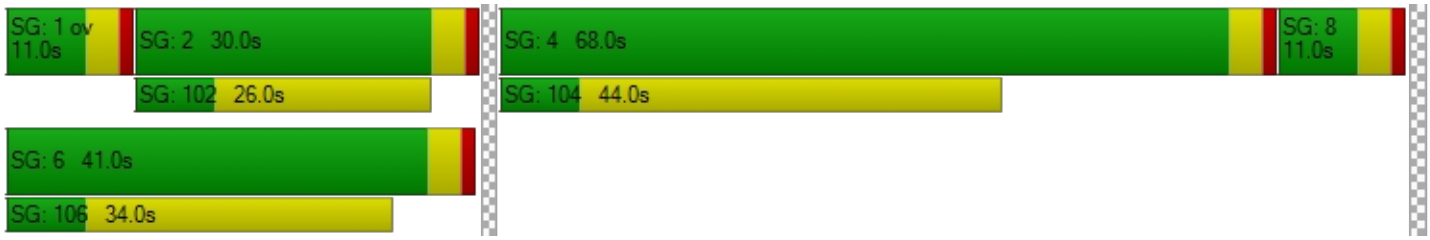
Vehicle Miles Traveled [mph]	10.81	192.4	99.68	98.94	2.55	55.85	14.64	4.69	0.20	3.49	21.31	21.31	21.31
Stops [stops/h]	77.20	957.4	571.5	604.4	74.63	621.27	170.07	92.59	3.48	56.35	381.51	399.30	414.46
Fuel consumption [US gal/h]	1.90	20.85	12.42	13.15	2.00	13.52	3.68	1.92	0.07	1.09	6.67	7.04	7.39
CO [g/h]	133.0	1457.	867.8	919.0	139.73	945.05	257.42	133.88	4.88	76.46	466.45	492.11	516.68
NOx [g/h]	25.89	283.5	168.8	178.8	27.19	183.87	50.08	26.05	0.95	14.88	90.75	95.75	100.53
VOC [g/h]	30.84	337.7	201.1	212.9	32.38	219.02	59.66	31.03	1.13	17.72	108.10	114.05	119.74

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.487	2.529	2.813
Crosswalk LOS	F	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	617	433	117	1067
d_b, Bicycle Delay [s]	28.70	36.82	53.20	13.07
l_b,int, Bicycle LOS Score for Intersection	3.114	2.013	1.837	3.880
Bicycle LOS	C	B	A	D

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

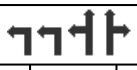


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	41.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.495

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	151	81	89	709	336	24	348	733	338	14	285	561
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	81	89	709	336	24	348	733	338	14	285	561
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	21	23	186	88	6	91	192	89	4	75	147
Total Analysis Volume [veh/h]	158	85	93	744	353	25	365	769	355	15	299	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	35.0	0.0	36.0	35.0	35.0	12.0	11.0	11.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	43.1	43.1	50.0	28.7	28.7	28.7	15.8	34.3	88.3	2.8	21.3	54.0
g / C, Green / Cycle	0.35	0.35	0.40	0.23	0.23	0.23	0.13	0.27	0.71	0.02	0.17	0.43
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.06	0.16	0.16	0.16	0.11	0.22	0.22	0.01	0.08	0.37
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1807	1842	3459	3560	1589	1026	3560	1589
c, Capacity [veh/h]	1194	646	636	793	414	422	438	978	1123	65	608	687
d1, Uniform Delay [s]	28.07	28.06	23.89	44.10	44.10	44.09	53.29	41.94	6.92	62.28	46.91	32.04
k, delay calibration	0.50	0.50	0.50	0.11	0.16	0.16	0.11	0.11	0.50	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.42	0.48	1.08	3.03	2.97	4.19	1.44	0.74	1.79	0.62	13.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.13	0.15	0.69	0.69	0.69	0.83	0.79	0.32	0.23	0.49	0.86
d, Delay for Lane Group [s/veh]	28.30	28.48	24.37	45.18	47.13	47.06	57.48	43.38	7.66	64.07	47.53	45.16
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	D
Critical Lane Group	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	1.82	1.84	7.86	8.43	8.58	5.76	10.91	3.36	0.51	4.21	17.83
50th-Percentile Queue Length [ft/ln]	41.57	45.59	45.91	196.44	210.84	214.60	144.04	272.83	84.10	12.66	105.18	445.72
95th-Percentile Queue Length [veh/ln]	2.99	3.28	3.31	12.45	13.20	13.39	9.70	16.33	6.06	0.91	7.57	24.75
95th-Percentile Queue Length [ft/ln]	74.83	82.05	82.64	311.37	329.91	334.72	242.45	408.27	151.38	22.78	189.28	618.84

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.30	28.48	24.37	45.67	47.08	47.06	57.48	43.38	7.66	64.07	47.53	45.16
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	D
d_A, Approach Delay [s/veh]	27.26			46.16			38.32			46.26		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	41.50											
Intersection LOS	D											
Intersection V/C	0.495											

Emissions

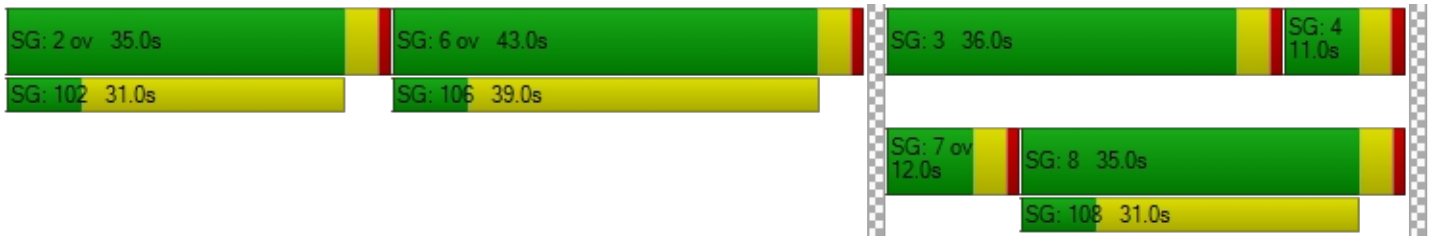
Vehicle Miles Traveled [mph]	11.15	6.00	6.56	21.19	11.07	11.28	20.15	42.46	19.60	1.83	36.44	71.79
Stops [stops/h]	95.78	52.52	52.89	452.60	242.89	247.22	331.86	628.60	96.88	14.58	242.34	513.47
Fuel consumption [US gal/h]	2.05	1.12	1.11	8.39	4.53	4.61	8.25	14.48	2.21	0.40	6.58	13.03
CO [g/h]	143.64	78.02	77.52	586.67	316.87	322.45	576.77	1012.47	154.27	28.26	459.79	910.70
NOx [g/h]	27.95	15.18	15.08	114.14	61.65	62.74	112.22	196.99	30.02	5.50	89.46	177.19
VOC [g/h]	33.29	18.08	17.97	135.97	73.44	74.73	133.67	234.65	35.75	6.55	106.56	211.06

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.691	0.000	2.976	3.149
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	496	496	112
d_b, Bicycle Delay [s]	29.58	35.34	35.34	55.70
l_b,int, Bicycle LOS Score for Intersection	2.114	2.485	2.788	2.305
Bicycle LOS	B	B	C	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.828

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1627	65	263	1022	707	728	598	109	57	125	406
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1627	65	263	1022	707	728	598	109	57	125	406
Peak Hour Factor	0.9500	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	417	17	67	262	181	186	153	28	15	32	104
Total Analysis Volume [veh/h]	0	1667	67	269	1047	724	746	613	112	58	128	416
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	13.0	51.0	51.0	0.0	50.0	0.0	0.0	19.0	19.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	40.4	40.4	12.5	56.9	97.9	37.0	37.0	37.0	14.1	71.6
g / C, Green / Cycle	0.34	0.34	0.10	0.47	0.82	0.31	0.31	0.31	0.12	0.60
(v / s)_i Volume / Saturation Flow Rate	0.25	0.04	0.08	0.21	0.46	0.26	0.17	0.07	0.10	0.15
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	2826	3560	1589	1841	2813
c, Capacity [veh/h]	2288	536	360	2416	1296	870	1096	489	217	1678
d1, Uniform Delay [s]	34.96	27.54	52.24	20.88	3.75	39.15	34.71	30.92	51.94	11.47
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.28	0.13
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.08	0.48	3.13	0.57	1.74	2.59	0.45	0.24	20.72	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.13	0.75	0.43	0.56	0.86	0.56	0.23	0.86	0.25
d, Delay for Lane Group [s/veh]	37.04	28.02	55.36	21.45	5.49	41.75	35.16	31.15	72.65	11.56
Lane Group LOS	D	C	E	C	A	D	D	C	E	B
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.82	1.40	4.06	6.46	4.67	6.88	7.37	2.41	6.64	2.49
50th-Percentile Queue Length [ft/ln]	270.46	34.99	101.49	161.55	116.71	172.12	184.29	60.22	166.05	62.25
95th-Percentile Queue Length [veh/ln]	16.21	2.52	7.31	10.63	8.21	11.19	11.82	4.34	10.87	4.48
95th-Percentile Queue Length [ft/ln]	405.31	62.99	182.68	265.78	205.30	279.69	295.61	108.39	271.72	112.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	37.04	28.02	55.36	21.45	5.49	41.75	35.16	31.15	72.65	72.65	11.56
Movement LOS		D	C	E	C	A	D	D	C	E	E	B
d_A, Approach Delay [s/veh]	36.69			20.26			38.20			30.43		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	30.69											
Intersection LOS	C											
Intersection V/C	0.828											

Emissions

Vehicle Miles Traveled [mph]	92.01	3.70	38.25	148.90	102.96	90.92	74.71	13.65	13.84	30.95
Stops [stops/h]	1298.20	41.99	243.57	581.60	140.06	619.62	442.29	72.26	199.26	149.41
Fuel consumption [US gal/h]	25.83	0.84	6.32	14.62	5.79	15.68	11.41	1.91	5.20	3.55
CO [g/h]	1805.78	58.63	441.78	1021.86	404.53	1096.12	797.37	133.43	363.68	248.48
NOx [g/h]	351.34	11.41	85.95	198.82	78.71	213.27	155.14	25.96	70.76	48.35
VOC [g/h]	418.51	13.59	102.39	236.83	93.75	254.04	184.80	30.92	84.29	57.59

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.159	0.000	3.117	2.717
Crosswalk LOS	C	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	783	767	250
d_b, Bicycle Delay [s]	30.82	22.20	22.82	45.94
l_b,int, Bicycle LOS Score for Intersection	2.275	2.682	2.773	2.553
Bicycle LOS	B	B	C	B

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	33.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.122

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	16	0	49	3	0	30	1	786	0	41	408	1
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	0	49	3	0	30	1	786	0	41	408	1
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	13	1	0	8	0	210	0	11	109	0
Total Analysis Volume [veh/h]	17	0	52	3	0	32	1	840	0	44	436	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.12	0.00	0.09	0.02	0.00	0.04	0.00	0.01	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	33.81	34.11	14.12	24.75	31.51	9.93	8.22	0.00	0.00	9.82	0.00	0.00
Movement LOS	D	D	B	C	D	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.79	0.79	0.79	0.18	0.18	0.18	0.00	0.00	0.00	0.18	0.00	0.00
95th-Percentile Queue Length [ft/ln]	19.64	19.64	19.64	4.51	4.51	4.51	0.07	0.00	0.00	4.41	0.00	0.00
d_A, Approach Delay [s/veh]	18.97			11.20			0.01			0.90		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	1.50											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	21.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.109

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	23	18	10	786	408	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	18	10	786	408	6
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	5	3	232	120	2
Total Analysis Volume [veh/h]	27	21	12	927	481	7
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.03	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	21.19	11.38	8.40	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.47	0.47	0.03	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	11.76	11.76	0.85	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.90		0.11		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.62					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.792

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	74	1552	1119	47	0	1192	94	91	4	68	567	39	759
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1552	1119	47	0	1192	94	91	4	68	567	39	759
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	388	280	12	0	298	24	23	1	17	142	10	190
Total Analysis Volume [veh/h]	74	1552	1119	47	0	1192	94	91	4	68	567	39	759
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

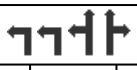
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.39	0.39	0.03	0.00	0.15	0.15	0.05	0.00	0.00	0.17	0.27	0.27
Intersection LOS	C												
Intersection V/C	0.792												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	151	81	89	709	336	24	348	733	338	14	285	561
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	81	89	709	336	24	348	733	338	14	285	561
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	20	22	177	84	6	87	183	85	4	71	140
Total Analysis Volume [veh/h]	151	81	89	709	336	24	348	733	338	14	285	561
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.05	0.04	0.14	0.16	0.16	0.10	0.22	0.15	0.01	0.08	0.19
Intersection LOS	A											
Intersection V/C	0.548											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1627	65	263	1022	707	728	598	109	57	125	406
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1627	65	263	1022	707	728	598	109	57	125	406
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	407	16	66	256	177	182	150	27	14	31	102
Total Analysis Volume [veh/h]	0	1627	65	263	1022	707	728	598	109	57	125	406
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.24	0.04	0.08	0.20	0.27	0.14	0.18	0.06	0.03	0.11	0.04
Intersection LOS	B											
Intersection V/C	0.650											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	184	1323	5	30	763	288	437	34	323	16	22	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	1323	5	30	763	288	437	34	323	16	22	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	331	1	8	191	72	109	9	81	4	6	6
Total Analysis Volume [veh/h]	184	1323	5	30	763	288	437	34	323	16	22	22
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.39	0.39	0.02	0.31	0.31	0.13	0.14	0.19	0.01	0.02	0.02
Intersection LOS	B											
Intersection V/C	0.675											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.545

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	176	1000	5	11	917	223	520	18	248	6	7	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	1000	5	11	917	223	520	18	248	6	7	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	250	1	3	229	56	130	5	62	2	2	3
Total Analysis Volume [veh/h]	176	1000	5	11	917	223	520	18	248	6	7	13
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.20	0.20	0.01	0.27	0.00	0.15	0.16	0.15	0.00	0.02	0.02
Intersection LOS	A											
Intersection V/C	0.545											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.475

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	1015	183	227	767	389	988
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1015	183	227	767	389	988
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	254	46	57	192	97	247
Total Analysis Volume [veh/h]	1015	183	227	767	389	988
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.04	0.07	0.23	0.11	0.09
Intersection LOS	A					
Intersection V/C	0.475					

Appendix G

Project Opening Year (2028) With Project Conditions
Level of Service Analysis Worksheets

RK19036.3
JN: 2939-2022-01

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	24.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	67	1066	1022	26	0	1338	106	36	1	52	678	56	402
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1066	1022	26	0	1338	106	36	1	52	678	56	402
Peak Hour Factor	0.9510	0.9510	0.9510	0.951	0.950	0.951	0.951	0.9510	0.9510	0.9510	0.9510	0.9510	0.9510
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	280	269	7	0	352	28	9	0	14	178	15	106
Total Analysis Volume [veh/h]	70	1121	1075	27	0	1407	111	38	1	55	713	59	423
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	100
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	41.0	0.0	0.0	0.0	30.0	0.0	0.0	11.0	11.0	0.0	48.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	100	100	100	100	100	100	100	100	100	100	100	100	100
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.0	52.5	52.5	52.5	42.5	42.5	42.5	6.5	6.5	16.5	29.0	29.0	29.0
g / C, Green / Cycle	0.06	0.53	0.53	0.53	0.43	0.43	0.43	0.06	0.06	0.17	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.04	0.31	0.34	0.34	0.15	0.18	0.18	0.02	0.00	0.03	0.22	0.22	0.25
s, saturation flow rate [veh/h]	1781	3560	1589	1589	177	6792	1760	1781	1870	1589	1781	1780	1589
c, Capacity [veh/h]	107	1868	834	834	98	2883	747	116	122	263	517	517	461
d1, Uniform Delay [s]	45.96	16.48	17.06	17.06	43.00	20.13	20.17	44.66	43.73	36.08	32.44	32.45	33.61
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.51	1.43	3.82	3.82	6.86	0.45	1.74	1.63	0.03	0.39	2.47	2.47	6.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.60	0.64	0.64	0.28	0.42	0.42	0.33	0.01	0.21	0.77	0.77	0.86
d, Delay for Lane Group [s/veh]	52.47	17.92	20.89	20.89	49.86	20.58	21.90	46.29	43.76	36.47	34.91	34.92	40.00
Lane Group LOS	D	B	C	C	D	C	C	D	D	D	C	C	D
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	8.80	9.25	9.25	0.84	4.71	5.20	0.95	0.02	1.19	9.00	9.00	9.77
50th-Percentile Queue Length [ft/ln]	47.16	220.0	231.3	231.3	20.88	117.72	129.90	23.73	0.60	29.64	224.91	224.95	244.31
95th-Percentile Queue Length [veh/ln]	3.40	13.67	14.24	14.24	1.50	8.27	8.93	1.71	0.04	2.13	13.92	13.92	14.90
95th-Percentile Queue Length [ft/ln]	84.88	341.6	356.0	356.0	37.58	206.69	223.35	42.71	1.08	53.35	347.89	347.94	372.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.47	17.92	20.89	49.86	0.00	20.77	21.90	46.29	43.76	36.47	34.92	34.92	39.71
Movement LOS	D	B	C	D		C	C	D	D	D	C	C	D
d_A, Approach Delay [s/veh]	20.39			21.36				40.52			36.61		
Approach LOS	C			C				D			D		
d_I, Intersection Delay [s/veh]	24.86												
Intersection LOS	C												
Intersection V/C	0.739												

Emissions

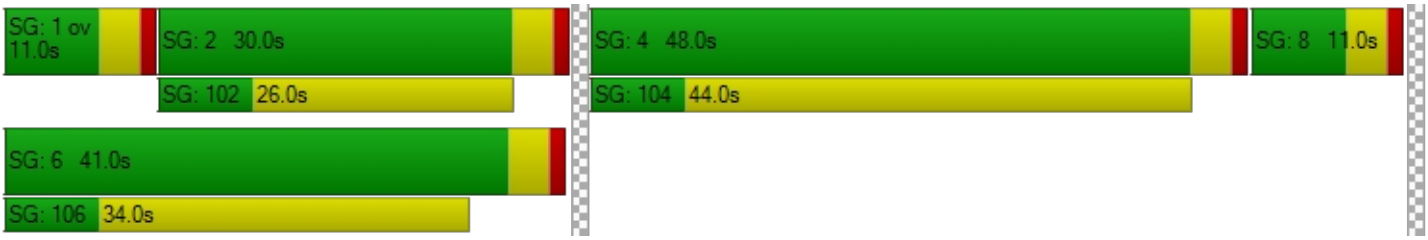
Vehicle Miles Traveled [mph]	9.95	159.4	76.44	76.44	1.44	64.03	16.73	1.90	0.05	2.74	18.11	18.11	18.11
Stops [stops/h]	67.91	633.6	333.1	333.1	30.06	678.08	187.05	34.16	0.86	42.68	323.88	323.93	351.80
Fuel consumption [US gal/h]	1.53	14.15	7.27	7.27	0.62	14.00	3.84	0.62	0.02	0.76	5.36	5.37	5.93
CO [g/h]	107.1	989.1	508.2	508.2	43.39	978.27	268.29	43.67	1.10	52.91	374.99	375.07	414.63
NOx [g/h]	20.84	192.4	98.89	98.89	8.44	190.34	52.20	8.50	0.21	10.30	72.96	72.97	80.67
VOC [g/h]	24.82	229.2	117.8	117.8	10.06	226.72	62.18	10.12	0.25	12.26	86.91	86.93	96.10

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	39.61	39.61	39.61
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.344	2.512	2.748
Crosswalk LOS	F	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	740	520	140	880
d_b, Bicycle Delay [s]	19.85	27.38	43.25	15.68
l_b,int, Bicycle LOS Score for Intersection	2.806	2.069	1.715	3.531
Bicycle LOS	C	B	A	D

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

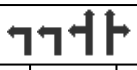


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	44.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.690

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	163	34	20	1079	892	35	172	205	99	10	368	613
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	34	20	1079	892	35	172	205	99	10	368	613
Peak Hour Factor	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590	0.9590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	9	5	281	233	9	45	53	26	3	96	160
Total Analysis Volume [veh/h]	170	35	21	1125	930	36	179	214	103	10	384	639
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	36.0	0.0	12.0	35.0	35.0	11.0	34.0	34.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	39.6	39.6	45.7	40.1	40.1	40.1	8.0	27.2	76.9	2.1	21.3	65.4
g / C, Green / Cycle	0.32	0.32	0.37	0.32	0.32	0.32	0.06	0.22	0.62	0.02	0.17	0.52
(v / s)_i Volume / Saturation Flow Rate	0.05	0.02	0.01	0.30	0.29	0.29	0.05	0.06	0.06	0.01	0.11	0.40
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1853	1848	3459	3560	1589	1291	3560	1589
c, Capacity [veh/h]	1097	593	581	1108	594	592	221	775	978	59	606	831
d1, Uniform Delay [s]	30.64	29.69	25.48	41.11	40.44	40.49	57.74	40.68	9.88	62.49	48.23	23.81
k, delay calibration	0.50	0.50	0.50	0.11	0.37	0.38	0.11	0.11	0.50	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.30	0.19	0.12	4.10	14.53	14.89	6.88	0.19	0.22	1.36	1.10	6.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.06	0.04	0.93	0.89	0.90	0.81	0.28	0.11	0.17	0.63	0.77
d, Delay for Lane Group [s/veh]	30.94	29.88	25.59	45.21	54.96	55.38	64.62	40.88	10.09	63.85	49.33	30.58
Lane Group LOS	C	C	C	D	D	E	E	D	B	E	D	C
Critical Lane Group	No	No	No	Yes	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.89	0.77	0.42	15.81	17.78	17.85	2.96	2.73	1.16	0.34	5.58	15.69
50th-Percentile Queue Length [ft/ln]	47.20	19.16	10.54	395.29	444.39	446.18	74.10	68.33	29.08	8.45	139.39	392.33
95th-Percentile Queue Length [veh/ln]	3.40	1.38	0.76	22.33	24.69	24.78	5.34	4.92	2.09	0.61	9.45	22.19
95th-Percentile Queue Length [ft/ln]	84.95	34.48	18.96	558.32	617.25	619.39	133.38	122.99	52.34	15.22	236.20	554.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.94	29.88	25.59	45.91	55.18	55.38	64.62	40.88	10.09	63.85	49.33	30.58
Movement LOS	C	C	C	D	E	E	E	D	B	E	D	C
d_A, Approach Delay [s/veh]	30.28			50.26			43.05			37.87		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	44.83											
Intersection LOS	D											
Intersection V/C	0.690											

Emissions

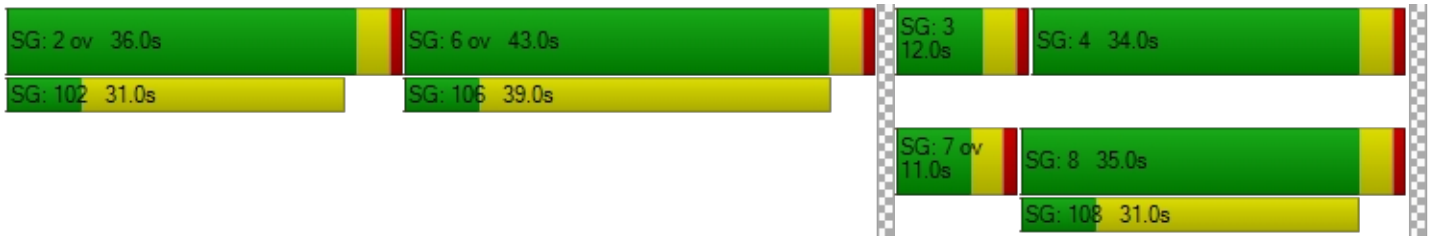
Vehicle Miles Traveled [mph]	11.99	2.47	1.48	39.97	20.58	20.58	9.88	11.82	5.69	1.22	46.80	77.88
Stops [stops/h]	108.74	22.07	12.14	910.75	511.94	514.00	170.72	157.42	33.50	9.74	321.15	451.97
Fuel consumption [US gal/h]	2.35	0.47	0.26	16.15	9.61	9.66	4.38	3.75	0.74	0.27	8.69	11.21
CO [g/h]	163.93	33.05	17.97	1129.08	671.62	675.53	306.50	262.10	52.03	18.82	607.12	783.31
NOx [g/h]	31.89	6.43	3.50	219.68	130.67	131.43	59.63	51.00	10.12	3.66	118.12	152.40
VOC [g/h]	37.99	7.66	4.17	261.68	155.65	156.56	71.03	60.74	12.06	4.36	140.70	181.54

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.723	0.000	2.811	3.130
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	512	496	480
d_b, Bicycle Delay [s]	29.58	34.60	35.34	36.10
l_b,int, Bicycle LOS Score for Intersection	1.933	3.285	1.969	2.412
Bicycle LOS	A	C	A	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	43.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.824

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1000	51	258	1093	773	658	397	178	57	209	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1000	51	258	1093	773	658	397	178	57	209	573
Peak Hour Factor	0.9500	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	262	13	68	287	203	173	104	47	15	55	150
Total Analysis Volume [veh/h]	0	1049	54	271	1147	811	690	417	187	60	219	601
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	11.0	49.0	49.0	0.0	44.0	0.0	0.0	27.0	27.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	35.0	35.0	16.1	55.2	91.3	32.2	32.2	32.2	20.7	77.0
g / C, Green / Cycle	0.29	0.29	0.13	0.46	0.76	0.27	0.27	0.27	0.17	0.64
(v / s)_i Volume / Saturation Flow Rate	0.15	0.03	0.08	0.23	0.51	0.29	0.12	0.12	0.15	0.21
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	2382	3560	1589	1850	2813
c, Capacity [veh/h]	2096	491	477	2444	1210	554	883	394	318	1758
d1, Uniform Delay [s]	33.92	29.69	48.38	20.95	6.98	44.43	38.43	38.45	48.43	10.74
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.28	0.12
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.86	0.45	1.07	0.65	2.96	113.44	0.39	0.89	17.32	0.13
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.11	0.57	0.47	0.67	1.24	0.47	0.47	0.88	0.34
d, Delay for Lane Group [s/veh]	34.78	30.14	49.44	21.60	9.95	157.86	38.82	39.34	65.75	10.87
Lane Group LOS	C	C	D	C	A	F	D	D	E	B
Critical Lane Group	No	No	No	No	Yes	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.48	1.21	3.86	7.50	9.02	10.91	5.02	4.56	9.50	3.32
50th-Percentile Queue Length [ft/ln]	161.97	30.17	96.38	187.43	225.59	272.81	125.54	114.00	237.56	83.12
95th-Percentile Queue Length [veh/ln]	10.65	2.17	6.94	11.99	13.95	18.18	8.70	8.06	14.56	5.98
95th-Percentile Queue Length [ft/ln]	266.33	54.31	173.49	299.69	348.75	454.41	217.41	201.56	363.95	149.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	34.78	30.14	49.44	21.60	9.95	157.86	38.82	39.34	65.75	65.75	10.87
Movement LOS		C	C	D	C	A	F	D	D	E	E	B
d_A, Approach Delay [s/veh]	34.55			20.74			102.37			28.27		
Approach LOS	C			C			F			C		
d_I, Intersection Delay [s/veh]	43.90											
Intersection LOS	D											
Intersection V/C	0.824											

Emissions

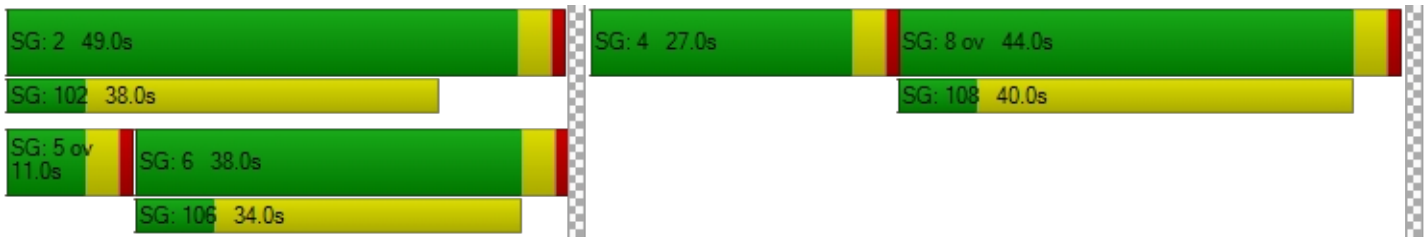
Vehicle Miles Traveled [mph]	57.90	2.98	38.54	163.12	115.33	84.10	50.82	22.79	20.76	44.72
Stops [stops/h]	777.45	36.21	231.32	674.75	270.71	982.12	301.29	136.80	285.07	199.49
Fuel consumption [US gal/h]	15.48	0.72	5.94	16.33	8.07	34.82	8.07	3.66	7.28	4.89
CO [g/h]	1081.90	50.13	414.87	1141.69	564.37	2434.10	564.40	255.64	508.66	341.88
NOx [g/h]	210.50	9.75	80.72	222.13	109.81	473.59	109.81	49.74	98.97	66.52
VOC [g/h]	250.74	11.62	96.15	264.60	130.80	564.13	130.80	59.25	117.89	79.23

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.094	0.000	3.117	2.735
Crosswalk LOS	C	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	750	667	383
d_b, Bicycle Delay [s]	30.82	23.44	26.67	39.20
l_b,int, Bicycle LOS Score for Intersection	2.015	2.786	2.627	3.012
Bicycle LOS	B	C	B	C

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	64.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	8	0	48	12	0	317	110	389	0	30	534	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	0	48	12	0	317	110	389	0	30	534	31
Peak Hour Factor	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610	0.8610
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	14	3	0	92	32	113	0	9	155	9
Total Analysis Volume [veh/h]	9	0	56	14	0	368	128	452	0	35	620	36
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.00	0.07	0.13	0.00	0.55	0.14	0.00	0.00	0.03	0.01	0.00
d_M, Delay for Movement [s/veh]	64.65	40.67	12.81	49.83	49.04	22.75	9.50	0.00	0.00	8.36	0.00	0.00
Movement LOS	F	E	B	E	E	C	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.79	0.79	0.79	5.14	5.14	5.14	0.48	0.00	0.00	0.10	0.00	0.00
95th-Percentile Queue Length [ft/ln]	19.81	19.81	19.81	128.47	128.47	128.47	11.95	0.00	0.00	2.45	0.00	0.00
d_A, Approach Delay [s/veh]	19.98			23.74			2.10			0.42		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	6.91											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	51.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.343

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	27	39	136	299	528	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	39	136	299	528	96
Peak Hour Factor	0.7370	0.7370	0.7370	0.7370	0.7370	0.7370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	13	46	101	179	33
Total Analysis Volume [veh/h]	37	53	185	406	716	130
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.09	0.24	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	51.18	23.97	10.98	0.00	0.00	0.00
Movement LOS	F	C	B	A	A	A
95th-Percentile Queue Length [veh/ln]	2.03	2.03	0.91	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	50.70	50.70	22.78	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	35.15		3.44		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	3.40					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	67	1066	1022	26	0	1338	106	36	1	52	678	56	402
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	67	1066	1022	26	0	1338	106	36	1	52	678	56	402
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	267	256	7	0	335	27	9	0	13	170	14	101
Total Analysis Volume [veh/h]	67	1066	1022	26	0	1338	106	36	1	52	678	56	402
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

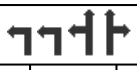
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.31	0.02	0.00	0.17	0.17	0.02	0.00	0.00	0.20	0.22	0.22
Intersection LOS	B												
Intersection V/C	0.616												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	163	34	20	1079	892	35	172	205	99	10	368	613
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	163	34	20	1079	892	35	172	205	99	10	368	613
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	9	5	270	223	9	43	51	25	3	92	153
Total Analysis Volume [veh/h]	163	34	20	1079	892	35	172	205	99	10	368	613
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.02	0.01	0.21	0.30	0.30	0.05	0.06	0.01	0.01	0.11	0.15
Intersection LOS	A											
Intersection V/C	0.593											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1000	51	258	1093	773	658	397	178	57	209	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1000	51	258	1093	773	658	397	178	57	209	573
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	250	13	65	273	193	165	99	45	14	52	143
Total Analysis Volume [veh/h]	0	1000	51	258	1093	773	658	397	178	57	209	573
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.15	0.03	0.08	0.21	0.33	0.13	0.12	0.10	0.03	0.16	0.09
Intersection LOS	B											
Intersection V/C	0.661											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.812

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	230	814	4	8	1050	515	276	21	230	13	57	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	230	814	4	8	1050	515	276	21	230	13	57	37
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	58	204	1	2	263	129	69	5	58	3	14	9
Total Analysis Volume [veh/h]	230	814	4	8	1050	515	276	21	230	13	57	37
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.24	0.24	0.00	0.46	0.46	0.08	0.09	0.14	0.01	0.03	0.03
Intersection LOS	D											
Intersection V/C	0.812											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.466

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	191	868	2	10	952	332	193	6	112	6	11	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	191	868	2	10	952	332	193	6	112	6	11	7
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	48	217	1	3	238	83	48	2	28	2	3	2
Total Analysis Volume [veh/h]	191	868	2	10	952	332	193	6	112	6	11	7
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.17	0.17	0.01	0.28	0.14	0.06	0.06	0.07	0.00	0.01	0.01
Intersection LOS	A											
Intersection V/C	0.466											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	842	294	75	390	755	1002
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	842	294	75	390	755	1002
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	211	74	19	98	189	251
Total Analysis Volume [veh/h]	842	294	75	390	755	1002
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.15	0.02	0.11	0.22	0.13
Intersection LOS	A					
Intersection V/C	0.459					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	36.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.027

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Curb Present	No			No				No			No		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	74	1559	1162	47	0	1197	94	91	4	68	587	39	759
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00												
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1559	1162	47	0	1197	94	91	4	68	587	39	759
Peak Hour Factor	0.9710	0.9710	0.9710	0.971	0.950	0.971	0.971	0.9710	0.9710	0.9710	0.9710	0.9710	0.9710
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	401	299	12	0	308	24	23	1	18	151	10	195
Total Analysis Volume [veh/h]	76	1606	1197	48	0	1233	97	94	4	70	605	40	782
Presence of On-Street Parking	No		No	No			No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0				0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0				0			0		
v_co, Outbound Pedestrian Volume crossing	0			0				0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0				0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Flashing Yellow Arrow				No									
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Maximum Green [s]	30	30	0	0	0	30	0	0	30	30	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0
Walk [s]	0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	7.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.0	37.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No				No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	2.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	11.0	41.0	0.0	0.0	0.0	30.0	0.0	0.0	11.0	11.0	0.0	68.0	0.0
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	0	0	7	0	0	7	7	0	7	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	0.0
Minimum Recall	No	No				No			No	No		No	
Maximum Recall	No	No				No			No	No		No	
Pedestrian Recall	No	No				No			No	No		No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	6.8	59.1	59.1	59.1	48.3	48.3	48.3	8.5	8.5	19.3	40.4	40.4	40.4
g / C, Green / Cycle	0.06	0.49	0.49	0.49	0.40	0.40	0.40	0.07	0.07	0.16	0.34	0.34	0.34
(v / s)_i Volume / Saturation Flow Rate	0.04	0.39	0.43	0.45	0.50	0.16	0.16	0.05	0.00	0.04	0.27	0.29	0.30
s, saturation flow rate [veh/h]	1781	3560	1671	1589	97	6792	1761	1781	1870	1589	1781	1659	1589
c, Capacity [veh/h]	100	1752	823	782	60	2733	709	126	132	255	601	560	536
d1, Uniform Delay [s]	55.81	25.18	27.08	28.10	60.00	25.36	25.41	54.73	51.95	44.26	35.95	36.94	37.60
k, delay calibration	0.11	0.50	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.12	0.14
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.96	3.58	12.20	16.85	66.89	0.41	1.61	8.58	0.09	0.58	2.40	4.28	6.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.78	0.87	0.91	0.79	0.39	0.39	0.75	0.03	0.27	0.79	0.85	0.89
d, Delay for Lane Group [s/veh]	66.76	28.76	39.28	44.95	126.89	25.77	27.02	63.31	52.04	44.84	38.35	41.22	44.25
Lane Group LOS	E	C	D	D	F	C	C	E	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.57	16.56	20.40	21.87	2.56	5.25	5.75	3.09	0.12	1.88	12.87	13.48	14.03
50th-Percentile Queue Length [ft/ln]	64.34	413.9	509.8	546.8	64.05	131.24	143.77	77.17	2.90	46.96	321.76	336.96	350.83
95th-Percentile Queue Length [veh/ln]	4.63	23.23	27.80	29.54	4.61	9.01	9.68	5.56	0.21	3.38	18.75	19.50	20.18
95th-Percentile Queue Length [ft/ln]	115.8	580.8	695.0	738.6	115.30	225.17	242.09	138.90	5.22	84.54	468.85	487.48	504.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.76	30.29	42.59	126.8	0.00	25.95	27.02	63.31	52.04	44.84	38.96	41.22	43.06
Movement LOS	E	C	D	F		C	C	E	D	D	D	D	D
d_A, Approach Delay [s/veh]	36.40			29.54				55.35			41.27		
Approach LOS	D			C				E			D		
d_I, Intersection Delay [s/veh]	36.52												
Intersection LOS	D												
Intersection V/C	1.027												

Emissions

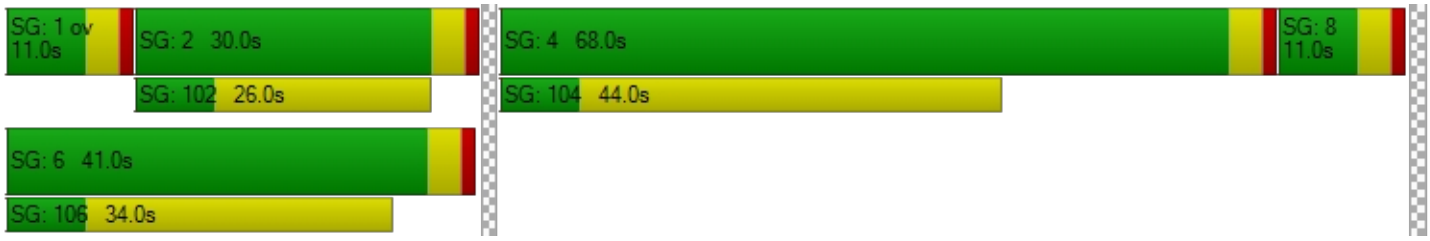
Vehicle Miles Traveled [mph]	10.81	195.2	101.8	101.5	2.55	56.06	14.70	4.69	0.20	3.49	21.63	21.63	21.63
Stops [stops/h]	77.21	993.5	611.8	656.2	76.87	629.93	172.52	92.60	3.48	56.36	386.11	404.35	421.00
Fuel consumption [US gal/h]	1.90	21.56	13.30	14.34	2.09	13.72	3.74	1.92	0.07	1.09	6.74	7.11	7.50
CO [g/h]	133.0	1506.	929.6	1002.	145.80	959.19	261.44	133.90	4.88	76.46	470.79	497.23	524.20
NOx [g/h]	25.89	293.1	180.8	194.9	28.37	186.62	50.87	26.05	0.95	14.88	91.60	96.74	101.99
VOC [g/h]	30.84	349.2	215.4	232.2	33.79	222.30	60.59	31.03	1.13	17.72	109.11	115.24	121.49

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersectio	0.000	3.489	2.529	2.826
Crosswalk LOS	F	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	617	433	117	1067
d_b, Bicycle Delay [s]	28.70	36.82	53.20	13.07
l_b,int, Bicycle LOS Score for Intersection	3.143	2.014	1.837	3.914
Bicycle LOS	C	B	A	D

Sequence

Ring 1	1	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

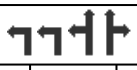


Intersection Level Of Service Report

Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	41.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.495

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	151	81	89	740	336	24	348	738	338	14	292	561
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	81	89	740	336	24	348	738	338	14	292	561
Peak Hour Factor	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530	0.9530
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	21	23	194	88	6	91	194	89	4	77	147
Total Analysis Volume [veh/h]	158	85	93	776	353	25	365	774	355	15	306	589
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	125
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Maximum Green [s]	0	30	30	0	30	0	30	30	30	30	30	30
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk [s]	0.0	7.0	7.0	0.0	7.0	0.0	0.0	7.0	7.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	32.0	32.0	0.0	24.0	0.0	0.0	24.0	24.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	43.0	43.0	0.0	35.0	0.0	36.0	35.0	35.0	12.0	11.0	11.0
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	7	7	0	7	0	7	7	7	7	7	7
Vehicle Extension [s]	0.0	3.0	3.0	0.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Recall		No	No		No		No	No	No	No	No	No
Maximum Recall		No	No		No		No	No	No	No	No	No
Pedestrian Recall		No	No		No		No	No	No	No	No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	R	L	C	R
C, Calculated Cycle Length [s]	125	125	125	125	125	125	125	125	125	125	125	125
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	43.1	43.1	49.9	28.8	28.8	28.8	15.8	34.3	88.2	2.8	21.3	54.1
g / C, Green / Cycle	0.34	0.34	0.40	0.23	0.23	0.23	0.13	0.27	0.71	0.02	0.17	0.43
(v / s)_i Volume / Saturation Flow Rate	0.05	0.05	0.06	0.16	0.16	0.16	0.11	0.22	0.22	0.01	0.09	0.37
s, saturation flow rate [veh/h]	3459	1870	1589	3459	1804	1843	3459	3560	1589	1026	3560	1589
c, Capacity [veh/h]	1193	645	635	794	414	423	438	978	1123	65	608	687
d1, Uniform Delay [s]	28.10	28.10	23.92	44.28	44.28	44.27	53.29	42.03	6.94	62.28	47.02	31.99
k, delay calibration	0.50	0.50	0.50	0.11	0.17	0.17	0.11	0.11	0.50	0.11	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.42	0.49	1.17	3.55	3.46	4.19	1.49	0.74	1.79	0.65	13.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.13	0.13	0.15	0.71	0.71	0.71	0.83	0.79	0.32	0.23	0.50	0.86
d, Delay for Lane Group [s/veh]	28.33	28.52	24.40	45.46	47.83	47.73	57.48	43.51	7.68	64.07	47.67	45.05
Lane Group LOS	C	C	C	D	D	D	E	D	A	E	D	D
Critical Lane Group	No	No	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.66	1.82	1.84	8.13	8.75	8.92	5.76	11.01	3.37	0.51	4.32	17.80
50th-Percentile Queue Length [ft/ln]	41.60	45.62	45.95	203.27	218.79	223.05	144.04	275.24	84.29	12.66	107.92	445.11
95th-Percentile Queue Length [veh/ln]	3.00	3.28	3.31	12.81	13.60	13.82	9.70	16.45	6.07	0.91	7.72	24.72
95th-Percentile Queue Length [ft/ln]	74.88	82.11	82.70	320.18	340.08	345.51	242.45	411.28	151.72	22.78	193.10	618.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	28.33	28.52	24.40	46.08	47.76	47.73	57.48	43.51	7.68	64.07	47.67	45.05
Movement LOS	C	C	C	D	D	D	E	D	A	E	D	D
d_A, Approach Delay [s/veh]	27.29			46.65			38.41			46.24		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	41.72											
Intersection LOS	D											
Intersection V/C	0.495											

Emissions

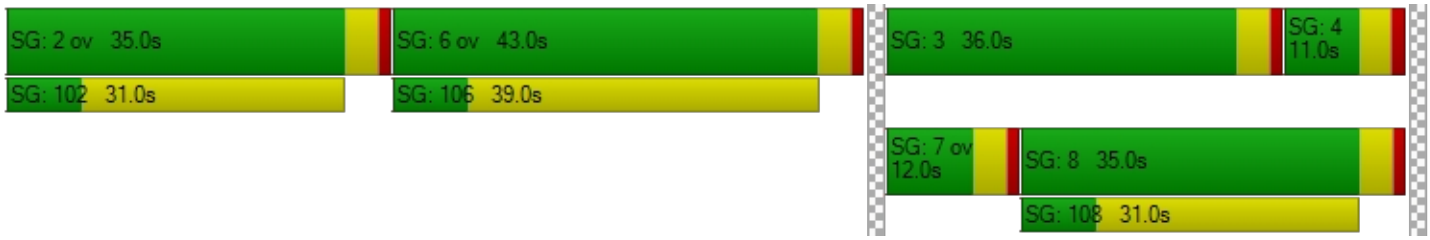
Vehicle Miles Traveled [mph]	11.15	6.00	6.56	21.80	11.37	11.60	20.15	42.74	19.60	1.83	37.30	71.79
Stops [stops/h]	95.85	52.55	52.93	468.33	252.05	256.95	331.86	634.16	97.10	14.58	248.64	512.76
Fuel consumption [US gal/h]	2.06	1.12	1.11	8.68	4.71	4.80	8.25	14.61	2.21	0.40	6.75	13.01
CO [g/h]	143.76	78.08	77.59	606.92	329.37	335.67	576.77	1021.52	154.54	28.26	471.60	909.22
NOx [g/h]	27.97	15.19	15.10	118.09	64.08	65.31	112.22	198.75	30.07	5.50	91.76	176.90
VOC [g/h]	33.32	18.10	17.98	140.66	76.33	77.80	133.67	236.75	35.82	6.55	109.30	210.72

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.98	0.00	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersectio	2.691	0.000	2.978	3.156
Crosswalk LOS	B	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	624	496	496	112
d_b, Bicycle Delay [s]	29.58	35.34	35.34	55.70
l_b,int, Bicycle LOS Score for Intersection	2.114	2.512	2.792	2.310
Bicycle LOS	B	B	C	B

Sequence

Ring 1	2	6	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	-	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	37.2
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.885

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1627	70	289	1022	707	728	634	109	64	132	484
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1627	70	289	1022	707	728	634	109	64	132	484
Peak Hour Factor	0.9500	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760	0.9760
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	417	18	74	262	181	186	162	28	16	34	124
Total Analysis Volume [veh/h]	0	1667	72	296	1047	724	746	650	112	66	135	496
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	16.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Flashing Yellow Arrow												
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Maximum Green [s]	0	30	0	30	30	30	0	30	0	0	30	30
Amber [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
All red [s]	0.0	1.0	0.0	1.0	1.0	1.0	0.0	1.0	0.0	0.0	1.0	1.0
Walk [s]	0.0	7.0	0.0	0.0	7.0	7.0	0.0	7.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	27.0	0.0	0.0	31.0	31.0	0.0	33.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	13.0	51.0	51.0	0.0	50.0	0.0	0.0	19.0	19.0
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	7	7	7	0	7	0	0	7	7
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0	0.0	0.0	3.0	3.0
Minimum Recall		No		No	No	No		No			No	No
Maximum Recall		No		No	No	No		No			No	No
Pedestrian Recall		No		No	No	No		No			No	No

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	R	L	C	R	C	R
C, Calculated Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	39.2	39.2	14.6	57.8	97.1	35.3	35.3	35.3	14.9	72.8
g / C, Green / Cycle	0.33	0.33	0.12	0.48	0.81	0.29	0.29	0.29	0.12	0.61
(v / s)_i Volume / Saturation Flow Rate	0.25	0.05	0.09	0.21	0.46	0.28	0.18	0.07	0.11	0.18
s, saturation flow rate [veh/h]	6792	1589	3459	5094	1589	2625	3560	1589	1840	2813
c, Capacity [veh/h]	2338	547	427	2551	1286	676	979	437	229	1658
d1, Uniform Delay [s]	34.20	27.03	50.43	18.82	4.02	42.71	38.60	33.94	51.65	12.30
k, delay calibration	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.32	0.20
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.89	0.50	2.04	0.49	1.79	51.75	0.78	0.31	25.05	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.13	0.69	0.41	0.56	1.10	0.66	0.26	0.88	0.30
d, Delay for Lane Group [s/veh]	36.09	27.53	52.47	19.31	5.81	94.46	39.38	34.25	76.70	12.48
Lane Group LOS	D	C	D	B	A	F	D	C	E	B
Critical Lane Group	Yes	No	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	10.98	1.53	4.36	6.34	4.97	9.39	8.13	2.47	7.43	2.99
50th-Percentile Queue Length [ft/ln]	274.54	38.33	108.94	158.53	124.20	234.86	203.35	61.75	185.63	74.69
95th-Percentile Queue Length [veh/ln]	16.42	2.76	7.78	10.47	8.62	15.21	12.81	4.45	11.89	5.38
95th-Percentile Queue Length [ft/ln]	410.41	69.00	194.52	261.77	215.58	380.21	320.29	111.15	297.35	134.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	36.09	27.53	52.47	19.31	5.81	94.46	39.38	34.25	76.70	76.70	12.48
Movement LOS		D	C	D	B	A	F	D	C	E	E	B
d_A, Approach Delay [s/veh]	35.73			19.33			66.25			31.00		
Approach LOS	D			B			E			C		
d_I, Intersection Delay [s/veh]	37.20											
Intersection LOS	D											
Intersection V/C	0.885											

Emissions

Vehicle Miles Traveled [mph]	92.01	3.97	42.09	148.90	102.96	90.92	79.22	13.65	14.95	36.90
Stops [stops/h]	1317.80	46.00	261.45	570.70	149.04	845.50	488.05	74.10	222.75	179.26
Fuel consumption [US gal/h]	25.66	0.90	6.73	14.08	5.90	25.90	12.84	2.00	5.86	4.34
CO [g/h]	1793.59	62.96	470.49	984.30	412.49	1810.45	897.58	139.63	409.67	303.57
NOx [g/h]	348.97	12.25	91.54	191.51	80.26	352.25	174.64	27.17	79.71	59.06
VOC [g/h]	415.68	14.59	109.04	228.12	95.60	419.59	208.02	32.36	94.94	70.36

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	49.50	0.00	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersectio	3.161	0.000	3.124	2.760
Crosswalk LOS	C	F	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	783	767	250
d_b, Bicycle Delay [s]	30.82	22.20	22.82	45.94
l_b,int, Bicycle LOS Score for Intersection	2.277	2.696	2.804	2.710
Bicycle LOS	B	B	C	B

Sequence

Ring 1	-	2	4	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 7: Project Driveway No. 1 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	59.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.222

Intersection Setup

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name	Reata Apartments Driveway			Project Driveway No. 1			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	16	0	49	35	0	127	48	840	0	41	521	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	0	49	35	0	127	48	840	0	41	521	17
Peak Hour Factor	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360	0.9360
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	13	9	0	34	13	224	0	11	139	5
Total Analysis Volume [veh/h]	17	0	52	37	0	136	51	897	0	44	557	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.09	0.33	0.00	0.19	0.05	0.01	0.00	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	59.37	54.28	18.84	47.90	57.44	21.15	8.82	0.00	0.00	10.08	0.00	0.00
Movement LOS	F	F	C	E	F	C	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	1.29	1.29	1.29	2.83	2.83	2.83	0.16	0.00	0.00	0.19	0.00	0.00
95th-Percentile Queue Length [ft/ln]	32.28	32.28	32.28	70.86	70.86	70.86	4.05	0.00	0.00	4.65	0.00	0.00
d_A, Approach Delay [s/veh]	28.83			26.87			0.47			0.72		
Approach LOS	D			D			A			A		
d_I, Intersection Delay [s/veh]	4.16											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	78.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	104	131	63	818	424	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	131	63	818	424	45
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	39	19	241	125	13
Total Analysis Volume [veh/h]	123	154	74	965	500	53
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.70	0.21	0.07	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	78.56	63.06	8.83	0.00	0.00	0.00
Movement LOS	F	F	A	A	A	A
95th-Percentile Queue Length [veh/ln]	8.68	8.68	0.24	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	217.11	217.11	5.90	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	69.94		0.63		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	10.72					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 1: Bridger Road / I-5 NB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.803

Intersection Setup

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Approach	Northbound			Southbound				Eastbound			Westbound		
Lane Configuration													
Turning Movement	Left	Thru	Right	U-tu	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	107.00	100.00	380.00	165.0	100.0	100.0	100.0	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	4	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	49.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			40.00				30.00			30.00		
Grade [%]	0.00			0.00				0.00			0.00		
Crosswalk	No			Yes				Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road				Bridger Road			I-5 NB Ramps		
Base Volume Input [veh/h]	74	1559	1162	47	0	1197	94	91	4	68	587	39	759
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	1559	1162	47	0	1197	94	91	4	68	587	39	759
Peak Hour Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.000	1.000	1.000	1.000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	390	291	12	0	299	24	23	1	17	147	10	190
Total Analysis Volume [veh/h]	74	1559	1162	47	0	1197	94	91	4	68	587	39	759
Pedestrian Volume [ped/h]	0			0				0			0		
Bicycle Volume [bicycles/h]	0			0				0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Permi	Permi	Permi	Permi	Split	Split	Overlap	Split	Split	Split
Signal Group	1	6	0	0	0	2	0	0	8	8	0	4	0
Auxiliary Signal Groups										1,8			
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-

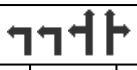
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.40	0.40	0.03	0.00	0.15	0.15	0.05	0.00	0.00	0.17	0.27	0.27
Intersection LOS	D												
Intersection V/C	0.803												

Intersection Level Of Service Report
Intersection 2: Avenida De La Carolota at Paseo De Valencia / I-5 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.547

Intersection Setup

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	180.00	100.00	260.00	370.00	100.00	100.00	132.00	100.00	132.00	38.00	100.00	125.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			30.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Paseo De Valencia			I-5 SB Ramps			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	151	81	89	740	336	24	348	738	338	14	292	561
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	151	81	89	740	336	24	348	738	338	14	292	561
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	20	22	185	84	6	87	185	85	4	73	140
Total Analysis Volume [veh/h]	151	81	89	740	336	24	348	738	338	14	292	561
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Split	Overlap	Split	Split	Split	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	0	6	6	0	2	0	3	8	8	7	4	4
Auxiliary Signal Groups			6,7						6,8			2,4
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.05	0.04	0.15	0.16	0.16	0.10	0.22	0.15	0.01	0.09	0.18
Intersection LOS	A											
Intersection V/C	0.547											

Intersection Level Of Service Report
Intersection 3: Avenida De La Carlota / I-5 SB Ramps at El Toro Road

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.676

Intersection Setup

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	1	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	50.00	455.00	100.00	139.00	212.00	100.00	100.00	100.00	100.00	220.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	El Toro Road			El Toro Road			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	0	1627	70	289	1022	707	728	634	109	64	132	484
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1627	70	289	1022	707	728	634	109	64	132	484
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	407	18	72	256	177	182	159	27	16	33	121
Total Analysis Volume [veh/h]	0	1627	70	289	1022	707	728	634	109	64	132	484
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Overlap
Signal Group	0	6	0	5	2	2	0	8	0	0	4	4
Auxiliary Signal Groups						2,8						4,5
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.24	0.04	0.09	0.20	0.27	0.14	0.19	0.06	0.04	0.12	0.06
Intersection LOS	B											
Intersection V/C	0.676											

Intersection Level Of Service Report

Intersection 4: Rockfield Boulevard / Fordview Street at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.679

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	398.00	100.00	100.00	162.00	100.00	100.00	249.00	100.00	249.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	50.00			50.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Rockfield Boulevard			Fordview Street		
Base Volume Input [veh/h]	184	1344	5	30	778	288	437	34	323	16	22	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	184	1344	5	30	778	288	437	34	323	16	22	22
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	336	1	8	195	72	109	9	81	4	6	6
Total Analysis Volume [veh/h]	184	1344	5	30	778	288	437	34	323	16	22	22
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.40	0.40	0.02	0.31	0.31	0.13	0.14	0.19	0.01	0.02	0.02
Intersection LOS	B											
Intersection V/C	0.679											

Intersection Level Of Service Report
Intersection 5: Avenida De La Carlota at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	0	0	0
Entry Pocket Length [ft]	199.00	100.00	100.00	165.00	100.00	230.00	197.00	100.00	197.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	40.00			40.00			40.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			Yes			Yes		

Volumes

Name	Los Alisos Boulevard			Los Alisos Boulevard			Avenida De La Carlota			Avenida De La Carlota		
Base Volume Input [veh/h]	196	1000	5	11	917	238	541	18	276	6	7	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	196	1000	5	11	917	238	541	18	276	6	7	13
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	250	1	3	229	60	135	5	69	2	2	3
Total Analysis Volume [veh/h]	196	1000	5	11	917	238	541	18	276	6	7	13
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Split	Split	Split	Split	Split	Split
Signal Group	1	6	0	5	2	2	0	8	0	0	4	0
Auxiliary Signal Groups						2,8						
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.20	0.20	0.01	0.27	0.00	0.16	0.16	0.16	0.00	0.02	0.02
Intersection LOS	A											
Intersection V/C	0.557											

Intersection Level Of Service Report
Intersection 6: Paseo De Valencia at Los Alisos Boulevard

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

Intersection Setup

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	1	1	0	0	1
Entry Pocket Length [ft]	358.00	358.00	246.00	100.00	100.00	204.00
No. of Lanes in Exit Pocket	0	1	0	1	0	0
Exit Pocket Length [ft]	0.00	500.00	0.00	500.00	0.00	0.00
Speed [mph]	40.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Los Alisos Boulevard		Paseo De Valencia		Paseo De Valencia	
Base Volume Input [veh/h]	1036	190	232	767	389	1003
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1036	190	232	767	389	1003
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	259	48	58	192	97	251
Total Analysis Volume [veh/h]	1036	190	232	767	389	1003
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Split	Overlap	Protected	Permissive	Permissive	Overlap
Signal Group	7	4	5	2	6	6
Auxiliary Signal Groups		4,5				6,7
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.04	0.07	0.23	0.11	0.09
Intersection LOS	A					
Intersection V/C	0.479					

Appendix H

Project Opening Year (2028)
With Project Conditions – Mitigated
Level of Service Analysis Worksheets

RK19036.3
JN: 2939-2022-01

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	23.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.157

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	27	39	136	299	528	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	39	136	299	528	96
Peak Hour Factor	0.7370	0.7370	0.7370	0.7370	0.7370	0.7370
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	13	46	101	179	33
Total Analysis Volume [veh/h]	37	53	185	406	716	130
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.09	0.24	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	23.57	14.48	10.98	0.00	0.00	0.00
Movement LOS	C	B	B	A	A	A
95th-Percentile Queue Length [veh/ln]	0.97	0.97	0.91	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	24.15	24.15	22.78	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.22		3.44		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.40					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Control Type:	Two-way stop	Delay (sec / veh):	28.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.399

Intersection Setup

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Driveway No. 2		Avenida De La Carlota		Avenida De La Carlota	
Base Volume Input [veh/h]	104	131	63	818	424	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	131	63	818	424	45
Peak Hour Factor	0.8480	0.8480	0.8480	0.8480	0.8480	0.8480
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	39	19	241	125	13
Total Analysis Volume [veh/h]	123	154	74	965	500	53
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	Yes					
Number of Storage Spaces in Median	1		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.40	0.21	0.07	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	28.50	21.80	8.83	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	4.01	4.01	0.24	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	100.34	100.34	5.90	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.78		0.63		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	4.02					
Intersection LOS	D					

Appendix I

Detailed CA MUTCD
Traffic Signal Warrant Analysis Worksheets

Signal Warrants Report For Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	572	342	61
2	555	332	59
3	543	325	58
4	509	304	54
5	452	270	48
6	446	267	48
7	440	263	47
8	400	239	43
9	395	236	42
10	389	233	41
11	337	202	36
12	315	188	34
13	309	185	33
14	229	137	24
15	229	137	24
16	160	96	17
17	92	55	10
18	92	55	10
19	51	31	5
20	29	17	3
21	17	10	2
22	6	3	1
23	6	3	1
24	6	3	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	914	1	61	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	887	1	59	No	No	No	No	No	No	Yes	Yes	No	No
3	3	868	1	58	No	No	No	No	No	No	Yes	Yes	No	No
4	3	813	1	54	No	No	No	No	No	No	Yes	Yes	No	No
5	3	722	1	48	No	No	No	No	No	No	No	Yes	No	No
6	3	713	1	48	No	No	No	No	No	No	No	Yes	No	No
7	3	703	1	47	No	No	No	No	No	No	No	Yes	No	No
8	3	639	1	43	No	No	No	No	No	No	No	Yes	No	No
9	3	631	1	42	No	No	No	No	No	No	No	Yes	No	No
10	3	622	1	41	No	No	No	No	No	No	No	No	No	No
11	3	539	1	36	No	No	No	No	No	No	No	No	No	No
12	3	503	1	34	No	No	No	No	No	No	No	No	No	No
13	3	494	1	33	No	No	No	No	No	No	No	No	No	No
14	3	366	1	24	No	No	No	No	No	No	No	No	No	No
15	3	366	1	24	No	No	No	No	No	No	No	No	No	No
16	3	256	1	17	No	No	No	No	No	No	No	No	No	No
17	3	147	1	10	No	No	No	No	No	No	No	No	No	No
18	3	147	1	10	No	No	No	No	No	No	No	No	No	No
19	3	82	1	5	No	No	No	No	No	No	No	No	No	No
20	3	46	1	3	No	No	No	No	No	No	No	No	No	No
21	3	27	1	2	No	No	No	No	No	No	No	No	No	No
22	3	9	1	1	No	No	No	No	No	No	No	No	No	No
23	3	9	1	1	No	No	No	No	No	No	No	No	No	No
24	3	9	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	1	4	9	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	23
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:23
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	61
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	975
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	440	862	194
2	427	836	188
3	418	819	184
4	392	767	173
5	348	681	153
6	343	672	151
7	339	664	149
8	308	603	136
9	304	595	134
10	299	586	132
11	260	509	114
12	242	474	107
13	238	465	105
14	176	345	78
15	176	345	78
16	123	241	54
17	70	138	31
18	70	138	31
19	40	78	17
20	22	43	10
21	13	26	6
22	4	9	2
23	4	9	2
24	4	9	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1302	1	194	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1263	1	188	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
3	3	1237	1	184	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
4	3	1159	1	173	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5	3	1029	1	153	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	3	1015	1	151	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
7	3	1003	1	149	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
8	3	911	1	136	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
9	3	899	1	134	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
10	3	885	1	132	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
11	3	769	1	114	No	No	Yes	Yes	No	Yes	Yes	Yes	No	No
12	3	716	1	107	No	No	Yes	Yes	No	No	Yes	Yes	No	No
13	3	703	1	105	No	No	Yes	Yes	No	No	Yes	Yes	No	No
14	3	521	1	78	No	No	No	No	No	No	No	Yes	No	No
15	3	521	1	78	No	No	No	No	No	No	No	Yes	No	No
16	3	364	1	54	No	No	No	No	No	No	No	No	No	No
17	3	208	1	31	No	No	No	No	No	No	No	No	No	No
18	3	208	1	31	No	No	No	No	No	No	No	No	No	No
19	3	118	1	17	No	No	No	No	No	No	No	No	No	No
20	3	65	1	10	No	No	No	No	No	No	No	No	No	No
21	3	39	1	6	No	No	No	No	No	No	No	No	No	No
22	3	13	1	2	No	No	No	No	No	No	No	No	No	No
23	3	13	1	2	No	No	No	No	No	No	No	No	No	No
24	3	13	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					6	10	13	13	8	11	13	15	7	1

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	34.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	1:52
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	194
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1496
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	No
#2	Four Hour Vehicular Volume	No
#3	Peak Hour	No

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	624	435	66
2	605	422	64
3	593	413	63
4	555	387	59
5	493	344	52
6	487	339	51
7	480	335	51
8	437	305	46
9	431	300	46
10	424	296	45
11	368	257	39
12	343	239	36
13	337	235	36
14	250	174	26
15	250	174	26
16	175	122	18
17	100	70	11
18	100	70	11
19	56	39	6
20	31	22	3
21	19	13	2
22	6	4	1
23	6	4	1
24	6	4	1

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1059	1	66	No	No	No	No	No	Yes	Yes	Yes	No	No
2	3	1027	1	64	No	No	No	No	No	Yes	Yes	Yes	No	No
3	3	1006	1	63	No	No	No	No	No	Yes	Yes	Yes	No	No
4	3	942	1	59	No	No	No	No	No	No	Yes	Yes	No	No
5	3	837	1	52	No	No	No	No	No	No	Yes	Yes	No	No
6	3	826	1	51	No	No	No	No	No	No	No	Yes	No	No
7	3	815	1	51	No	No	No	No	No	No	No	Yes	No	No
8	3	742	1	46	No	No	No	No	No	No	No	Yes	No	No
9	3	731	1	46	No	No	No	No	No	No	No	Yes	No	No
10	3	720	1	45	No	No	No	No	No	No	No	Yes	No	No
11	3	625	1	39	No	No	No	No	No	No	No	No	No	No
12	3	582	1	36	No	No	No	No	No	No	No	No	No	No
13	3	572	1	36	No	No	No	No	No	No	No	No	No	No
14	3	424	1	26	No	No	No	No	No	No	No	No	No	No
15	3	424	1	26	No	No	No	No	No	No	No	No	No	No
16	3	297	1	18	No	No	No	No	No	No	No	No	No	No
17	3	170	1	11	No	No	No	No	No	No	No	No	No	No
18	3	170	1	11	No	No	No	No	No	No	No	No	No	No
19	3	95	1	6	No	No	No	No	No	No	No	No	No	No
20	3	53	1	3	No	No	No	No	No	No	No	No	No	No
21	3	32	1	2	No	No	No	No	No	No	No	No	No	No
22	3	10	1	1	No	No	No	No	No	No	No	No	No	No
23	3	10	1	1	No	No	No	No	No	No	No	No	No	No
24	3	10	1	1	No	No	No	No	No	No	No	No	No	No
Hours Met					0	0	0	0	0	3	5	10	0	0

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	35.2
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	0:38
Delay Condition Met	No
Volume on Minor Street Approach During Same Hour	66
High Minor Volume Condition Met	No
Total Entering Volume on All Approaches During Same Hour	1125
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	No
Warrant Met for Intersection	**No**

Signal Warrants Report For Intersection 8: Project Driveway No. 2 at Avenida De La Carlota

Warrants Summary

Warrant	Name	Met?
#1	Eight Hour Vehicular Volume	Yes
#2	Four Hour Vehicular Volume	Yes
#3	Peak Hour	Yes

Intersection Warrants Parameters

Major Approaches	E, W
Minor Approaches	N
Speed > 40mph	No
Population < 10,000	No
Warrant Factor	100%

Warrant Analysis Traffic Volumes

Hour	Major Streets		Minor Streets
	E	W	N
1	469	881	235
2	455	855	228
3	446	837	223
4	417	784	209
5	371	696	186
6	366	687	183
7	361	678	181
8	328	617	165
9	324	608	162
10	319	599	160
11	277	520	139
12	258	485	129
13	253	476	127
14	188	352	94
15	188	352	94
16	131	247	66
17	75	141	38
18	75	141	38
19	42	79	21
20	23	44	12
21	14	26	7
22	5	9	2
23	5	9	2
24	5	9	2

Warrant Analysis by Hour

Hour	Major Streets		Minor Street		Warrant 1 Condition A				Warrant 1 Condition B				Warrant 2	Warrant 3
	Number	Volume	Number	Volume	100%	80%	70%	56%	100%	80%	70%	56%		Condition B
1	3	1350	1	235	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	3	1310	1	228	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	3	1283	1	223	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	3	1201	1	209	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
5	3	1067	1	186	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
6	3	1053	1	183	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
7	3	1039	1	181	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
8	3	945	1	165	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
9	3	932	1	162	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
10	3	918	1	160	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
11	3	797	1	139	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
12	3	743	1	129	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
13	3	729	1	127	No	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
14	3	540	1	94	No	No	No	Yes	No	No	No	Yes	No	No
15	3	540	1	94	No	No	No	Yes	No	No	No	Yes	No	No
16	3	378	1	66	No	No	No	No	No	No	No	No	No	No
17	3	216	1	38	No	No	No	No	No	No	No	No	No	No
18	3	216	1	38	No	No	No	No	No	No	No	No	No	No
19	3	121	1	21	No	No	No	No	No	No	No	No	No	No
20	3	67	1	12	No	No	No	No	No	No	No	No	No	No
21	3	40	1	7	No	No	No	No	No	No	No	No	No	No
22	3	14	1	2	No	No	No	No	No	No	No	No	No	No
23	3	14	1	2	No	No	No	No	No	No	No	No	No	No
24	3	14	1	2	No	No	No	No	No	No	No	No	No	No
Hours Met					10	13	13	15	10	13	13	15	8	3

Warrant 3 Condition A

Orientation	N
Total Stopped Delay Per Vehicle on Minor Approach (s)	69.9
Number of Lanes on Minor Street Approach	1
VehicleHours of Stopped Delay on Minor Approach ([h]h:mm)	4:33
Delay Condition Met	Yes
Volume on Minor Street Approach During Same Hour	235
High Minor Volume Condition Met	Yes
Total Entering Volume on All Approaches During Same Hour	1585
Number of Approaches on Intersection	3
Total Volume Condition Met	Yes
Warrant Met for Approach	Yes
Warrant Met for Intersection	**Yes**

Appendix J

City of Laguna Hills VMT
Residential and Non-Residential Screening Forms

RK19036.3
JN: 2939-2022-01

CITY OF LAGUNA HILLS
VMT SCREENING FORM FOR LAND USE PROJECTS

This Screening Form acknowledges the City of Laguna Hills requirements for the evaluation of vehicle miles traveled (VMT) under CEQA. The analysis provided in this form should follow the City of Laguna Hills approved VMT Guidelines, dated July 2025.

I. Project Description

Case Number:

Project Name: 24422 Avenida De La Carlota Mixed-Use Project

Project Location: 24422 Avenida De La Carlota, City of Laguna Hills, CA

Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 250 DU senior housing).

(Please attach a copy of the project Site Plan)

Current GP Land Use: Village Commerical **Proposed GP Land Use:** Village Commerical

Current Zoning: Urban Village Specific Plan **Proposed Zoning:** Urban Village Specific Plan

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RTP/SCS Strategies and RHNA Allocation Plan.

II. VMT Screening Criteria

	YES		NO		Attachments:	
A. Is the Project 100% affordable housing?	YES		NO		Attachments:	
B. Is the Project within 1/2 mile of qualifying transit?	YES		NO		Attachments:	
C. Is the Project a local serving land use?	YES		NO		Attachments:	
D. Is the Project in a low VMT area?	YES	X	NO		Attachments:	
E. Are the Project's Net Daily Trips less than 500 ADT?	YES		NO	X	Attachments:	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	18.6	VMT/Capita
Citywide Employment VMT =	20.1	VMT/Employee

Project TAZ	VMT Rate for Project TAZ[1]		Type of Project	
1511	11.9	VMT/Capita	Residential:	
	14.5	VMT/Employee	Non-Residential:	X

[1] Base year (2019) projections from OCTAM 5.1.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: 2,637 **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	X	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	X	% Trip Credit:	
Affordable Housing Credit:	YES		NO	X	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	X	Trip Credit:	

Net Project Trip Generation: 2,637 **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA? YES X NO

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X

If the Project does not satisfy at least one (1) of the VMT screening criteria AND generates 2,400 or more net daily trips, then additional VMT modeling using OCTAM is required. If the project generates less than 2,400 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	N/A	N/A
B. Unmitigated Project TAZ VMT Rate:	N/A	N/A
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	N/A	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	N/A	N/A

F. Is the project presumed to have a less than significant impact with mitigation?

N/A

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	RK Engineering Group Inc.	**Company:**	BSP Oakbrook, LLC
Contact:	Justin Tucker, P.E.	**Contact:**	Matthew Haugen
Address:	1401 Dove Street, Suite 540, Newport Beach, CA	**Address:**	3501 Jamboree Road, Suite 4200, Newport Beach, CA
Phone:	(949) 474-0810	**Phone:**	(949) 219-2329
Email:	jt@rkengineer.com	**Email:**	mhaugen@buchananstreet.com
Date:	11/4/2025	**Date:**	11/4/2025

Approved by:

Laguna Hills Community Development Dept. **Date**	**Laguna Hills Public Services Dept.** **Date**

OCTAM 5.1** Base Year 2019 Statistics*

Zone	Home-based VMT per Capita	Employment (commute) VMT per employee	Total VMT per Service Population
1504	12.9	20.1	25.9
1505	1.3	18.1	47.5
1506	0.9	17.8	41.4
1507	10.8	17.7	41.4
1508	13.6	21.1	18.6
1509	0.0	17.2	61.1
1511	11.9	14.5	39.1
1512	16.2	15.2	26.6
1513	16.1	16.8	21.5
1514	16.6	16.9	24.5
1515	14.0	15.2	26.6
1516	14.4	20.9	18.5
1517	16.7	16.5	22.6
1518	10.6	14.3	to mixed-use development (
1519	19.4	15.9	28.8
1520	15.6	14.1	22.8
1521	17.2	14.2	24.0
1522	19.8	17.4	27.0
1523	14.0	12.5	26.1
1525	20.7	15.7	28.5
Total	16.1	16.1	28.6

*Geography nests into OCTAM zone structure. VMT includes all VMT to/from specified geography, except for VMT that leaves OCTAM model

** Note that as OCTAM is updated, these statistics are subject to change

Zone ID	Time Period	Home-Based VMT (PA)	Home-Based Work VMT (PA)	Population	Employment	HBVMT_per_Pop (PA)	HBWVMT_per_Emp (PA)	Total VMT (OD)	Service Population	TOTVMT_per_SerPop (OD)
1504	Daily	31882.1	17741.8	2478	883	12.8661	20.0927	87020.70008	3361	25.891312
1505	Daily	71.625	35688.9	55	1974	1.30227	18.0795	100243.9357	2110	47.508974
1506	Daily	24.3211	28753.9	27	1615	0.900782	17.8042	68057.92803	1642	41.44819
1507	Daily	7449.31	41928.3	692	2375	10.7649	17.654	126844.3549	3067	41.357794
1508	Daily	32203.6	7590.85	2369	359	13.5937	21.1444	56800.89478	3049	18.629352
1509	Daily	0	4366.6	0	254	0	17.1913	15517.94594	254	61.094275
1511	Daily	25280.6	96594.2	2129	6680	11.8744	14.4602	344856.7885	8809	39.148233
1512	Daily	62289.8	11523.4	3849	758	16.1834	15.2024	122524.1776	4607	26.59522
1513	Daily	33379.2	5629.06	2070	335	16.1252	16.8032	66099.64043	3077	21.481846
1514	Daily	22918.9	4078.65	1384	242	16.5599	16.8539	39885.29401	1626	24.529701
1515	Daily	11985.2	18247	857	1203	13.985	15.1679	71011.90267	2671	26.586261
1516	Daily	7103.31	250.251	493	12	14.4083	20.8542	9329.391349	505	18.474042
1517	Daily	17855.2	1071.33	1070	65	16.6871	16.4819	25645.02973	1135	22.59474
1518	Daily	15625.7	2625.25	1480	183	10.5579	14.3456	32706.40174	3185	10.268886
1519	Daily	17615.9	6107.18	909	383	19.3794	15.9456	37206.00289	1292	28.797216
1520	Daily	56187.9	6291.22	3599	447	15.6121	14.0743	92093.50203	4046	22.761617
1521	Daily	52288.7	o mixed-use developmer	3035	461	17.2286	14.2493	84010.43303	3496	24.030444
1522	Daily	48593.5	3997.38	2454	230	19.8018	17.3799	72452.28083	2684	26.994143
1523	Daily	6884.35	3653.68	490	292	14.0497	12.5126	21104.803	810	26.055312
1525	Daily	102398	18214.2	4941	1159	20.7241	15.7154	174085.9867	6100	28.538686
Total		**552037.2161**	**314353.151**	**34381**	**19910**	**16.05646189**	**15.78870673**	**1647497.394**	**57526**	**28.6391787**

CITY OF LAGUNA HILLS
VMT SCREENING FORM FOR LAND USE PROJECTS

This Screening Form acknowledges the City of Laguna Hills requirements for the evaluation of vehicle miles traveled (VMT) under CEQA. The analysis provided in this form should follow the City of Laguna Hills approved VMT Guidelines, dated July 2025.

I. Project Description

Case Number:

Project Name: 24422 Avenida De La Carlota Mixed-Use Project

Project Location: 24422 Avenida De La Carlota, City of Laguna Hills, CA

Project Description: Conversion of 121,000 SF of general/medical office building to mixed-use development (121,000 SF medical-dental office & 250 DU senior housing).

(Please attach a copy of the project Site Plan)

Current GP Land Use: Village Commerical **Proposed GP Land Use:** Village Commerical

Current Zoning: Urban Village Specific Plan **Proposed Zoning:** Urban Village Specific Plan

If a project requires a General Plan Amendment or Zone change, then additional information and analysis should be provided to ensure the project is consistent with RTP/SCS Strategies and RHNA Allocation Plan.

II. VMT Screening Criteria

A. Is the Project 100% affordable housing?	**YES**		**NO**		Attachments:	
B. Is the Project within 1/2 mile of qualifying transit?	**YES**		**NO**		Attachments:	
C. Is the Project a local serving land use?	**YES**		**NO**		Attachments:	
D. Is the Project in a low VMT area?	**YES**	**X**	**NO**		Attachments:	
E. Are the Project's Net Daily Trips less than 500 ADT?	**YES**		**NO**	**X**	Attachments:	

Low VMT Area Evaluation:

Citywide VMT Averages[1]		
Citywide Home-Based VMT =	18.6	VMT/Capita
Citywide Employment VMT =	20.1	VMT/Employee

Project TAZ	**VMT Rate for Project TAZ[1]**		**Type of Project**	
1511	**11.9**	VMT/Capita	Residential:	**X**
	14.5	VMT/Employee	Non-Residential:	

[1] Base year (2019) projections from OCTAM 5.1.

Trip Generation Evaluation:

Source of Trip Generation: ITE Trip Generation Manual (11th Edition, 2021)

Project Trip Generation: **2,637** **Average Daily Trips (ADT)**

Internal Trip Credit:	YES		NO	**X**	% Trip Credit:	
Pass-By Trip Credit:	YES		NO	**X**	% Trip Credit:	
Affordable Housing Credit:	YES		NO	**X**	% Trip Credit:	
Existing Land Use Trip Credit:	YES		NO	**X**	Trip Credit:	

Net Project Trip Generation: **2,637** **Average Daily Trips (ADT)** Attachments:

Does project trip generation warrant an LOS evaluation outside of CEQA?	**YES**	**X**	**NO**	

III. VMT Screening Summary

A. Is the Project presumed to have a less than significant impact on VMT?

A Project is presumed to have a less than significant impact on VMT if the Project satisfies at least one (1) of the VMT screening criteria.

Less Than Significant

B. Is mitigation required?

If the Project does not satisfy at least one (1) of the VMT screening criteria, then mitigation is required to reduce the Project's impact on VMT.

No Mitigation Required

C. Is additional VMT modeling required to evaluate Project impacts?

YES		NO	X

If the Project does not satisfy at least one (1) of the VMT screening criteria AND generates 2,400 or more net daily trips, then additional VMT modeling using OCTAM is required. If the project generates less than 2,400 net daily trips, the Project TAZ VMT Rate can be used for mitigation purposes.

IV. MITIGATION

A. Citywide Average VMT Rate (Threshold of Significance) for Mitigation Purposes:	N/A	N/A
B. Unmitigated Project TAZ VMT Rate:	N/A	N/A
C. Percentage Reduction Required to Achieve the Citywide Average VMT:	N/A	

D. VMT Reduction Mitigation Measures:

Source of VMT Reduction Estimates:	
Project Location Setting	

	VMT Reduction Mitigation Measure:	Estimated VMT Reduction (%)
1.		0.00%
2.		0.00%
3.		0.00%
4.		0.00%
5.		0.00%
6.		0.00%
7.		0.00%
8.		0.00%
9.		0.00%
10.		0.00%
Total VMT Reduction (%)		**0.00%**

(Attach additional pages, if necessary, and a copy of all mitigation calculations.)

E. Mitigated Project TAZ VMT Rate:	N/A	N/A

F. Is the project presumed to have a less than significant impact with mitigation?

N/A

If the mitigated Project VMT rate is below the Citywide Average Rate, then the Project is presumed to have a less than significant impact with mitigation. If the answer is no, then additional VMT modeling may be required and a potentially significant and unavoidable impact may occur. All mitigation measures identified in Section IV.D. are subject to become Conditions of Approval of the project. Development review and processing fees should be submitted with, or prior to the submittal of this Form. The Planning Department staff will not process the Form prior to fees being paid to the City.

Prepared By		Developer/Applicant	
Company:	RK Engineering Group Inc.	**Company:**	BSP Oakbrook, LLC
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Date:	11/4/2025	**Date:**	11/4/2025

Approved by:

Laguna Hills Community Development Dept. **Date**	**Laguna Hills Public Services Dept.** **Date**

OCTAM 5.1** Base Year 2019 Statistics*

Zone	Home-based VMT per Capita	Employment (commute) VMT per employee	Total VMT per Service Population
1504	12.9	20.1	25.9
1505	1.3	18.1	47.5
1506	0.9	17.8	41.4
1507	10.8	17.7	41.4
1508	13.6	21.1	18.6
1509	0.0	17.2	61.1
1511	11.9	14.5	39.1
1512	16.2	15.2	26.6
1513	16.1	16.8	21.5
1514	16.6	16.9	24.5
1515	14.0	15.2	26.6
1516	14.4	20.9	18.5
1517	16.7	16.5	22.6
1518	10.6	14.3	to mixed-use development (
1519	19.4	15.9	28.8
1520	15.6	14.1	22.8
1521	17.2	14.2	24.0
1522	19.8	17.4	27.0
1523	14.0	12.5	26.1
1525	20.7	15.7	28.5
Total	16.1	16.1	28.6

*Geography nests into OCTAM zone structure. VMT includes all VMT to/from specified geography, except for VMT that leaves OCTAM model

** Note that as OCTAM is updated, these statistics are subject to change

Zone ID	Time Period	Home-Based VMT (PA)	Home-Based Work VMT (PA)	Population	Employment	HBVMT_per_Pop (PA)	HBWVMT_per_Emp (PA)	Total VMT (OD)	Service Population	TOTVMT_per_SerPop (OD)
1504	Daily	31882.1	17741.8	2478	883	12.8661	20.0927	87020.70008	3361	25.891312
1505	Daily	71.625	35688.9	55	1974	1.30227	18.0795	100243.9357	2110	47.508974
1506	Daily	24.3211	28753.9	27	1615	0.900782	17.8042	68057.92803	1642	41.44819
1507	Daily	7449.31	41928.3	692	2375	10.7649	17.654	126844.3549	3067	41.357794
1508	Daily	32203.6	7590.85	2369	359	13.5937	21.1444	56800.89478	3049	18.629352
1509	Daily	0	4366.6	0	254	0	17.1913	15517.94594	254	61.094275
1511	Daily	25280.6	96594.2	2129	6680	11.8744	14.4602	344856.7885	8809	39.148233
1512	Daily	62289.8	11523.4	3849	758	16.1834	15.2024	122524.1776	4607	26.59522
1513	Daily	33379.2	5629.06	2070	335	16.1252	16.8032	66099.64043	3077	21.481846
1514	Daily	22918.9	4078.65	1384	242	16.5599	16.8539	39885.29401	1626	24.529701
1515	Daily	11985.2	18247	857	1203	13.985	15.1679	71011.90267	2671	26.586261
1516	Daily	7103.31	250.251	493	12	14.4083	20.8542	9329.391349	505	18.474042
1517	Daily	17855.2	1071.33	1070	65	16.6871	16.4819	25645.02973	1135	22.59474
1518	Daily	15625.7	2625.25	1480	183	10.5579	14.3456	32706.40174	3185	10.268886
1519	Daily	17615.9	6107.18	909	383	19.3794	15.9456	37206.00289	1292	28.797216
1520	Daily	56187.9	6291.22	3599	447	15.6121	14.0743	92093.50203	4046	22.761617
1521	Daily	52288.7	o mixed-use developmer	3035	461	17.2286	14.2493	84010.43303	3496	24.030444
1522	Daily	48593.5	3997.38	2454	230	19.8018	17.3799	72452.28083	2684	26.994143
1523	Daily	6884.35	3653.68	490	292	14.0497	12.5126	21104.803	810	26.055312
1525	Daily	102398	18214.2	4941	1159	20.7241	15.7154	174085.9867	6100	28.538686
Total		**552037.2161**	**314353.151**	**34381**	**19910**	**16.05646189**	**15.78870673**	**1647497.394**	**57526**	**28.6391787**