Appendix L

Local Transportation Assessment for Harmon Ranch

Local Transportation Assessment

Harmon Ranch

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Executive Summary

The purpose of this Local Transportation Assessment (LTA) is to identify and document any substantial effects that the proposed Harmon Ranch project (Proposed Project) will have on the surrounding transportation network, and to recommend potential improvements, as necessary.

ES.1 Project Setting

The proposed project is approximately 11.5 acres and includes a total of 63 new single-family homes and associated site improvements and retention of the existing historic home (see Figure 1-1, Site Plan). The project proposes approximately 5.7 acres designated for residential development, a 0.25-acre historic home site, 3.2 acres of open space areas, 1.9 acres for private streets, and 0.5 acres of public right-of-way (Oak Knoll Road). The proposed project would include 63 single-family detached homes plus the 1 existing historic home on site for a total of 64 lots within the Specific Plan boundary. The proposed density is 8.8 dwelling units/acre (64 total residential lots/7.26-acre net project area not including private streets), which is just over the existing RS-7 designation density. The proposed project is located in the southern portion of the City, along Oak Knoll Road, south of Poway Road and west of Carriage Road.

A total of 40 public parking spaces will be provided, including 24 parallel and 16 perpendicular spaces, in addition to the two car parking garages and driveways provided for each unit.

The Proposed Project is anticipated to generate a total of 630 daily trips, with 51 trips (15-in & 36-out) generated during the AM peak hour and 63 trips (44-in & 19-out) during the PM peak hour.

ES.2 Project Study Area

Based on the Proposed Project trip assignment and the City's *Transportation Master Element* Policies C.1 and C.2, the following facilities are included within the project study area:

Roadway Segments:

- Poway Road west of Oak Knoll Road
- Poway Road between Oak Knoll Road and Pomerado Road
- Pomerado Road north of Poway Road
- Pomerado Road between Poway Road and Oak Knoll Road
- Pomerado Road south of Oak Knoll Road
- Oak Knoll Road between Poway Road and Pomerado Road
- Carriage Road between Poway Road and Oak Knoll Road

Intersections:

1. Oak Knoll Road / Poway Road
2. Pomerado Road / Poway Road
3. Pomerado Road / Oak Knoll Road
4. Oak Knoll Road / Project Driveway (Analyzed under "Plus Project" conditions only)
5. Oak Knoll Road / Carriage Road

ES.3 Substantial Effects to the Transportation Network

This section summarizes the analysis results under each analysis scenario.

Existing Conditions

The following summarizes the analysis results and findings under Existing conditions.

Roadway Analysis

- All study roadway segments currently operate within their design thresholds.

Intersection Analysis

- All study area intersections currently operate at acceptable LOS D or better.

Near-Term Conditions

The following summarizes the analysis results and findings under Near-Term conditions.

Roadway Analysis

- All study roadway segments are projected to operate within their design thresholds under Near-Term Base conditions.
- All study roadway segments are projected to operate within their design thresholds under Near-Term Base with Project conditions.

Intersection Analysis

- All study area intersections are projected to operate at acceptable LOS D or better under Near-Term Base conditions.
- All study area intersections are projected to operate at acceptable LOS D or better under Near-Term with Project conditions.

The Proposed Project is not anticipated to have any substantial effect on the operations of the study area roadway or intersections under Near-Term with Project conditions. Therefore, no additional intersection improvements are needed.

1.0 Introduction

The purpose of this Local Transportation Assessment (LTA) is to identify and document any substantial effects that the proposed Harmon Ranch project (Proposed Project) will have on the surrounding transportation network, and to recommend potential improvements, as necessary.

1.1 Project Description

The proposed project is approximately 11.5 acres and includes a total of 63 new single-family homes and associated site improvements and retention of the existing historic home (see Figure 1-1, Site Plan). The project proposes approximately 5.7 acres designated for residential development, a 0.25-acre historic home site, 3.2 acres of open space areas, 1.9 acres for private streets, and 0.5 acres of public right-of-way (Oak Knoll Road). The proposed project would include 63 single-family detached homes plus the 1 existing historic home on site for a total of 64 lots within the Specific Plan boundary. The proposed density is 8.8 dwelling units/acre (64 total residential lots/7.26-acre net project area not including private streets), which is just over the existing RS-7 designation density. The proposed project is located in the southern portion of the City, along Oak Knoll Road, south of Poway Road and west of Carriage Road.

A total of 40 public parking spaces will be provided, including 24 parallel and 16 perpendicular spaces, in addition to the two car parking garages and driveways provided for each unit. The project location is displayed in Figure 1.1.

1.2 Report Organization

Following this Introduction chapter, this report is organized into the following sections:

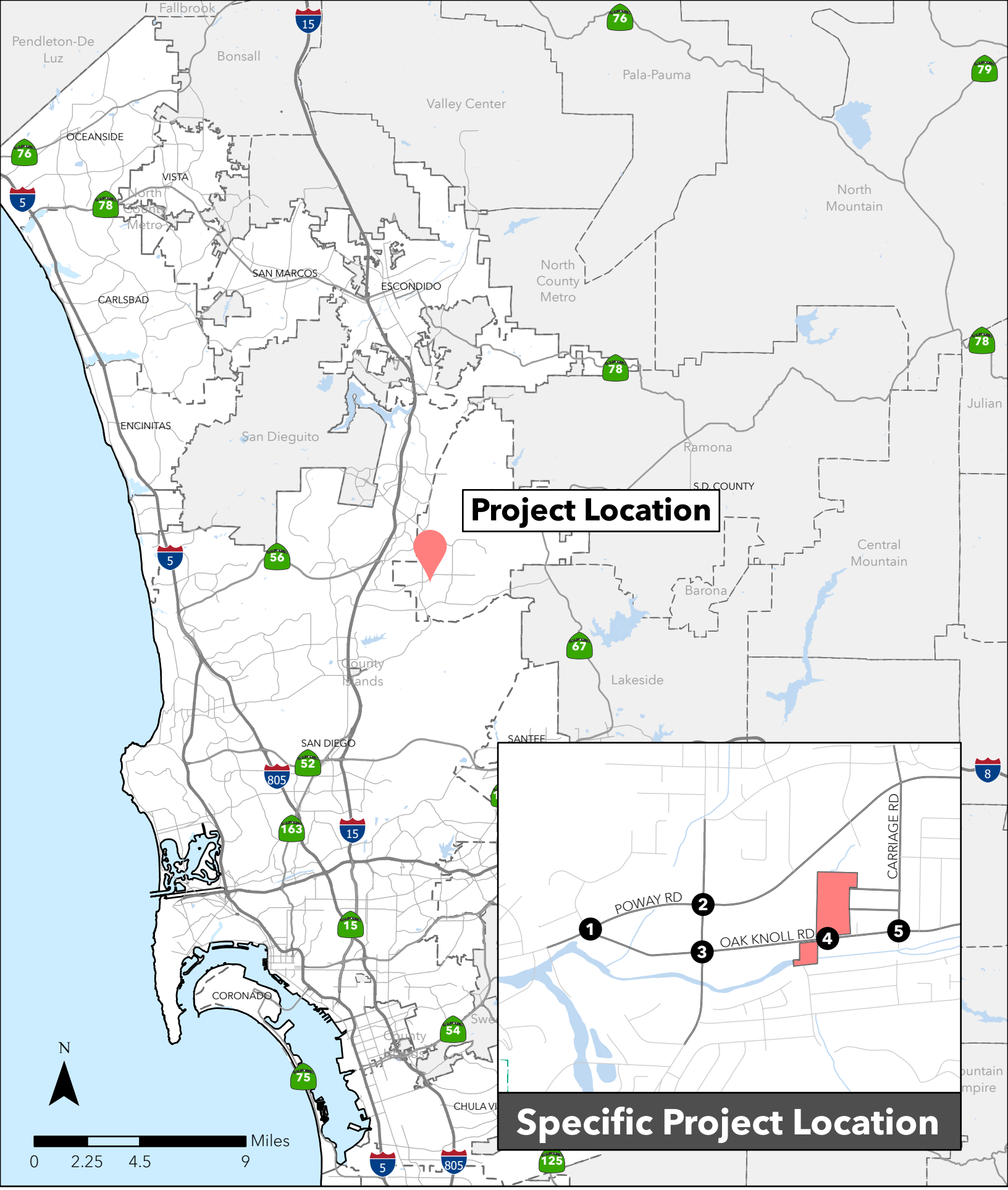
2.0 *Analysis Methodology* - This chapter describes the methodologies and standards utilized to analyze traffic operations and conditions.

3.0 *Proposed Project* - This chapter describes the Proposed Project including project trip generation, trip distribution, trip assignment, and the project study area.

4.0 *Existing Conditions* - This chapter describes the existing traffic network within the study area and provides analysis results for existing traffic conditions.

5.0 *Near-Term Conditions* – This chapter describes near-term developments that are anticipated to generate additional study area trips by the Proposed Project's opening year. Analysis results are provided for the No-Project (Near-Term Base) and Near-Term Plus Project conditions.

6.0 *Site Access* – This chapter addresses access and internal circulation within the project site.



Harmon Ranch

Figure 1.1
Project Location

2.0 Analysis Methodology

Detailed information on intersection analysis methodologies, standards, and thresholds are discussed in the following sections.

2.1 Level of Service Definition

Level of Service (LOS) is a quantitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as delay, speed, travel time, freedom to maneuver, interruptions in traffic flow, queuing, comfort, and convenience. Table 2.1 describes generalized definitions of the various LOS categories (A through F) as applied to roadway operations.

Table 2.1 Level of Service Definitions

LOS Category	Definition of Operation
A	This LOS represents a completely free-flow condition, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions cannot be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Highway Capacity Manual 6th Edition

2.2 Peak Hour Intersection Level of Service Standards and Thresholds

Unlike other jurisdictions within the region, the City of Poway does not assign a daily LOS to roadway facilities. Instead, the City developed a series daily traffic volume design thresholds for each facility type (Primes, Majors, Collectors, etc.) and for unique individual facilities (Espola Road, Poway Road, Community Road, etc.), which are outlined in Table V-1 of the City of Poway Transportation Master Element, March 2010. To determine if average daily traffic volumes on the study area roadway segments are within the design threshold, the appropriate volumes were compared to the daily design capacity of the roadway segments.

2.3 Peak Hour Intersection Level of Service Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analysis for signalized and unsignalized intersections. The following assumptions were utilized in conducting all intersection level of service analysis:

- *Peak Hour Factor*: Based on existing peak hour count for existing conditions.
- *Signal Timing*: Based on existing signal timing plans (as of April 2022), provided in Appendix A.

Unsignalized Intersection Analysis

Side-street stop-controlled intersections were analyzed using the Highway Capacity Manual 6th Edition (Section 19) Two-Way Stop-Controlled Intersection analysis methodology. The Synchro Version 11 software supports this methodology and was utilized to produce LOS results. The LOS for a two-way stop-controlled (SSSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. Table 2.2 summarizes the LOS criteria for unsignalized intersections.

Table 2.2 LOS Criteria for Stop-Controlled Unsignalized Intersections

Average Stopped Delay Per Vehicle (sec/veh)	LOS
<10	A
>10 to <15	B
>15 to <25	C
>25 to <35	D
>35 to <50	E
>50	F

Source: Highway Capacity Manual 6th Edition

Signalized Intersection Analysis

The analysis of signalized intersections utilized the operational analysis procedure as outlined in the Highway Capacity Manual (HCM) 6th Edition signalized intersection analysis methodology. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (VPHPL) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e., through and right-turn movements originating from the same lane). The LOS criteria used for the analysis of signalized intersections are described in Table 2.3, identifying the thresholds of control delays and the associated LOS. The computerized analysis of intersection operations was performed utilizing the Synchro Version 11 traffic analysis software by Trafficware Ltd.

Table 2.3 Signalized Intersection LOS Operational Analysis Method

Average Stopped Delay Per Vehicle (seconds)	Level of Service (LOS) Characteristics
<10	*LOS A* describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
>10– 20	*LOS B* describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
>20 – 35	*LOS C* describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
>35– 55	*LOS D* describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
>55 – 80	*LOS E* is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80	*LOS F* describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 6th Edition

2.4 Determination of Substantial Effects

This section outlines the thresholds for determination of substantial project-related effects on study area facilities.

In general, a substantial effect would be identified when the addition of project traffic results in a level of service dropping from LOS D or better to substandard LOS E or F. Table 2.4 summarizes the thresholds for determining substantial effects for facilities operating at substandard level of service with and without the project. These thresholds, as applied to roadway segments, are based upon an acceptable increase in the Volume / Capacity (V/C) ratio.

Table 2.4 Measures of Substantial Project Transportation Effects

	Allowable Change				
	Freeways		Roadway Segments		Intersections
LOS with Project	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)
E & F	0.01	1	0.02	1	2

Source: Guidelines for Transportation Impact Studies in the San Diego Region, May 2019

2.5 Determination of Inconsistencies with Circulation Element

This section outlines City's *Transportation Master Element* policies that are relevant to the Proposed Project. In general, an inconsistency with the *Transportation Master Element* would be identified when the addition of project traffic results in level of service that deviates from the following:

- *Policy C.1:* Avoid approving any development that will increase the traffic on a City roadway above the design capacity threshold unless traffic/roadway design mitigation is available and/or will be implemented to achieve the desired capacity. If no feasible alternates are available, cumulative land use impacts on roadways should be assessed to ascertain the contribution of each new land use being considered.

- *Policy C.2*: Prohibit development which will result in Levels of Service (LOS) exceeding "D" during the two highest peak hours at any intersection unless no feasible alternatives exist and an overriding public need can be demonstrated.

Consistency with these *Transportation Master Element* policies were evaluated in this analysis since they focus on circulation element roadways. The Proposed Project is not proposing any features that are inconsistent with the City's *Transportation Master Element*. It should be noted that the Proposed Project land uses are consistent with those assumed in the City's *Housing Element Update*. Therefore, the roadway operation findings in this study are also consistent with those outlined in the City's *Transportation Master Element*. As a result, the Proposed Project will not change or create any inconsistencies within the City's *Transportation Master Element*.

3.0 Proposed Project

This section describes the Proposed Project including land uses, estimated trip generation, trip distribution, trip assignment and project study area.

3.1 Project Description

The Proposed Project plans to develop 63-single family dwelling units. Proposed amenities will include almost an acre of open space for residents to utilize and a trail connecting to the existing commercial center north of the site. A total of 40 parking spaces will be provided, including 24 parallel and 16 perpendicular spaces, in addition to the two-car parking garages and driveways provided for each unit. The Proposed Project site plan is displayed in Figure 3.1.

3.2 Proposed Project Trip Generation

Table 3.1 displays the Proposed Project's anticipated trip generation. Trip generation rates were derived from *SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates in the San Diego Region, April 2002*.

Table 3.1 Proposed Project Trip Generation

Land Use	Units	Trip Rate	ADT	AM					PM				
				%	Trips	Split	In	Out	%	Trips	Split	In	Out
Single Family	63 Units	10/Units	630	8%	51	(3:7)	15	36	10%	63	(7:3)	44	19

As shown, the Proposed Project is anticipated to generate a total of 630 daily trips, with 51 trips (15-in & 36-out) generated during the AM peak hour and 63 trips (44-in & 19-out) during the PM peak hour.

3.3 Project Trip Distribution & Assignment

The project trip distribution was developed based on the geographical location of the project, the characteristics of the proposed land use, nearest freeway facilities, as well as the location of schools, job centers, and shopping centers. The Proposed Project's trip distribution and trip assignment are displayed in Figure 3.2.

3.4 Project Study Area

Section 7.0 of the *Guidelines for Transportation Impact Studies in the San Diego Region, May 2019* recommends that all, intersection locations where the proposed project will add 50 or more peak-hour trips in either direction to the existing roadway traffic, be included in the study area. As shown in Figure 3.2, the Proposed Project's trip generation will not add more than 50 or more peak hour trips to an intersection; however, a focused LTA was conducted to analyze the following major roadway segments and intersections adjacent to the Proposed Project, as well as the project's driveway:

Roadway Segments:

- Poway Road west of Oak Knoll Road
- Poway Road between Oak Knoll Road and Pomerado Road
- Pomerado Road north of Poway Road
- Pomerado Road between Poway Road and Oak Knoll Road
- Pomerado Road south of Oak Knoll Road
- Oak Knoll Road between Poway Road and Pomerado Road
- Carriage Road between Poway Road and Oak Knoll Road

Intersections:

1. Oak Knoll Road / Poway Road
2. Pomerado Road / Poway Road
3. Pomerado Road / Oak Knoll Road
4. Oak Knoll Road / Project Driveway
5. Oak Knoll Road / Carriage Road

The Proposed Project Study Area is shown in Figure 3.3.

Figure 3.1
Project Site Plan

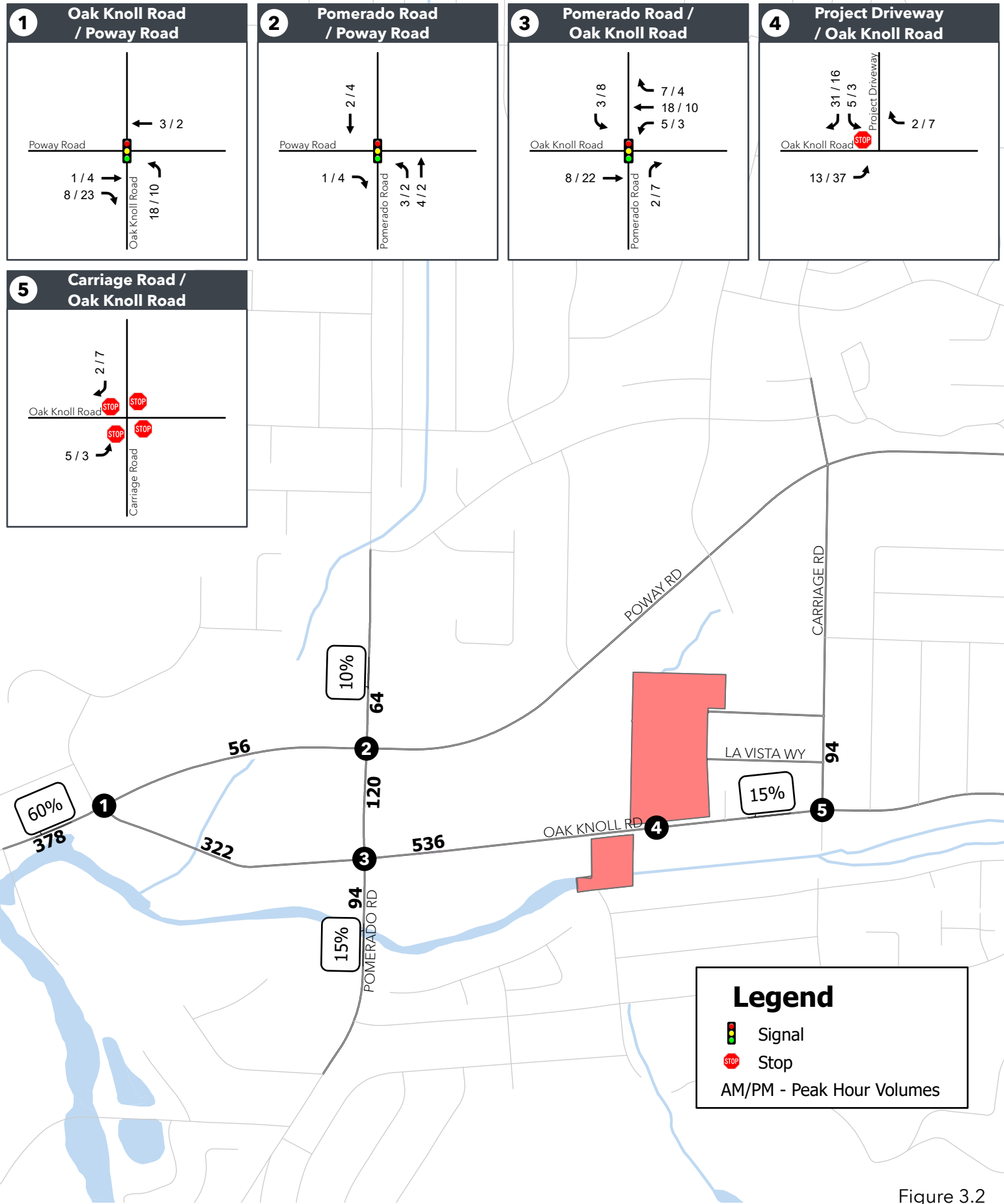


Figure 3.2

Traffic Volumes
Project Trip Assignment

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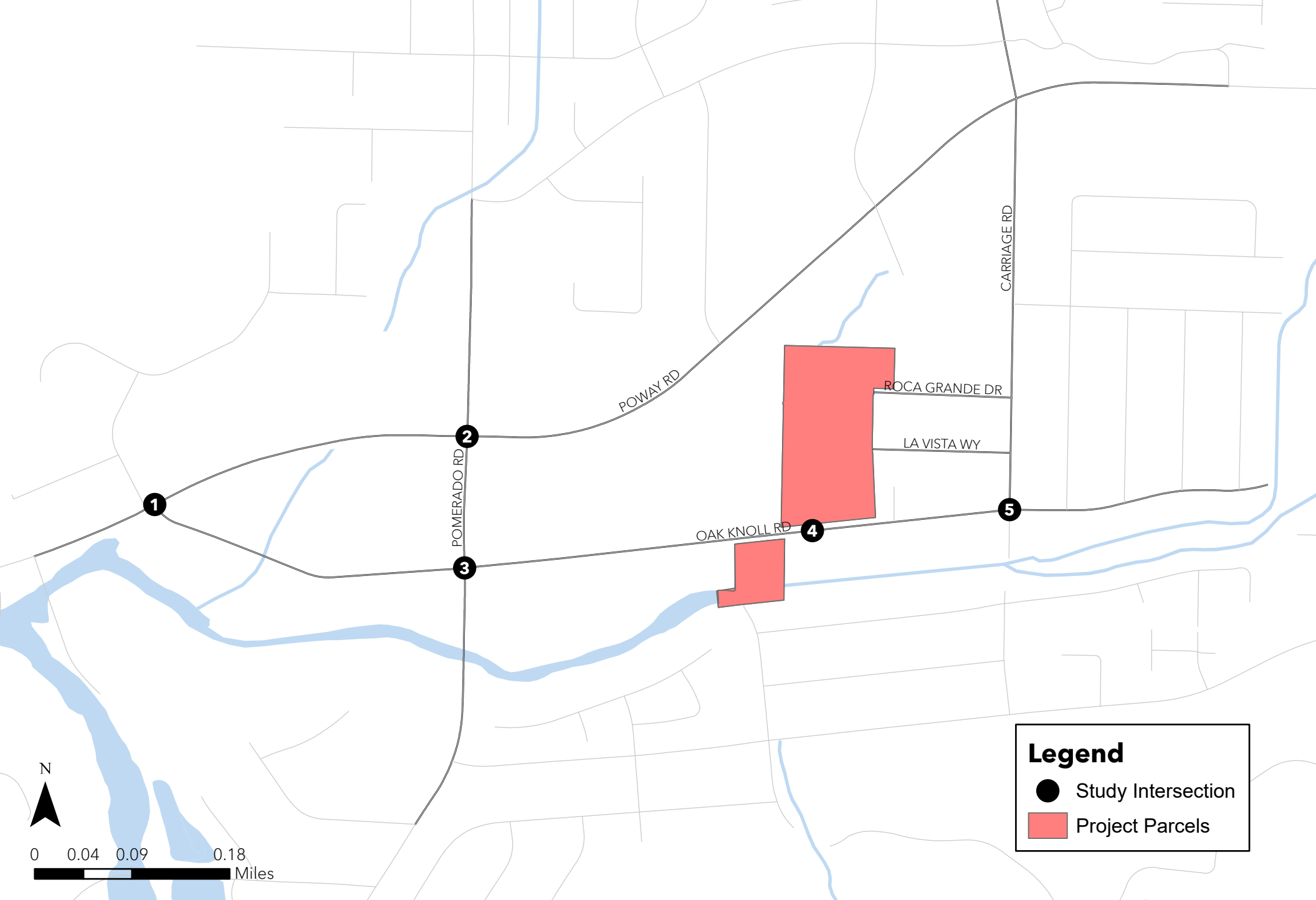
Intersecting Metrics



Harmon Ranch

Figure 3.3
Local Transportation Network

4.0 Existing Conditions

This section describes key study intersections, existing peak hour intersection traffic volumes, and LOS analysis results under Existing conditions.

4.1 Existing Roadway Network

Access to the Proposed Project from the regional transportation network would be provided via Poway Road, Pomerado Road, and Oak Knoll Road. These roadways would either provide a direct connection to the Proposed Project site, via a project driveway on Oak Knoll Road, or would provide a critical link between the Proposed Project and the regional transportation network. Descriptions of these transportation network facilities are described below:

Poway Road is a four-lane east/west roadway that connects I-15 in the west to SR-67 in the east. The roadway has a posted speed limit of 35 miles per hour (mph) and is divided by a raised median. Within the study area, Poway Road provides direct access to commercial centers. Pedestrian sidewalks and bicycle lanes are present on both sides of the roadway. San Diego Metropolitan Transit System (MTS) bus routes 944, 945, and 945A currently provide services on Poway Road, with the closest stop to the project site located on Poway Road and the Countryside Apartments driveway. Poway Road is classified as a Major Arterial by the City's *Transportation Master Element, March 2010*.

Pomerado Road is a four-lane north/south roadway that connects Twin Peaks Road to Spring Canyon Road. Within the study area, this roadway provides a center-left-turn lane median and has a posted speed limit of 45 mph. Pomerado Road is primarily fronted by residential units and provides pedestrian sidewalks and bicycle lanes on both sides of the roadway. San Diego MTS bus routes 945 and 945A currently provide services on Pomerado Road, north of Poway Road. Pomerado Road is classified as a Major Arterial by the City's *Transportation Master Element, March 2010*.

Oak Knoll Road is two-lane roadway that connects Sage View Road to Selier Street. The Proposed Project will take access via side-street stop-controlled intersections on Oak Knoll Road. This roadway is an undivided roadway with a posted speed limit of 25 mph and parallel parking provided on both sides of the roadway. Oak Knoll Road is fronted by residential units and small businesses. Pedestrian sidewalks are provided on both sides of the roadway and sharrow signs are painted on the roadway indicating that Oak Knoll Road is a bicycle route. According to the City's *Transportation Master Element, March 2010*, Oak Knoll Road is a local collector between Poway Road and Pomerado Road and a local road east of Pomerado Road.

Carriage Road is a two-lane roadway that connects Poway Road to Oak Knoll Road. This roadway is an undivided roadway with a posted speed limit of 25 mph and parallel parking provided on both sides of the roadway. Pedestrian sidewalks are provided on both sides of the roadway and bicycle sharrow markings are painted on the roadway indicating that Carriage Road is a bicycle route. Carriage Road is classified as a local collector by the City's *Transportation Master Element, March 2010*.

Figure 4.1 displays the existing functional classifications of the study area roadways, and existing intersection geometrics of the study intersections.

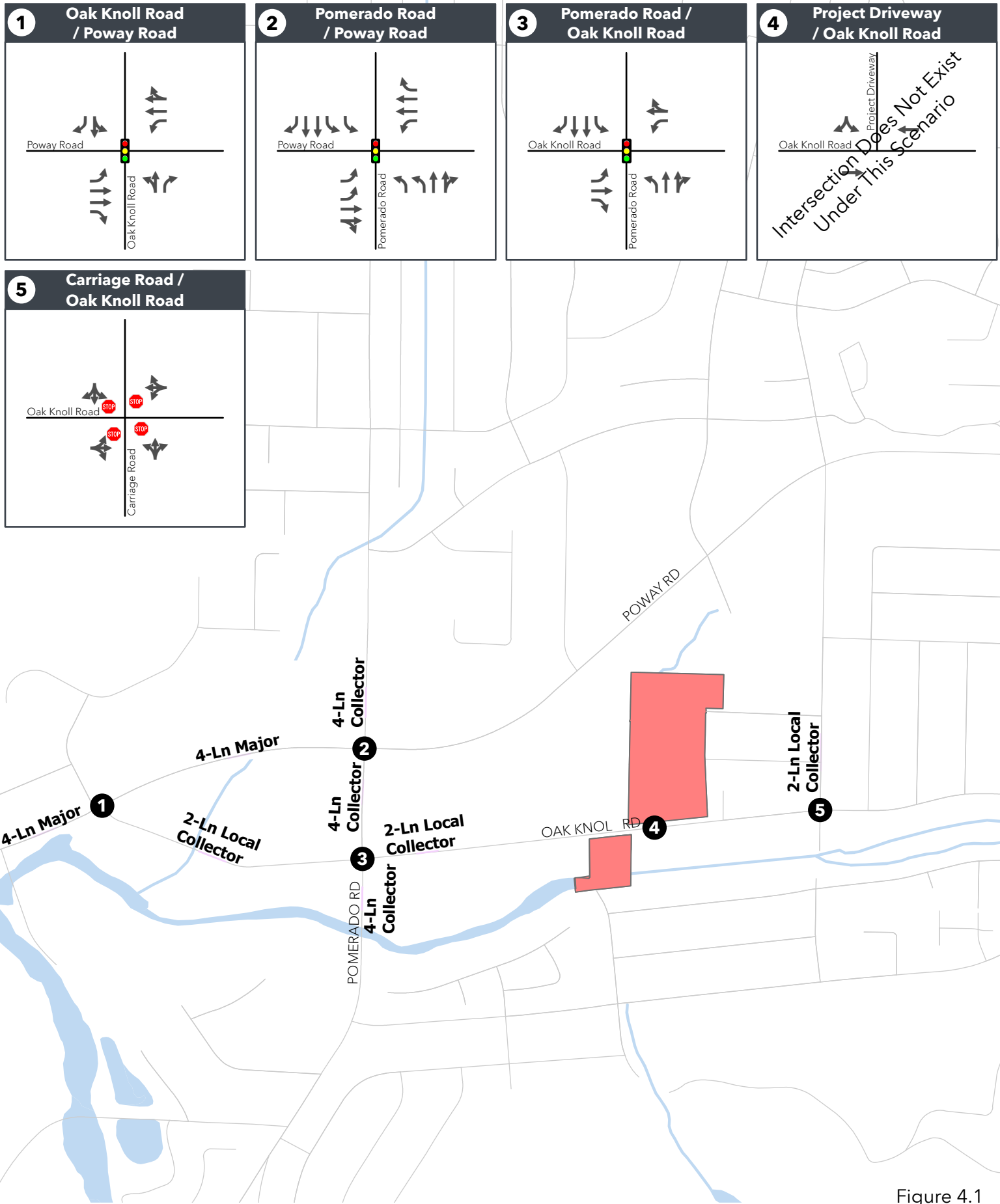


Figure 4.1

Intersection Lane Configurations
Existing Conditions

4.2 Existing Intersection and Roadway Volumes

Figure 4.2 displays the existing AM/PM peak hour turning movements for the study intersections. The roadway segment counts were obtained from recently completed transportation studies and study area intersection traffic counts were conducted in April 2022. Traffic count worksheets are provided in Appendix A.

4.3 Existing Level of Service Analysis

LOS analyses under Existing conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment and intersection LOS analyses results are discussed below.

Roadway Segment Analysis

Table 4.1 displays each study roadway segment's design threshold, Average Daily Traffic (ADT) volume, and whether the roadway segment operates within its design threshold. As shown, all study roadways currently operate within their design threshold.

Table 4.1 Roadway Segment ADT and Thresholds – Existing Conditions

Roadway	Segment	Functional Classification	Design Threshold	ADT	Within Design Threshold?
Poway Rd	West of Oak Knoll Rd	4-Lane Major Arterial	43,000	36,495	Yes
	Oak Knoll Rd to Pomerado Rd	4-Lane Major Arterial	43,000	31,629	Yes
Pomerado Rd	North of Poway Rd	4-Lane Collector	32,000	23,012	Yes
	Poway Rd to Oak Knoll Rd	4-Lane Collector	32,000	16,092	Yes
	South of Oak Knoll Rd	4-Lane Collector	32,000	24,200	Yes
Oak Knoll Rd	Poway Rd to Pomerado	2-Lane Local Collector	10,900	6,900	Yes
	Pomerado Rd to Carriage Rd	2-Lane Local Collector	10,900	4,000	Yes
Carriage Rd	Poway Rd to Oak Knoll Rd	2-Lane Local Collector	10,900	3,359	Yes

Intersection Analysis

Table 4.2 displays intersection LOS and average vehicle delay results for the study area intersections under Existing conditions. LOS calculation worksheets for Existing conditions are provided in Appendix B.

Table 4.2 Peak Hour Intersection LOS Results - Existing Conditions

Intersection	Control	AM		PM	
		Delay	LOS	Delay	LOS
1: Oak Knoll Rd & Poway Rd	Signal	31.1	C	29.9	C
2: Pomerado Rd & Poway Rd	Signal	40.7	D	33.2	C
3: Pomerado Rd & Oak Knoll Rd	Signal	18.6	B	18.7	B
4: Oak Knoll Rd & Project Drwy	SSSC	Does Not Exist Under This Scenario			
5: Oak Knoll Rd & Carriage Rd	AWSC	7.4	A	7.9	A

Note:
SSSC = Side-Street Stop Controlled. For SSSC intersections, the delay shown is the worst delay experienced by any of the approaches.
AWSC = All-Way Stop Controlled

As shown in Table 4.2, all study area intersections currently operate at LOS D or better.

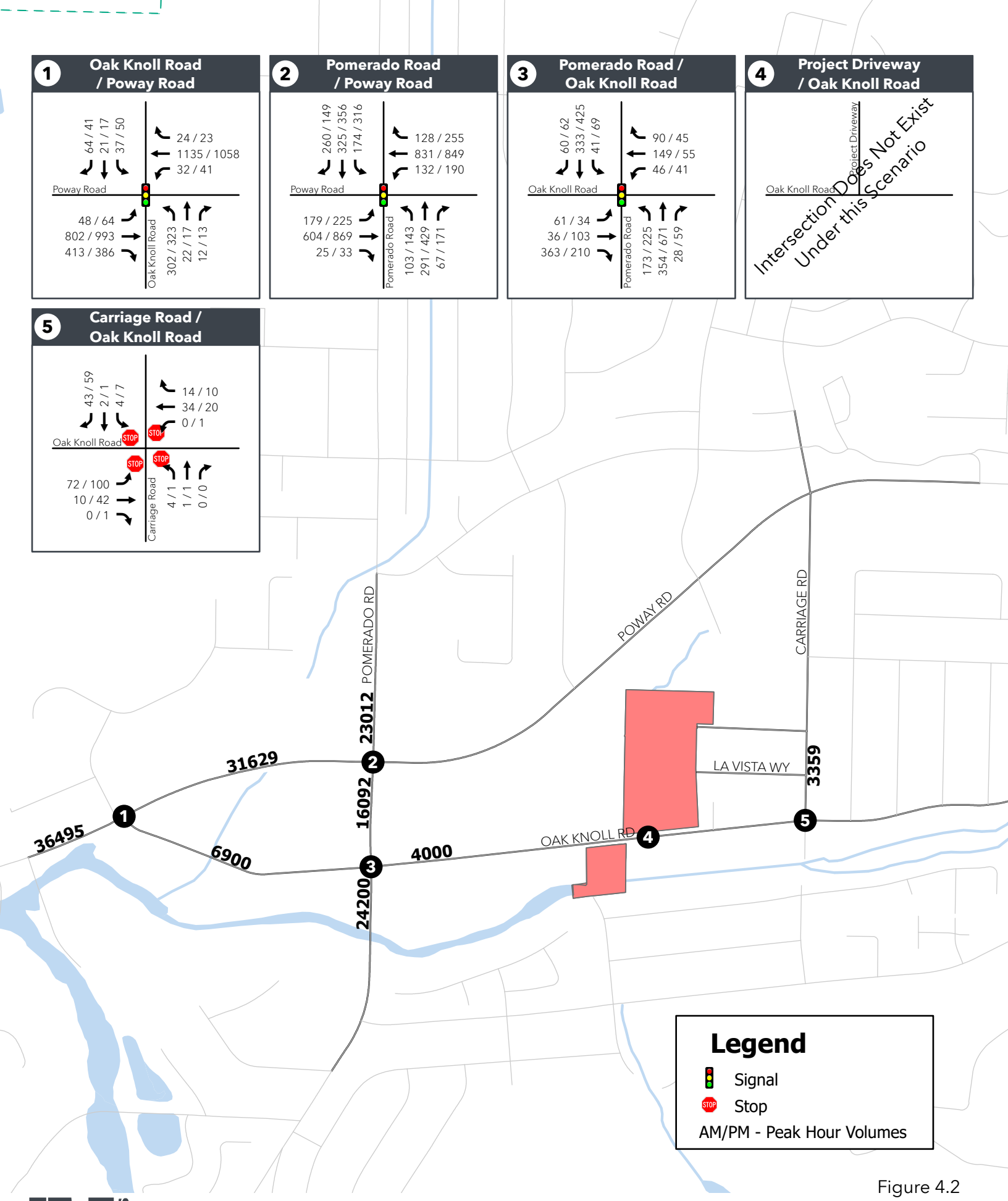


Figure 4.2

Traffic Volumes
Existing Conditions

5.0 Near-Term Conditions

This section provides an analysis of Near-Term Base conditions both with and without the Proposed Project. The scenarios analyzed in this section include:

- Near-Term Base
- Near-Term Plus Proposed Project

5.1 Cumulative Project Traffic

The following two (2) projects were identified by the City of Poway as cumulative projects, since they are anticipated to contribute traffic within the project study area:

1. *Poway Commons*– This project is located on the southwest corner of the Poway Road and Civic Center Drive intersection. It proposed to develop 141 condominium units with 25,000 square feet of specialty retail. The project is anticipated to generate 2,572 average daily trips with 175 trips (65-in / 110-out) during the AM peak hour and 224 trips (138-in / 86-out) during the PM peak hour.

2. *Fairfield* – This project is located at the existing Carriage Center West Shopping Center and recently closed Poway Bowl parcel on 12845 and 12941 Poway Road, respectively. It proposes to replace the existing shopping center and bowling alley with 221 apartments, 4,620 square feet of restaurant, and 3,878 square feet of retail uses. The project is anticipated to generate 2,220 average daily trips with 170 trips (54-in / 116-out) during the AM peak hour and 192 trips (125-in / 67-out) during the PM peak hour.

3. *The Outpost* – This project is located at 13249 – 13253 Poway Road. Is proposed to develop 72 dwelling units and 15,871 square feet of commercial space. The project is anticipated to generate 2,625 average daily trips with 135 trips (63-in / 72-out) during the AM peak hour and 187 trips (108-in / 79-out) during the PM peak hour.

The traffic generated from the projects listed above was included in the Near-Term Base scenario. Table 5.1 displays trip generation for the cumulative projects described above. The respective trip distribution and trip assignment assumptions for each cumulative project was obtained from the either the project's respective traffic impact study. Relevant excerpts from the different sources of information regarding cumulative projects are provided in Appendix C

Table 5.1 Cumulative Projects Trip Generation

Project	Land Use	ADT	AM			PM		
			Total	In	Out	Total	In	Out
Poway Commons[1]	Residential and Retail	2,572	175	65	110	224	138	86
Fairfeild[2]	Residential, Restaurant, and Retail	2,220	170	54	116	192	125	67
The Outpost[3]	Residential and Retail	2,625	135	63	72	187	108	79
Total		7,417	480	182	298	603	371	232

Notes:

[1]Trip generation and distribution was obtained from Meridian Poway Access Analysis Memorandum – Urban Systems Associates, Inc. October 2019

[2]Trip generation and distribution was obtained from Poway Road Mixed Use TIA – Linscott, Law & Greenspan, Engineers. June 2020

[3]Trip generation calculated using the *SANDAG's Not So Brief Guide of Vehicular Traffic Generation Rates in the San Diego Region, April 2002.*

As shown, the cumulative projects are anticipated to generate 7,417 daily trips, with 480 trips during the AM peak hour and 603 trips during the PM peak hour. Figure 5.1 displays the location of the cumulative projects and the cumulative project trip assignment.

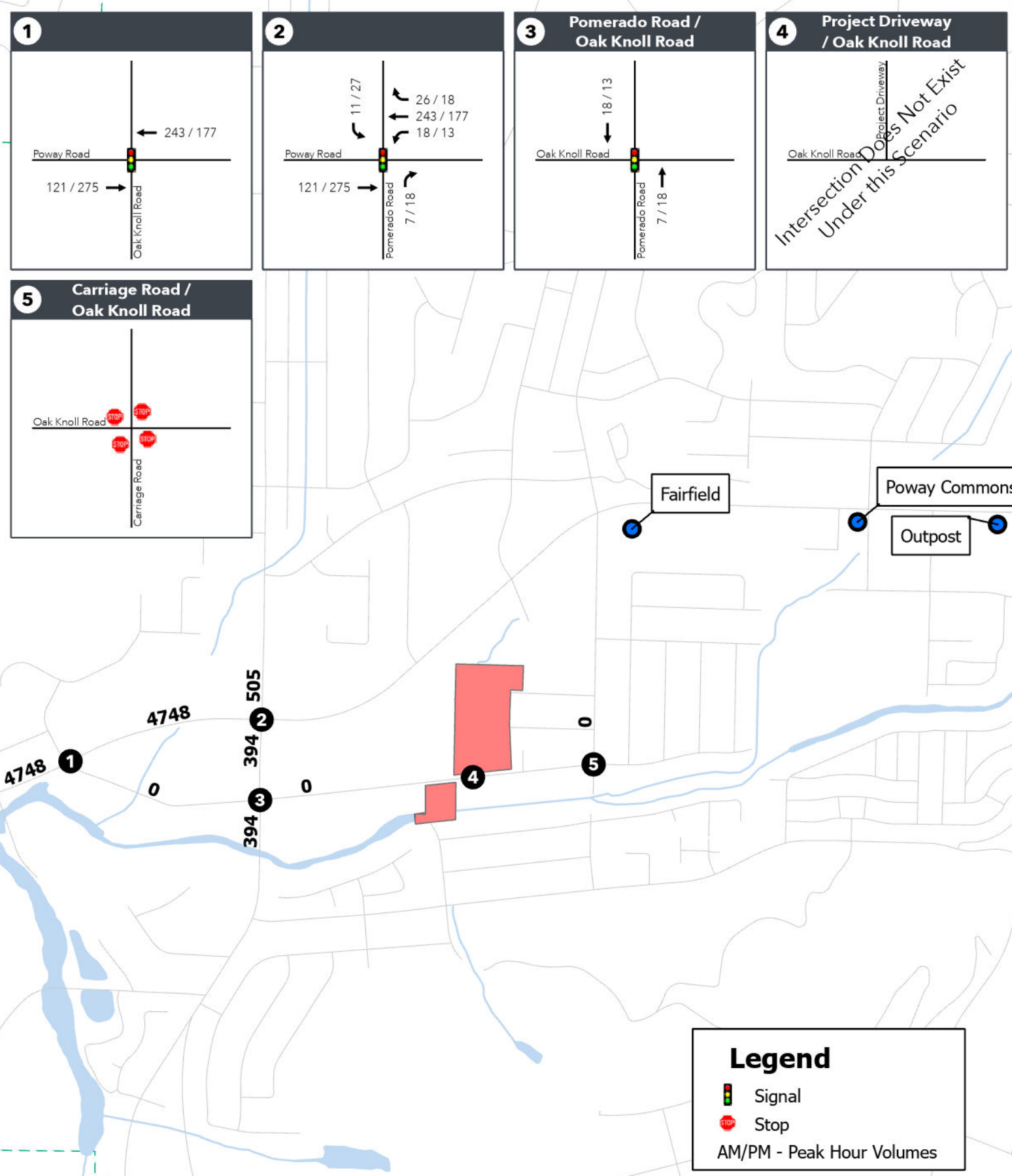


Figure 5.1

Cumulative Projects Locations and Trip Assignment

Harmon Ranch

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5.2 Near-Term Base Roadway Network and Traffic Volumes

The Near-Term Base roadway segment classifications and intersection geometrics for the study area were assumed to be identical to the Existing conditions geometrics, as previously shown in Figure 4.1.

The Near-Term Base scenario traffic volumes were derived by adding the additional trips generated by the cumulative projects listed in Section 5.1 (Figure 5.1) to the existing traffic volumes (Figure 4.2). Figure 5.2 displays the daily roadway segment volume and peak hour intersection volumes for the study roadway segments and intersections, respectively, under the Near-Term Base conditions.

5.3 Near-Term Base Traffic Conditions

LOS analyses for Near-Term Base conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment and intersection LOS analyses results are discussed separately below.

Roadway Segment Analysis

Table 5.2 displays each study roadway segment's design threshold, ADT volume, and whether the roadway segment operates within its design threshold. As shown, all study roadways are anticipated to operate within their design threshold under Near-Term Base conditions.

Table 5.2 Roadway Segment ADT and Thresholds – Near-Term Base Conditions

Roadway	Segment	Functional Classification	Design Threshold	ADT	Within Design Threshold?
Poway Rd	West of Oak Knoll Rd	4-Lane Major Arterial	43,000	41,250	Yes
	Oak Knoll Rd to Pomerado Rd	4-Lane Major Arterial	43,000	36,380	Yes
Pomerado Rd	North of Poway Rd	4-Lane Collector	32,000	23,520	Yes
	Poway Rd to Oak Knoll Rd	4-Lane Collector	32,000	16,490	Yes
	South of Oak Knoll Rd	4-Lane Collector	32,000	24,600	Yes
Oak Knoll Rd	Poway Rd to Pomerado	2-Lane Local Collector	10,900	6,900	Yes
	Pomerado Rd to Carriage Rd	2-Lane Local Collector	10,900	4,000	Yes
Carriage Rd	Poway Rd to Oak Knoll Rd	2-Lane Local Collector	10,900	3,360	Yes

Intersection Analysis

Table 5.3 displays intersection LOS and average vehicle delay results for the key study area intersections under Near-Term Base conditions. LOS calculation worksheets for Near-Term Base conditions are provided in Appendix D.

Table 5.3 Peak Hour Intersection LOS Results - Near-Term Base Conditions

Intersection	Control	AM		PM	
		Delay	LOS	Delay	LOS
1: Oak Knoll Rd & Poway Rd	Signal	35.1	D	32.6	C
2: Pomerado Rd & Poway Rd	Signal	41.1	D	46.9	D
3: Pomerado Rd & Oak Knoll Rd	Signal	19.2	B	19.5	B
4: Oak Knoll Rd & Project Drwy	SSSC	Does Not Exist Under This Scenario			
5. Oak Knoll Rd & Carriage Rd	AWSC	7.4	A	8.1	A

Note:
SSSC = Side-Street Stop Controlled. For SSSC intersections, the delay shown is the worst delay experienced by any of the approaches.
AWSC = All-Way Stop Controlled

As shown in Table 5.2, all study area intersections are projected to operate at LOS D or better under Near-Term Base conditions.

5.4 Near-Term Plus Project Traffic Conditions

LOS analyses were conducted using the methodologies described in Chapter 2.0. Intersection LOS analysis results are discussed separately in the following sections.

Roadway and intersection geometrics under the Near-Term Plus Project conditions were assumed to be identical to Existing geometrics with the addition of the following project driveway:

- *Oak Knoll Road / Project Driveway* – This driveway is located south of the Proposed Project and would allow for full-access. This is an unsignalized intersection, with Oak Knoll Road as uncontrolled and the Project Driveway being stop controlled. This driveway would include one inbound and one outbound lane.

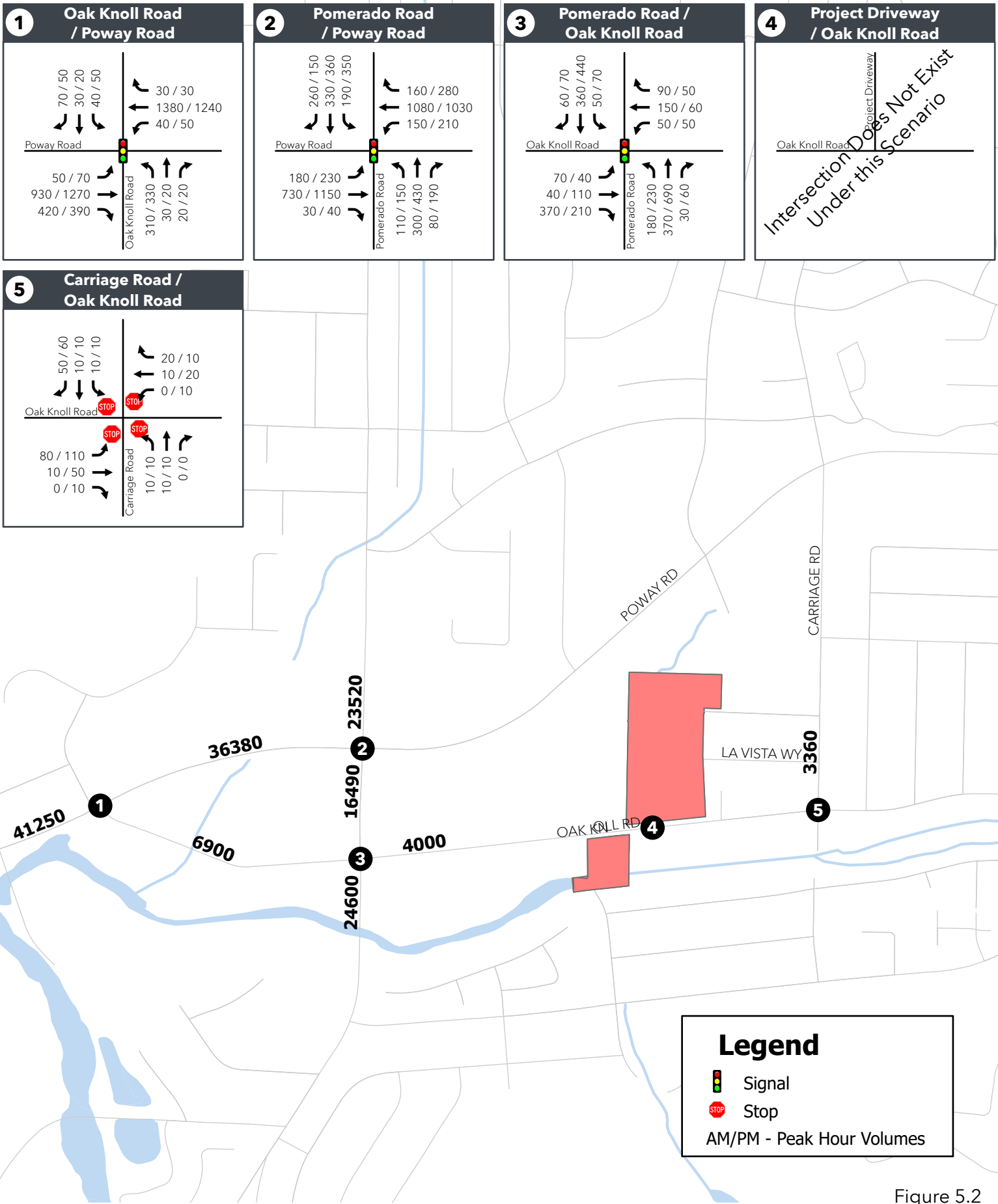


Figure 5.2

Traffic Volumes
Near Term Conditions

Near-Term Plus Project traffic volumes were derived by combining the Near-Term Base traffic volumes (displayed in Figure 5.2) and the project trip assignment volumes (displayed in Figure 3.2). Peak hour intersection volumes for this scenario are displayed in Figure 5.3.

Roadway Segment Analysis

Table 5.3 displays each study roadway segment's design threshold, ADT volume, and whether the roadway segment operates within its design threshold. As shown, all study roadways are anticipated to operate within their design threshold under Near-Term Plus Project conditions.

Table 5.3 Roadway Segment ADT and Thresholds – Near-Term Plus Project Conditions

Roadway	Segment	Functional Classification	Design Threshold	ADT	Within Design Threshold?
Poway Rd	West of Oak Knoll Rd	4-Lane Major Arterial	43,000	41,628	Yes
	Oak Knoll Rd to Pomerado Rd	4-Lane Major Arterial	43,000	36,436	Yes
Pomerado Rd	North of Poway Rd	4-Lane Collector	32,000	23,584	Yes
	Poway Rd to Oak Knoll Rd	4-Lane Collector	32,000	16,610	Yes
	South of Oak Knoll Rd	4-Lane Collector	32,000	24,694	Yes
Oak Knoll Rd	Poway Rd to Pomerado	2-Lane Local Collector	10,900	7,222	Yes
	Pomerado Rd to Carriage Rd	2-Lane Local Collector	10,900	4,536	Yes
Carriage Rd	Poway Rd to Oak Knoll Rd	2-Lane Local Collector	10,900	3,454	Yes

Intersection Analysis

Table 5.4 displays intersection LOS and average vehicle delay results under Near-Term Plus Project conditions. LOS calculation worksheets for Near-Term Plus Project conditions are provided in Appendix E.

Table 5.4 Peak Hour Intersection LOS Results - Near-Term Plus Project Conditions

Intersection	Control	AM		PM		Delay w/o Project (sec) AM/PM	LOS w/o Project AM/PM	Δ Delay (sec)	SE?
		Delay	LOS	Delay	LOS				
1: Oak Knoll Rd & Poway Rd	Signal	37.0	D	33.6	C	35.1 / 32.6	D / C	1.9 / 1.0	N / N
2: Pomerado Rd & Poway Rd	Signal	41.2	D	47.3	D	41.1 / 46.9	D / D	0.1 / 0.4	N / N
3: Pomerado Rd & Oak Knoll Rd	Signal	19.5	B	20.1	C	19.2 / 19.5	B / B	0.3 / 0.6	N / N
4: Oak Knoll Rd & Project Drwy	SSSC	10.5	B	9.8	A	0.0 / 0.0	A / A	10.5 / 9.8	N / N
5. Oak Knoll Rd & Carriage Rd	AWSC	7.4	A	8.2	A	7.6 / 8.1	A / A	0.1 / 0.1	N / N

Notes:
SSSC = Side-Street Stop Controlled. For SSSC intersections, the delay shown is the worst delay experienced by any of the approaches
AWSC = All-Way Stop Controlled
SE = Substantial Effect

As shown in Table 5.4, all study area intersections are anticipated to operate at acceptable LOS D or better under Near-Term Plus Project conditions. As such, the Proposed Project is not anticipated to have a Substantial Effect on its surrounding transportation network, based on standards outlined in Section 2.4.

5.5 Substantial Effects Under Near-Term Conditions

Based upon the criteria of Substantial Effect presented in Sections 2.3 and 2.4 of this report, the addition of Proposed Project traffic would not create a Substantial Effect to any study area intersections.

Roadway Segments

No substantial effects were identified. Therefore, no off-site improvements are recommended.

Intersections

No substantial effects were identified. Therefore, no off-site improvements are recommended.

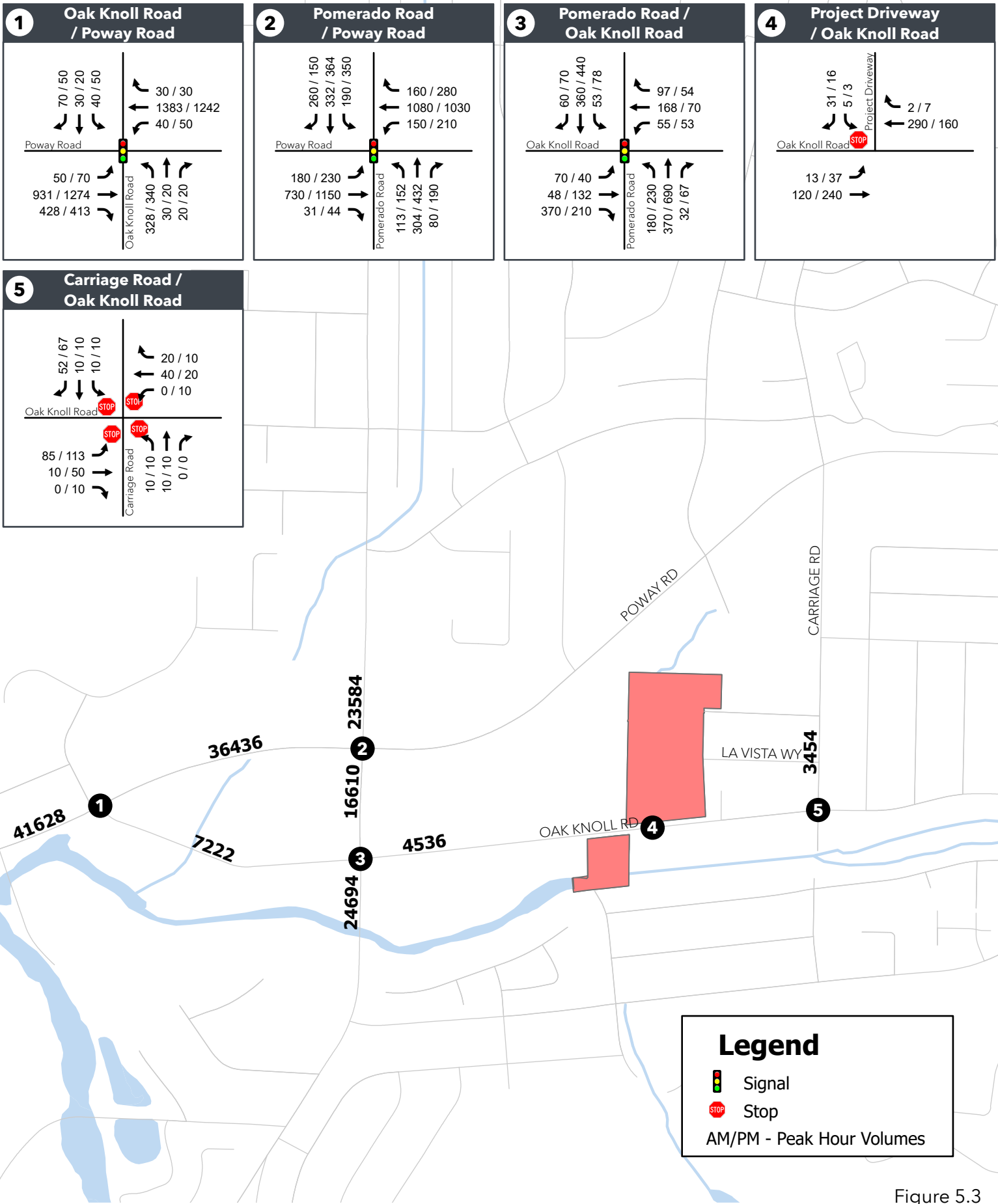


Figure 5.3

Traffic Volumes
Near Term Plus Project Conditions

6.0 Site Access

This chapter addresses access to the project site. Topics discussed include site-access and on-site circulation, and parking.

6.1 On-Site Vehicle Circulation

The Proposed Project will take access via the main driveway located on Oak Knoll Road. The driveway will connect to an internal project roadway which is a north/south loop through the project site. The internal project roadway connects to each dwelling unit's driveway. As shown in the previous section, the Proposed Project Drive is anticipated to operate at LOS A under all analysis scenarios.

The project driveway will be designed to provide adequate corner sight distance for vehicles exiting the project site (see project design plans for further information). There are no sight distance issues anticipated as the project driveway is located on a straight segment of Oak Knoll Road with no vertical or horizontal curvature. Driveway design plans showing the corner sight distance triangles will be submitted as part of the civil design plan set to the City.

6.2 Parking

The Proposed Project will provide two-car parking garages for each unit and 20-foot-deep driveways to accommodate off-street parking. Additionally, the Proposed Project includes 40 guest parking spaces along the private streets on the site. As such, the Proposed Project will provide adequate parking spaces for the residents and their guests. It should be noted that the parking located within the Proposed Project site will only be available to project residents and their guests. Parking spill over from the adjacent neighborhood will not be allowed. It will be the responsibility of the HOA to identify and report violators to the proper authorities.

Appendix A: Intersection Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

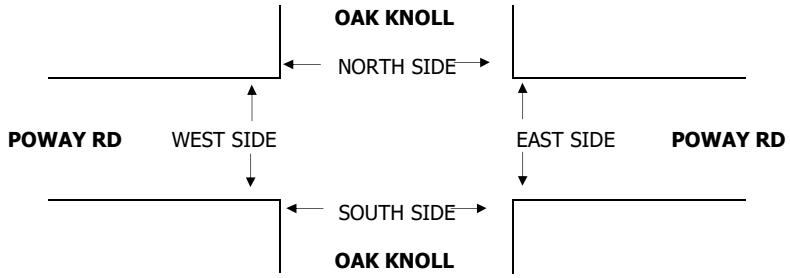
DATE:	LOCATION:	POWAY	PROJECT #:	ETD22-0422-01
4/20/22	NORTH & SOUTH:	OAK KNOLL	LOCATION #:	1
WEDNESDAY	EAST & WEST:	POWAY RD	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND OAK KNOLL			SOUTHBOUND OAK KNOLL			EASTBOUND POWAY RD			WESTBOUND POWAY RD				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	63	7	1	2	4	15	16	175	50	5	241	5	584			1	3	4
	7:15 AM	66	3	2	11	9	14	15	219	87	5	320	5	756				2	2
	7:30 AM	87	8	2	14	5	22	12	192	119	11	300	4	776			1	6	7
	7:45 AM	65	5	2	7	3	14	12	222	122	8	236	8	704				1	1
	8:00 AM	84	6	6	5	4	14	9	169	85	8	279	7	676			1	3	4
	8:15 AM	74	8	7	3	1	8	17	166	67	10	296	4	661				5	5
	8:30 AM	69	7	7	9	3	9	15	168	65	5	246	6	609				3	3
	8:45 AM	41	27	8	14	2	6	28	230	89	8	213	2	668			1	4	5
	VOLUMES	549	71	35	65	31	102	124	1,541	684	60	2,131	41	5,434	0	0	4	27	31
	APPROACH %	84%	11%	5%	33%	16%	52%	5%	66%	29%	3%	95%	2%						
	APP/DEPART	655	/	236	198	/	775	2,349	/	1,641	2,232	/	2,782	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	302	22	12	37	21	64	48	802	413	32	1,135	24	2,912					
	APPROACH %	90%	7%	4%	30%	17%	52%	4%	63%	33%	3%	95%	2%						
	PEAK HR FACTOR		0.866			0.744			0.887			0.902		0.938					
	APP/DEPART	336	/	94	122	/	466	1,263	/	851	1,191	/	1,501	0					
PM	4:00 PM	80	2	6	2	4	15	20	266	69	4	238	6	712				4	4
	4:15 PM	82	5	1	14	5	7	18	311	78	9	295	7	832				3	3
	4:30 PM	88	6	2	17	3	10	13	193	114	17	288	5	756			1	4	5
	4:45 PM	73	4	4	17	5	9	13	223	125	11	237	5	726			1	6	7
	5:00 PM	56	5	5	7	1	16	8	170	88	10	277	6	649				6	6
	5:15 PM	66	6	7	7	3	15	20	165	69	9	284	5	656				5	5
	5:30 PM	62	6	1	17	4	13	18	231	98	9	278	6	743		1		6	7
	5:45 PM	64	7	2	18	4	15	21	221	87	8	277	10	734				7	7
	VOLUMES	571	41	28	99	29	100	131	1,780	728	77	2,174	50	5,808	0	1	2	41	44
	APPROACH %	89%	6%	4%	43%	13%	44%	5%	67%	28%	3%	94%	2%						
	APP/DEPART	640	/	222	228	/	834	2,639	/	1,907	2,301	/	2,845	0					
	BEGIN PEAK HR		4:00 PM																
	VOLUMES	323	17	13	50	17	41	64	993	386	41	1,058	23	3,026					
	APPROACH %	92%	5%	4%	46%	16%	38%	4%	69%	27%	4%	94%	2%						
	PEAK HR FACTOR		0.919			0.871			0.886			0.902		0.909					
	APP/DEPART	353	/	104	108	/	444	1,443	/	1,056	1,122	/	1,422	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0			1		1
	7:15 AM		1			1					0			1		1
	7:30 AM					0					0		1		1	2
	7:45 AM					0					0			1		1
	8:00 AM		2		2	4					0			1		1
	8:15 AM					0					0					0
	8:30 AM					0					0				1	1
	8:45 AM					0					0		1	1	1	3
	TOTAL	0	3	0	2	5	0	0	0	0	0	0	2	5	3	10
PM	4:00 PM					0					0			1		1
	4:15 PM			2		2					0		1		1	2
	4:30 PM					0					0		1	1	1	3
	4:45 PM					0					0					0
	5:00 PM					0					0					0
	5:15 PM		1			1					0			1	1	2
	5:30 PM					0					0		1		1	2
	5:45 PM					0					0					0
	TOTAL	0	1	2	0	3	0	0	0	0	0	0	3	3	4	10

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

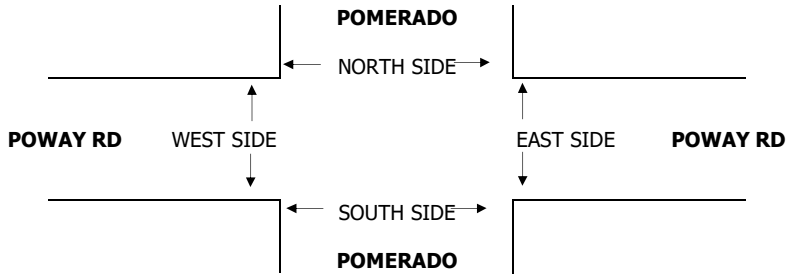
DATE:	LOCATION:	POWAY	PROJECT #:	ETD22-0422-01
4/20/22	NORTH & SOUTH:	POMERADO	LOCATION #:	2
WEDNESDAY	EAST & WEST:	POWAY RD	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND POMERADO			SOUTHBOUND POMERADO			EASTBOUND POWAY RD			WESTBOUND POWAY RD				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	11	97	11	26	52	50	76	79	4	20	169	45	640					0
	7:15 AM	21	106	15	45	89	99	74	122	4	31	216	32	854					0
	7:30 AM	27	52	18	47	96	77	42	158	10	35	199	23	784					0
	7:45 AM	28	79	19	41	69	28	37	183	7	26	199	38	754					0
	8:00 AM	27	54	15	41	71	56	26	141	4	40	217	35	727				1	1
	8:15 AM	19	74	13	39	68	43	22	139	8	32	249	46	752				1	1
	8:30 AM	17	57	21	36	75	36	29	148	5	23	190	30	667				1	1
	8:45 AM	16	62	26	39	52	30	48	198	7	40	178	33	729					0
	VOLUMES	166	581	138	314	572	419	354	1,168	49	247	1,617	282	5,907	0	0	0	3	3
	APPROACH %	19%	66%	16%	24%	44%	32%	23%	74%	3%	12%	75%	13%						
	APP/DEPART	885	/	1,217	1,305	/	868	1,571	/	1,620	2,146	/	2,202	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	103	291	67	174	325	260	179	604	25	132	831	128	3,119					
	APPROACH %	22%	63%	15%	23%	43%	34%	22%	75%	3%	12%	76%	12%						
	PEAK HR FACTOR		0.812			0.814			0.890			0.934		0.913					
	APP/DEPART	461	/	598	759	/	482	808	/	845	1,091	/	1,194	0					
PM	4:00 PM	44	100	21	47	113	48	52	231	2	39	200	51	948			2	5	7
	4:15 PM	49	120	35	61	99	22	54	231	2	35	197	53	958			2	7	9
	4:30 PM	42	104	31	59	86	39	56	187	9	54	242	59	968				9	9
	4:45 PM	37	108	39	86	95	31	56	246	7	47	181	70	1,003			1	11	12
	5:00 PM	29	123	56	87	86	41	58	215	9	46	232	56	1,038				10	10
	5:15 PM	35	94	45	84	89	38	55	221	8	43	194	70	976			1	6	7
	5:30 PM	23	90	36	61	76	45	53	231	9	40	237	62	963			2	5	7
	5:45 PM	33	82	41	73	76	31	50	232	9	49	234	63	973				8	8
	VOLUMES	292	821	304	558	720	295	434	1,794	55	353	1,717	484	7,827	0	0	8	61	69
	APPROACH %	21%	58%	21%	35%	46%	19%	19%	79%	2%	14%	67%	19%						
	APP/DEPART	1,417	/	1,739	1,573	/	1,128	2,283	/	2,656	2,554	/	2,304	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	143	429	171	316	356	149	225	869	33	190	849	255	3,985					
	APPROACH %	19%	58%	23%	38%	43%	18%	20%	77%	3%	15%	66%	20%						
	PEAK HR FACTOR		0.893			0.959			0.912			0.911		0.960					
	APP/DEPART	743	/	909	821	/	579	1,127	/	1,356	1,294	/	1,141	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	5	1	1	1	8					0				1	1
	7:15 AM	2	3	1	1	7					0					0
	7:30 AM	1			1	2					0					0
	7:45 AM	3	1	1		5					0					0
	8:00 AM		1		1	2					0					0
	8:15 AM	1	1	1	1	4					0					0
	8:30 AM	1			1	2					0		1			1
	8:45 AM	1	6	2	2	11					0			1		1
	TOTAL	14	13	6	8	41	0	0	0	0	0	0	1	1	1	3
PM	4:00 PM			1	1	2					0			2		2
	4:15 PM			1	1	2					0					0
	4:30 PM					0					0					0
	4:45 PM	2		1	1	4					0		1		1	2
	5:00 PM	2		1	3	6					0					0
	5:15 PM		1		1	2					0		1			1
	5:30 PM	1			1	2					0					0
	5:45 PM	1	2	1	2	6					0		2		1	3
	TOTAL	6	3	5	10	24	0	0	0	0	0	0	4	2	2	8

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

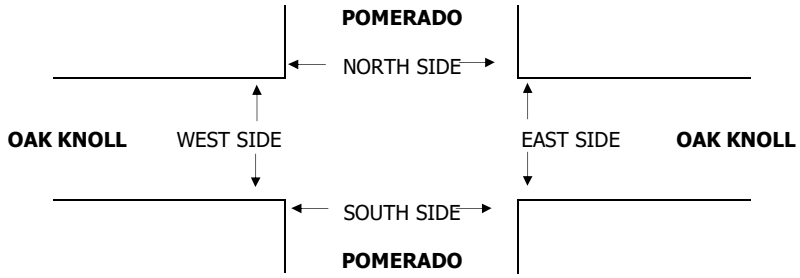
DATE:	LOCATION:	POWAY	PROJECT #:	ETD22-0422-01
4/20/22	NORTH & SOUTH:	POMERADO	LOCATION #:	3
WEDNESDAY	EAST & WEST:	OAK KNOLL	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND POMERADO			SOUTHBOUND POMERADO			EASTBOUND OAK KNOLL			WESTBOUND OAK KNOLL				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	32	92	7	9	49	5	11	5	42	19	33	38	342					0
	7:15 AM	45	115	7	13	89	9	16	7	86	4	32	25	448					0
	7:30 AM	51	78	4	11	95	19	16	7	96	4	30	13	424					0
	7:45 AM	26	83	7	12	66	8	21	8	105	14	32	23	405					0
	8:00 AM	51	78	10	5	83	24	8	14	76	24	52	29	454					0
	8:15 AM	46	93	7	8	88	11	8	10	52	3	24	18	368					0
	8:30 AM	44	85	7	5	77	7	3	10	79	9	25	8	359					0
	8:45 AM	32	66	5	4	63	11	4	11	56	5	24	16	297					0
	VOLUMES	327	690	54	67	610	94	87	72	592	82	252	170	3,097	0	0	0	0	0
	APPROACH %	31%	64%	5%	9%	79%	12%	12%	10%	79%	16%	50%	34%						
	APP/DEPART	1,071	/	947	771	/	1,284	751	/	193	504	/	673	0					
	BEGIN PEAK HR		7:15 AM																
	VOLUMES	173	354	28	41	333	60	61	36	363	46	146	90	1,731					
	APPROACH %	31%	64%	5%	9%	77%	14%	13%	8%	79%	16%	52%	32%						
	PEAK HR FACTOR		0.831			0.868			0.858			0.671		0.953					
	APP/DEPART	555	/	505	434	/	742	460	/	105	282	/	379	0					
PM	4:00 PM	61	163	18	13	100	12	5	29	51	6	13	11	482		1			1
	4:15 PM	53	170	11	18	96	9	10	31	60	12	8	16	494					0
	4:30 PM	72	157	12	20	102	18	13	18	59	8	18	14	511					0
	4:45 PM	50	179	18	21	104	20	7	26	49	9	14	8	505					0
	5:00 PM	50	165	18	10	123	15	4	28	42	12	15	7	489		1			1
	5:15 PM	49	136	16	14	99	12	1	24	48	13	6	17	435					0
	5:30 PM	38	132	16	15	100	13	2	25	57	10	13	15	436					0
	5:45 PM	53	134	15	21	103	12	2	26	44	5	11	14	440					0
	VOLUMES	426	1,236	124	132	827	111	44	207	410	75	98	102	3,792	0	2	0	0	2
	APPROACH %	24%	69%	7%	12%	77%	10%	7%	31%	62%	27%	36%	37%						
	APP/DEPART	1,786	/	1,382	1,070	/	1,312	661	/	463	275	/	635	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	225	671	59	69	425	62	34	103	210	41	55	45	1,999					
	APPROACH %	24%	70%	6%	12%	76%	11%	10%	30%	61%	29%	39%	32%						
	PEAK HR FACTOR		0.967			0.939			0.859			0.881		0.978					
	APP/DEPART	955	/	750	556	/	676	347	/	231	141	/	342	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM				1	1					0					0
	7:15 AM	2			1	3					0					0
	7:30 AM		1		2	3					0					0
	7:45 AM	2			1	3					0				1	1
	8:00 AM		1			1					0	1				1
	8:15 AM		1		2	3					0					0
	8:30 AM		1			1					0			1		1
	8:45 AM		1			1					0					0
	TOTAL	4	5	0	7	16	0	0	0	0	0	1	0	1	1	3
PM	4:00 PM	2				2					0	1				1
	4:15 PM	1		1	1	3					0					0
	4:30 PM	1				1					0					0
	4:45 PM			1		1					0					0
	5:00 PM	3			1	4					0					0
	5:15 PM	2				2					0					0
	5:30 PM	1				1					0			1		1
	5:45 PM	1	2		4	7					0					0
	TOTAL	11	2	2	6	21	0	0	0	0	0	1	0	1	0	2

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

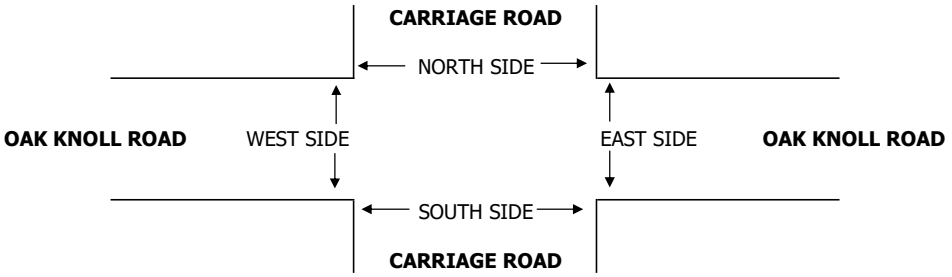
DATE:	LOCATION:	POWAY	PROJECT #:	ETD22-1007-01
10/4/22	NORTH & SOUTH:	CARRIAGE ROAD	LOCATION #:	1
TUESDAY	EAST & WEST:	OAK KNOLL ROAD	CONTROL:	STOP

NOTES:

INCLUDES BIKE & PED

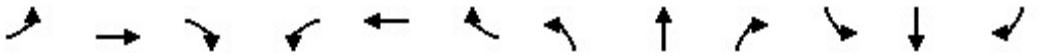
AM / PM / MD / OTHER / OTHER — ▲ N, ◄ W, E ►, S ▼

		NORTHBOUND CARRIAGE ROAD			SOUTHBOUND CARRIAGE ROAD			EASTBOUND OAK KNOLL ROAD			WESTBOUND OAK KNOLL ROAD				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	1	0	0	1	1	14	16	1	0	0	9	5	48					0
	7:15 AM	3	0	0	1	1	6	14	1	0	0	7	2	35					0
	7:30 AM	0	1	0	1	0	12	22	4	0	0	7	5	52					0
	7:45 AM	0	0	0	1	0	11	20	4	0	0	11	2	49					0
	8:00 AM	0	0	0	0	0	12	15	2	1	0	11	1	42					0
	8:15 AM	0	0	0	0	0	9	4	8	1	0	6	1	29	1				1
	8:30 AM	1	0	0	1	0	13	13	3	1	0	6	1	39					0
	8:45 AM	1	1	0	0	0	8	11	3	0	0	3	0	27					0
	VOLUMES	6	2	0	5	2	85	115	26	3	0	60	17	321	1	0	0	0	1
	APPROACH %	75%	25%	0%	5%	2%	92%	80%	18%	2%	0%	78%	22%						
	APP/DEPART	8	/	134	92	/	5	144	/	31	77	/	151	0					
	BEGIN PEAK HR		7:00 AM																
	VOLUMES	4	1	0	4	2	43	72	10	0	0	34	14	184					
	APPROACH %	80%	20%	0%	8%	4%	88%	88%	12%	0%	0%	71%	29%						
	PEAK HR FACTOR		0.417			0.766			0.788			0.857		0.885					
	APP/DEPART	5	/	87	49	/	2	82	/	14	48	/	81	0					
PM	4:00 PM	0	0	0	3	0	11	22	5	1	0	6	0	48					0
	4:15 PM	0	0	0	2	0	14	20	7	0	0	6	3	52					0
	4:30 PM	0	0	0	4	0	15	20	12	0	0	5	3	59					0
	4:45 PM	0	0	0	1	0	14	25	11	0	1	6	2	60					0
	5:00 PM	1	1	0	1	0	12	26	9	0	0	5	1	56					0
	5:15 PM	0	0	0	1	1	18	29	10	2	0	4	4	69					0
	5:30 PM	0	3	0	1	1	11	25	10	0	0	4	3	58					0
	5:45 PM	0	0	0	2	0	9	23	11	0	0	4	0	49				1	1
	VOLUMES	1	4	0	15	2	104	190	75	3	1	40	16	451	0	0	0	1	1
	APPROACH %	20%	80%	0%	12%	2%	86%	71%	28%	1%	2%	70%	28%						
	APP/DEPART	5	/	210	121	/	6	268	/	90	57	/	145	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	1	1	0	7	1	59	100	42	2	1	20	10	244					
	APPROACH %	50%	50%	0%	10%	1%	88%	69%	29%	1%	3%	65%	32%						
	PEAK HR FACTOR		0.250			0.838			0.878			0.861		0.884					
	APP/DEPART	2	/	111	67	/	4	144	/	49	31	/	80	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	2	4	2	9					0			1		1
	7:15 AM		1	1		2					0					0
	7:30 AM	2	1	1	2	6					0		2		1	3
	7:45 AM			1		1					0		1			1
	8:00 AM	2	1	3		6					0					0
	8:15 AM	1				1					0					0
	8:30 AM	1	1	1	1	4					0					0
	8:45 AM			1		1					0		1			1
	TOTAL	7	6	12	5	30	0	0	0	0	0	0	4	1	1	6
PM	4:00 PM			1		1					0					0
	4:15 PM				1	1					0					0
	4:30 PM	2		2	1	5					0	2				2
	4:45 PM	2				2					0					0
	5:00 PM	1				1					0					0
	5:15 PM		2	1		3					0	1				1
	5:30 PM	1	1	1	1	4					0					0
	5:45 PM		1		3	4					0	1			1	2
	TOTAL	6	4	5	6	21	0	0	0	0	0	4	0	0	1	5

Appendix B: LOS Analysis Worksheets – Existing Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	802	413	32	1135	24	302	22	12	37	21	64
Future Volume (veh/h)	48	802	413	32	1135	24	302	22	12	37	21	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	853	173	34	1207	24	321	23	0	39	22	55
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	2062	897	44	2022	40	367	22		349	188	429
Arrive On Green	0.04	0.58	0.58	0.02	0.38	0.38	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1546	1781	3564	71	1141	82	1585	1107	684	1561
Grp Volume(v), veh/h	51	853	173	34	602	629	344	0	0	61	0	55
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1858	1223	0	1585	1791	0	1561
Q Serve(g_s), s	3.7	17.2	6.9	2.5	35.3	35.3	32.4	0.0	0.0	0.0	0.0	3.4
Cycle Q Clear(g_c), s	3.7	17.2	6.9	2.5	35.3	35.3	35.7	0.0	0.0	3.3	0.0	3.4
Prop In Lane	1.00		1.00	1.00		0.04	0.93		1.00	0.64		1.00
Lane Grp Cap(c), veh/h	66	2062	897	44	1008	1054	389	0		537	0	429
V/C Ratio(X)	0.77	0.41	0.19	0.78	0.60	0.60	0.88	0.00		0.11	0.00	0.13
Avail Cap(c_a), veh/h	370	2062	897	301	1008	1054	389	0		537	0	429
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.0	15.1	12.9	63.6	28.4	28.4	49.2	0.0	0.0	35.4	0.0	35.5
Incr Delay (d2), s/veh	6.9	0.6	0.5	9.1	2.2	2.1	20.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	6.9	2.5	1.2	16.4	17.2	13.5	0.0	0.0	1.5	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.0	15.7	13.4	72.7	30.6	30.5	69.2	0.0	0.0	35.4	0.0	35.5
LnGrp LOS	E	B	B	E	C	C	E	A		D	A	D
Approach Vol, veh/h		1077			1265			344			116	
Approach Delay, s/veh		17.8			31.6			69.2			35.5	
Approach LOS		B			C			E			D	

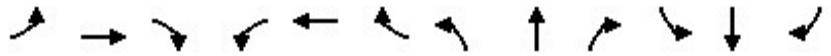
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	80.2		41.0	7.2	81.8		41.0				
Change Period (Y+Rc), s	4.0	6.4		* 5.3	4.0	* 6.4		* 5.3				
Max Green Setting (Gmax), s	27.0	31.6		* 36	22.0	* 37		* 16				
Max Q Clear Time (g_c+I1), s	5.7	37.3		37.7	4.5	19.2		5.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.2		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		31.1
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	179	604	25	132	831	128	103	291	67	174	325	260
Future Volume (veh/h)	179	604	25	132	831	128	103	291	67	174	325	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	197	664	22	145	913	108	113	320	63	191	357	149
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	1863	62	171	1965	873	169	445	86	247	630	277
Arrive On Green	0.02	0.18	0.18	0.10	0.55	0.55	0.05	0.15	0.15	0.07	0.18	0.18
Sat Flow, veh/h	3456	3510	116	1781	3554	1578	3456	2960	575	3456	3554	1561
Grp Volume(v), veh/h	197	336	350	145	913	108	113	190	193	191	357	149
Grp Sat Flow(s),veh/h/ln	1728	1777	1849	1781	1777	1578	1728	1777	1759	1728	1777	1561
Q Serve(g_s), s	7.4	21.6	21.6	10.4	20.1	4.3	4.2	13.3	13.6	7.1	11.9	11.3
Cycle Q Clear(g_c), s	7.4	21.6	21.6	10.4	20.1	4.3	4.2	13.3	13.6	7.1	11.9	11.3
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	249	943	982	171	1965	873	169	267	264	247	630	277
V/C Ratio(X)	0.79	0.36	0.36	0.85	0.46	0.12	0.67	0.71	0.73	0.77	0.57	0.54
Avail Cap(c_a), veh/h	261	943	982	288	1965	873	516	513	507	526	1052	462
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	34.1	34.1	57.8	17.5	13.9	60.8	52.6	52.7	59.3	48.9	48.6
Incr Delay (d2), s/veh	11.4	0.9	0.9	4.8	0.8	0.3	5.2	4.1	4.4	2.0	1.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	10.5	11.0	4.9	8.2	1.6	1.9	6.1	6.2	3.1	5.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.8	35.0	34.9	62.7	18.3	14.2	66.0	56.6	57.1	61.3	49.9	50.6
LnGrp LOS	E	C	C	E	B	B	E	E	E	E	D	D
Approach Vol, veh/h		883			1166			496			697	
Approach Delay, s/veh		43.6			23.4			58.9			53.2	
Approach LOS		D			C			E			D	

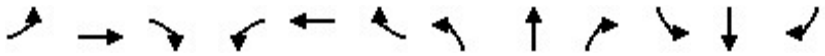
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	25.0	13.6	77.9	10.0	28.6	16.5	75.0
Change Period (Y+Rc), s	* 4.2	5.5	* 4.2	6.0	3.6	5.5	4.0	6.0
Max Green Setting (Gmax), s	* 9.3	37.5	* 9.8	38.0	19.4	38.5	21.0	32.0
Max Q Clear Time (g_c+I1), s	9.1	15.6	9.4	22.1	6.2	13.9	12.4	23.6
Green Ext Time (p_c), s	0.2	2.4	0.0	7.0	0.3	3.2	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	36	363	46	149	90	173	354	28	41	333	60
Future Volume (veh/h)	61	36	363	46	149	90	173	354	28	41	333	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	64	38	171	48	157	84	182	373	27	43	351	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	370	311	172	255	137	233	1033	74	64	743	325
Arrive On Green	0.07	0.20	0.20	0.10	0.22	0.22	0.13	0.31	0.31	0.04	0.21	0.21
Sat Flow, veh/h	1781	1870	1571	1781	1138	609	1781	3355	242	1781	3554	1555
Grp Volume(v), veh/h	64	38	171	48	0	241	182	197	203	43	351	58
Grp Sat Flow(s),veh/h/ln	1781	1870	1571	1781	0	1747	1781	1777	1820	1781	1777	1555
Q Serve(g_s), s	1.8	0.9	5.0	1.3	0.0	6.4	5.1	4.4	4.5	1.2	4.5	1.6
Cycle Q Clear(g_c), s	1.8	0.9	5.0	1.3	0.0	6.4	5.1	4.4	4.5	1.2	4.5	1.6
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	125	370	311	172	0	392	233	547	560	64	743	325
V/C Ratio(X)	0.51	0.10	0.55	0.28	0.00	0.61	0.78	0.36	0.36	0.68	0.47	0.18
Avail Cap(c_a), veh/h	1040	910	764	1040	0	850	694	1729	1771	676	3459	1513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	16.9	18.6	21.5	0.0	17.9	21.6	13.8	13.8	24.5	17.8	16.7
Incr Delay (d2), s/veh	1.2	0.0	0.6	0.3	0.0	0.6	2.2	0.5	0.5	4.6	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	1.7	0.5	0.0	2.4	1.9	1.5	1.5	0.5	1.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.3	16.9	19.1	21.9	0.0	18.5	23.8	14.3	14.3	29.1	18.4	17.0
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		273			289			582			452	
Approach Delay, s/veh		20.0			19.1			17.3			19.2	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	21.1	7.6	16.8	10.9	16.0	9.0	15.5
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 5.3	* 4.2	* 5.3	4.0	* 5.3
Max Green Setting (Gmax), s	19.5	* 50	30.0	* 25	* 20	* 50	30.0	* 25
Max Q Clear Time (g_c+I1), s	3.2	6.5	3.8	8.4	7.1	6.5	3.3	7.0
Green Ext Time (p_c), s	0.0	2.8	0.1	0.9	0.2	3.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	0	105	285	0	0	0
Future Vol, veh/h	0	105	285	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	114	310	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	424	310
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	114	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	587	730
Stage 1	0	-	-	0	744	-
Stage 2	0	-	-	0	911	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	587	730
Mov Cap-2 Maneuver	-	-	-	-	587	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	911	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

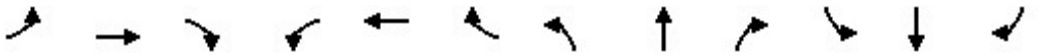
Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	10	0	0	34	14	4	1	0	4	2	43
Future Vol, veh/h	72	10	0	0	34	14	4	1	0	4	2	43
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	11	0	0	38	16	4	1	0	4	2	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.2	7.5	7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	80%	88%	0%	8%
Vol Thru, %	20%	12%	71%	4%
Vol Right, %	0%	0%	29%	88%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	82	48	49
LT Vol	4	72	0	4
Through Vol	1	10	34	2
RT Vol	0	0	14	43
Lane Flow Rate	6	92	54	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.007	0.109	0.059	0.056
Departure Headway (Hd)	4.39	4.257	3.935	3.679
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	842	906	960
Service Time	2.471	2.284	1.976	1.754
HCM Lane V/C Ratio	0.007	0.109	0.06	0.057
HCM Control Delay	7.5	7.8	7.2	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	0.2	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	993	386	41	1058	23	323	17	13	50	17	41
Future Volume (veh/h)	64	993	386	41	1058	23	323	17	13	50	17	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1091	204	45	1163	23	355	19	0	55	19	36
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	2032	888	58	1975	39	370	17		408	134	429
Arrive On Green	0.05	0.57	0.57	0.03	0.55	0.55	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1552	1781	3564	70	1153	62	1585	1311	489	1563
Grp Volume(v), veh/h	70	1091	204	45	580	606	374	0	0	74	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	1552	1781	1777	1858	1214	0	1585	1800	0	1563
Q Serve(g_s), s	5.0	24.7	8.4	3.3	28.1	28.1	31.7	0.0	0.0	0.0	0.0	2.2
Cycle Q Clear(g_c), s	5.0	24.7	8.4	3.3	28.1	28.1	35.7	0.0	0.0	4.0	0.0	2.2
Prop In Lane	1.00		1.00	1.00		0.04	0.95		1.00	0.74		1.00
Lane Grp Cap(c), veh/h	90	2032	888	58	985	1030	387	0		543	0	429
V/C Ratio(X)	0.78	0.54	0.23	0.77	0.59	0.59	0.97	0.00		0.14	0.00	0.08
Avail Cap(c_a), veh/h	343	2032	888	370	985	1030	387	0		543	0	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	17.2	13.7	62.4	19.2	19.2	50.9	0.0	0.0	35.7	0.0	35.0
Incr Delay (d2), s/veh	5.4	1.0	0.6	6.0	2.0	1.9	36.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	10.0	3.1	1.6	11.7	12.2	16.4	0.0	0.0	1.8	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.5	18.2	14.3	68.4	21.1	21.1	87.2	0.0	0.0	35.7	0.0	35.0
LnGrp LOS	E	B	B	E	C	C	F	A		D	A	D
Approach Vol, veh/h		1365			1231			374			110	
Approach Delay, s/veh		20.1			22.8			87.2			35.5	
Approach LOS		C			C			F			D	

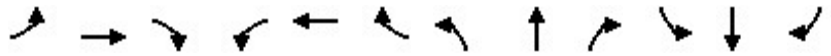
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	78.5		41.0	8.3	80.7		41.0				
Change Period (Y+Rc), s	4.0	6.4		* 5.3	4.0	* 6.4		* 5.3				
Max Green Setting (Gmax), s	25.0	35.6		* 36	27.0	* 34		* 14				
Max Q Clear Time (g_c+I1), s	7.0	30.1		37.7	5.3	26.7		6.0				
Green Ext Time (p_c), s	0.1	3.7		0.0	0.0	4.9		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		29.9	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



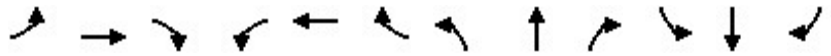
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	869	33	190	849	255	143	429	171	316	356	149
Future Volume (veh/h)	225	869	33	190	849	255	143	429	171	316	356	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	905	29	198	884	162	149	447	100	329	371	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	1138	36	235	1298	578	222	607	135	411	964	421
Arrive On Green	0.09	0.32	0.32	0.13	0.37	0.37	0.06	0.21	0.21	0.12	0.27	0.27
Sat Flow, veh/h	3456	3511	113	1781	3554	1584	3456	2887	641	3456	3554	1551
Grp Volume(v), veh/h	234	458	476	198	884	162	149	274	273	329	371	25
Grp Sat Flow(s),veh/h/ln	1728	1777	1847	1781	1777	1584	1728	1777	1752	1728	1777	1551
Q Serve(g_s), s	6.1	21.7	21.7	10.1	19.5	6.7	3.9	13.3	13.5	8.6	7.9	1.1
Cycle Q Clear(g_c), s	6.1	21.7	21.7	10.1	19.5	6.7	3.9	13.3	13.5	8.6	7.9	1.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	314	576	599	235	1298	578	222	374	368	411	964	421
V/C Ratio(X)	0.74	0.80	0.80	0.84	0.68	0.28	0.67	0.73	0.74	0.80	0.38	0.06
Avail Cap(c_a), veh/h	746	767	797	577	1534	684	746	959	945	746	1918	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	28.5	28.5	39.3	24.9	20.8	42.4	34.2	34.2	39.8	27.5	25.0
Incr Delay (d2), s/veh	1.3	4.7	4.5	3.2	1.1	0.3	1.3	3.4	3.6	1.4	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	9.6	9.9	4.5	8.0	2.4	1.6	5.8	5.8	3.6	3.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	33.2	33.0	42.4	26.0	21.1	43.7	37.5	37.8	41.1	27.8	25.1
LnGrp LOS	D	C	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1168			1244			696			725	
Approach Delay, s/veh		35.0			27.9			38.9			33.7	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	39.8	15.2	25.0	16.4	36.0	9.6	30.6
Change Period (Y+Rc), s	* 4.2	6.0	* 4.2	5.5	* 4.2	6.0	3.6	5.5
Max Green Setting (Gmax), s	* 8	40.0	* 20	50.0	* 30	40.0	20.0	50.0
Max Q Clear Time (g_c+I1), s	8.1	21.5	10.6	15.5	12.1	23.7	5.9	9.9
Green Ext Time (p_c), s	0.3	7.5	0.4	4.0	0.2	6.3	0.2	3.0

Intersection Summary	
HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	103	210	41	55	45	225	671	59	69	425	62
Future Volume (veh/h)	34	103	210	41	55	45	225	671	59	69	425	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	105	10	42	56	36	230	685	58	70	434	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	81	323	270	155	227	146	287	1123	95	89	796	343
Arrive On Green	0.05	0.17	0.17	0.09	0.21	0.21	0.16	0.34	0.34	0.05	0.22	0.22
Sat Flow, veh/h	1781	1870	1565	1781	1061	682	1781	3315	280	1781	3554	1533
Grp Volume(v), veh/h	35	105	10	42	0	92	230	367	376	70	434	58
Grp Sat Flow(s),veh/h/ln	1781	1870	1565	1781	0	1743	1781	1777	1819	1781	1777	1533
Q Serve(g_s), s	1.0	2.6	0.3	1.2	0.0	2.3	6.6	9.1	9.1	2.1	5.7	1.6
Cycle Q Clear(g_c), s	1.0	2.6	0.3	1.2	0.0	2.3	6.6	9.1	9.1	2.1	5.7	1.6
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	81	323	270	155	0	373	287	602	616	89	796	343
V/C Ratio(X)	0.43	0.33	0.04	0.27	0.00	0.25	0.80	0.61	0.61	0.79	0.55	0.17
Avail Cap(c_a), veh/h	1010	884	740	1010	0	824	674	1680	1719	657	3359	1450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	19.2	18.2	22.6	0.0	17.2	21.4	14.6	14.6	24.8	18.1	16.6
Incr Delay (d2), s/veh	1.3	0.2	0.0	0.3	0.0	0.1	2.0	1.2	1.2	5.7	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	1.1	0.1	0.5	0.0	0.9	2.5	3.0	3.1	0.9	2.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	19.4	18.2	22.9	0.0	17.4	23.4	15.8	15.8	30.5	18.9	16.8
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		150			134			973			562	
Approach Delay, s/veh		20.8			19.1			17.6			20.1	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	23.2	6.4	16.6	12.7	17.1	8.6	14.4
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 5.3	* 4.2	* 5.3	4.0	* 5.3
Max Green Setting (Gmax), s	19.5	* 50	30.0	* 25	* 20	* 50	30.0	* 25
Max Q Clear Time (g_c+I1), s	4.1	11.1	3.0	4.3	8.6	7.7	3.2	4.6
Green Ext Time (p_c), s	0.1	5.8	0.0	0.3	0.2	3.7	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	0	231	141	0	0	0
Future Vol, veh/h	0	231	141	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	251	153	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	404	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	251	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	603	893
Stage 1	0	-	-	0	875	-
Stage 2	0	-	-	0	791	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	603	893
Mov Cap-2 Maneuver	-	-	-	-	603	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	100	42	1	1	20	10	1	1	0	7	1	59
Future Vol, veh/h	100	42	1	1	20	10	1	1	0	7	1	59
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	114	48	1	1	23	11	1	1	0	8	1	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	7.2	7.6	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	70%	3%	10%
Vol Thru, %	50%	29%	65%	1%
Vol Right, %	0%	1%	32%	88%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	143	31	67
LT Vol	1	100	1	7
Through Vol	1	42	20	1
RT Vol	0	1	10	59
Lane Flow Rate	2	162	35	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.003	0.191	0.039	0.082
Departure Headway (Hd)	4.555	4.234	4.008	3.873
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	790	845	883	930
Service Time	2.557	2.27	2.079	1.873
HCM Lane V/C Ratio	0.003	0.192	0.04	0.082
HCM Control Delay	7.6	8.3	7.2	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.7	0.1	0.3

Appendix C: Cumulative Projects Information

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Table 1: Project Trip Generation (*including all trip types*)

Land Use	Intensity	Rate*	ADT	AM						PM					
				Peak%*	Vol.	In %	Out%	In	Out	Peak%*	Vol.	In %	Out%	In	Out
PROPOSED PROJECT															
Specialty Retail / Strip Commercial	**19** KSF	**40** /KSF	**760**	**3%**	**23**	**60% : 40%**		**14**	**9**	**9%**	**68**	**50% : 50%**		**34**	**34**
Condominium	**141** units	**8** /unit	**1,128**	**8%**	**90**	**20% : 80%**		**18**	**72**	**10%**	**113**	**70% : 30%**		**79**	**34**
Sit-Down Restaurant	**4.5** KSF	**160** /KSF	**720**	**8%**	**58**	**50% : 50%**		**29**	**29**	**8%**	**58**	**60% : 40%**		**35**	**23**
Delicatessen (7am-4pm)	**1.5** KSF	**150** /KSF	**225**	**9%**	**20**	**60% : 40%**		**12**	**8**	**3%**	**7**	**30% : 70%**		**2**	**5**
Total			**2,833**		**191**			**73**	**118**		**246**			**150**	**96**

Source:
*Rates are used taken from SANDAG "(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region", April 2002.
Note:
ADT= Average Daily Trips
KSF = 1,000 Square Feet

Table 2: Comparison of Primary, Diverted, and Pass-By Project ADTs

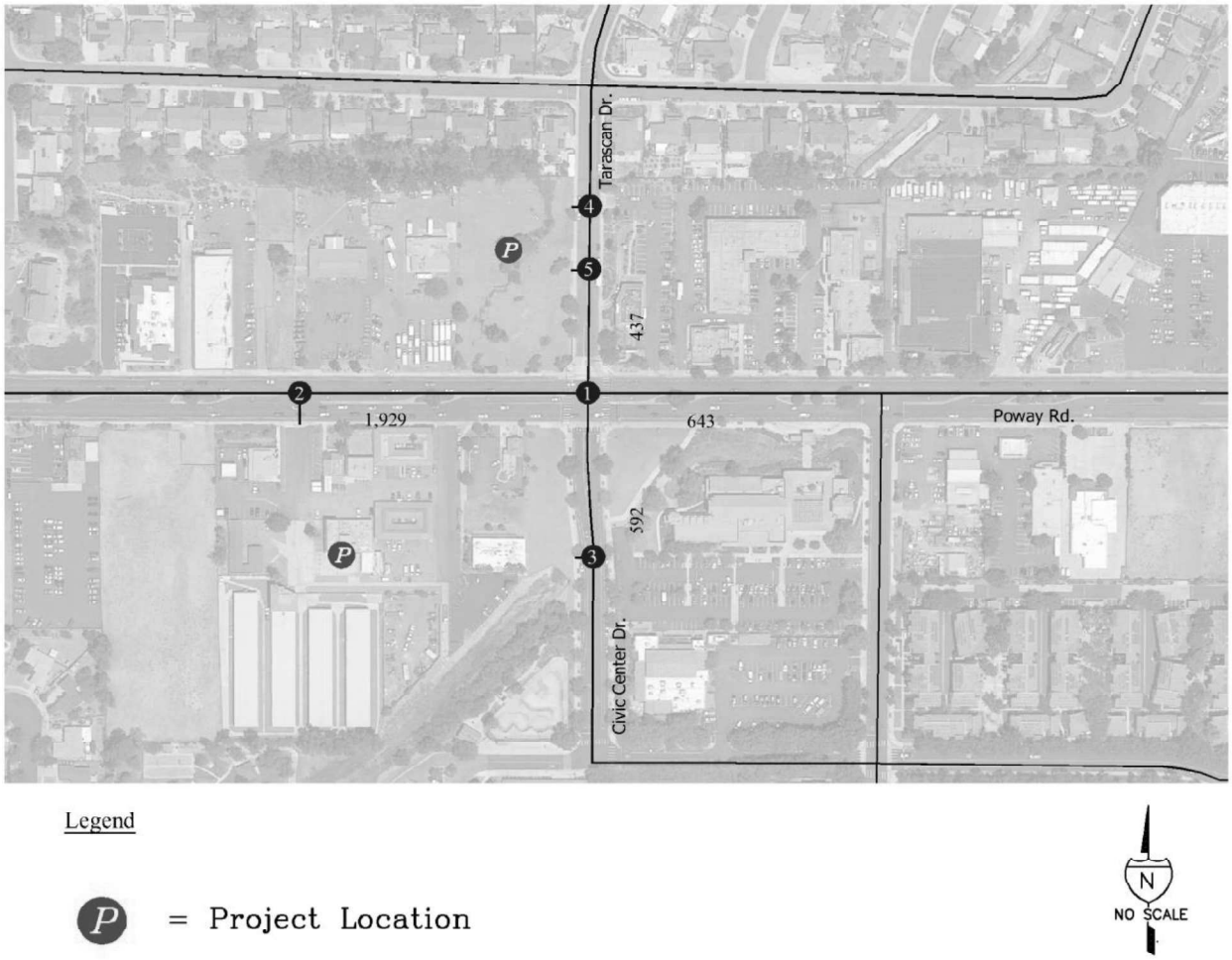
	Total	Primary Trips	Diverted Trips	Pass-By
Specialty Retail / Strip Commercial (45:40:15)	760	342	304	114
Condominium (86:11:3)	1,128	970	124	34
Sit-Down Restaurant (51:37:12)	720	367	266	86
Delicatessen (51:37:12)	225	115	83	27
TOTAL	2,833	1794	778	261

Table 3: Project Trip Generation (*including Primary and Diverted Trips*)

Land Use	Intensity	Rate*	ADT	AM						PM					
				Peak%*	Vol.	In %	Out%	In	Out	Peak%*	Vol.	In %	Out%	In	Out
PROPOSED PROJECT															
Specialty Retail / Strip Commercial	**19** KSF	**40** /KSF	**646**	**3%**	**19**	**60% : 40%**		**12**	**8**	**9%**	**58**	**50% : 50%**		**29**	**29**
Condominium	**141** units	**8** /unit	**1,094**	**8%**	**88**	**20% : 80%**		**18**	**70**	**10%**	**109**	**70% : 30%**		**77**	**33**
Sit-Down Restaurant	**4.5** KSF	**160** /KSF	**634**	**8%**	**51**	**50% : 50%**		**25**	**25**	**8%**	**51**	**60% : 40%**		**30**	**20**
Delicatessen (7am-4pm)	**1.5** KSF	**150** /KSF	**198**	**9%**	**18**	**60% : 40%**		**11**	**7**	**3%**	**6**	**30% : 70%**		**2**	**4**
Total			**2,572**		**175**			**65**	**110**		**224**			**138**	**86**

Source:
*Rates are used taken from SANDAG "(Not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region", April 2002.
Note:
ADT= Average Daily Trips
KSF = 1,000 Square Feet

Figure 4: Project Only ADT



7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

7.1 Trip Generation

7.1.1 *Trip Rates and Reductions*

As described previously in *Section 2.0*, the Project proposes to build 4,620 sf of restaurant, 3,878 sf of retail, and 221 multi-family dwelling units (DU) on a 6.68-acre site (33.1 DU/acre). The Project trip generation for these land uses is calculated using the *SANDAG (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.*

SANDAG guidance provides for certain trip rate reductions, including a 5% daily trip reduction for land uses with transit access or near transit stations accessible within ¼ mile and up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined.

As described in *Section 3.4*, the Project site is located within ¼ mile of stops serving multiple transit lines and therefore the 5% transit access reduction was applied. Based on the relative mix of residential and commercial uses in the Project and discussion with City of Poway staff, a 5% reduction for mixed land uses was applied.

7.1.2 *Existing On-Site Land Uses*

The site is occupied by a strip commercial-style development including a mix of retail, restaurant and personal services uses which currently remain in operation.

LLG assessed the actual trip generation activity of these existing land uses by conducting three days of counts at the four existing driveways serving the site. A fifth driveway providing access to the existing site parking area is located within close proximity to the Big O Tires tire retailer and servicer, which will remain. Thus, this fifth, easternmost driveway was excluded from the counts.

Two of the four driveways provide dimension which were appropriate for setting road tubes and collecting 24-hour data. The remaining two existing driveways do not provide sufficient depth ("throating") to collect accurate counts using this equipment. These two driveways were manually counted during peak hours (7AM-9AM/ 4PM-6PM). Each driveway was counted for three days (Tuesday, February 18- Thursday, February 20, 2020). The count sheets and summaries are included in ***Appendix E***.

Existing site peak hour volumes for the highest one hour during the commuter peaks were taken directly from the resulting counts. Based on the relationship of peak hour traffic to daily traffic observed at the two driveways where 24-hour counts were completed, daily traffic for the two remaining driveways was extrapolated from the peak hour volumes. For both peak hour and daily traffic, the three-day average volumes were used.

In total, the existing site is observed to generate 1,645 ADT, with 27 total AM peak hour trips (20 inbound/7 outbound) and 101 total PM peak hour trips (35 inbound/66 outbound) on a typical weekday. These existing traffic volumes would be replaced by the Project volumes with completion of the redevelopment. It should be noted that approximately 35% of the existing retail space was vacant at the time of these traffic counts.

7.1.3 *Final Trip Generation*

Table 7–1 presents a summary of the Project's estimated trip generation based on the land use rates described above. The Project's driveway trips are calculated to be 1,998 ADT, with 152 total AM peak hour trips (48 inbound/104 outbound) and 174 total PM peak hour trips (113 inbound/ 61 outbound).

The Project's net external net trips, after removing trips associated with land uses currently operating on the site, are 353 ADT, with 125 total AM peak hour trips (28 inbound/97 outbound) and 73 total PM peak hour trips (78 inbound/-5 outbound).

TABLE 7–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate [a]	Volume	% of ADT	In:Out Split	Volume In	Volume Out	Volume Total	% of ADT	In:Out Split	Volume In	Volume Out	Volume Total
Apartment	221 DU	6 /DU	1,326	8%	2:8	21	85	106	9%	7:3	83	36	119
Restaurant	4.620 KSF	160 /KSF	739	8%	5:5	30	29	59	8%	6:4	35	24	59
Retail	3.878 KSF	40 /KSF	155	3%	6:4	3	2	5	9%	5:5	7	7	14
Gross Project Subtotal		—	**2,220**	—	—	**54**	**116**	**170**	—	—	**125**	**67**	**192**
Transit Reduction [b]		*5%*	*(111)*	—	—	*(3)*	*(6)*	*(9)*	—	—	*(6)*	*(3)*	*(9)*
Mixed Use Reduction [c]		*5%*	*(111)*	—	—	*(3)*	*(6)*	*(9)*	—	—	*(6)*	*(3)*	*(9)*
Subtotal Net of Reductions (Project Driveway Trips)			**1,998**			**48**	**104**	**152**			**113**	**61**	**174**
Existing Land Uses (to be removed)		—	*(1,645)*	—	—	*(20)*	*(7)*	*(27)*	—	—	*(35)*	*(66)*	*(101)*
Net New Trips to the Overall Street System		—	***353***	—	—	***28***	***97***	***125***	—	—	***78***	***(5)***	***73***

General Notes:

1. Gross trip generation does not account for mixed-use reductions, transit reductions, or pass-by/diverted-linked reductions.
2. DU = Dwelling Unit
3. KSF = 1,000 square feet

Footnotes:

a. Rate is based on SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.
b. SANDAG footnote T[1]
c. SANDAG footnote T[2]

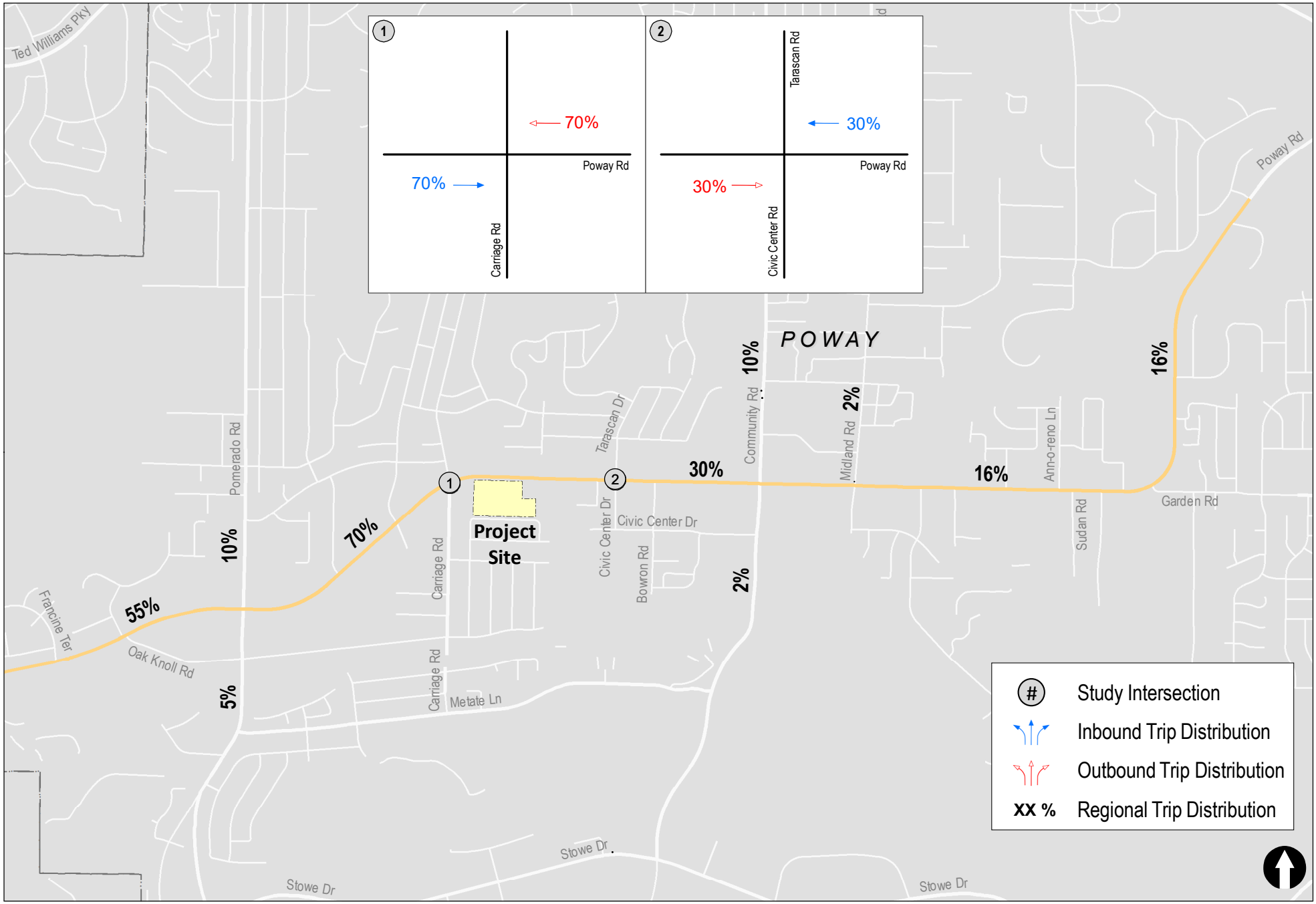
7.2 Trip Distribution/Assignment

Project traffic was distributed to the street system based on review of existing traffic data and discussions with City staff. Other factors, such as surrounding land uses and access to Interstate 15, were also considered. In general, regional distribution to/from the Project site was determined to be oriented to/from the west/east at 70%:30%, respectively. Distribution to the major side streets within the overall study area was obtained from existing traffic counts, and reflects destinations such as local schools, local retail centers, and arterial routes to neighboring job centers.

Figure 7–1 shows the regional project traffic distribution.

Figure 7–2 shows the assigned Project traffic.

Figure 7–3 shows Existing + Project traffic volumes.



LINSCOTT LAW & GREENSPAN engineers

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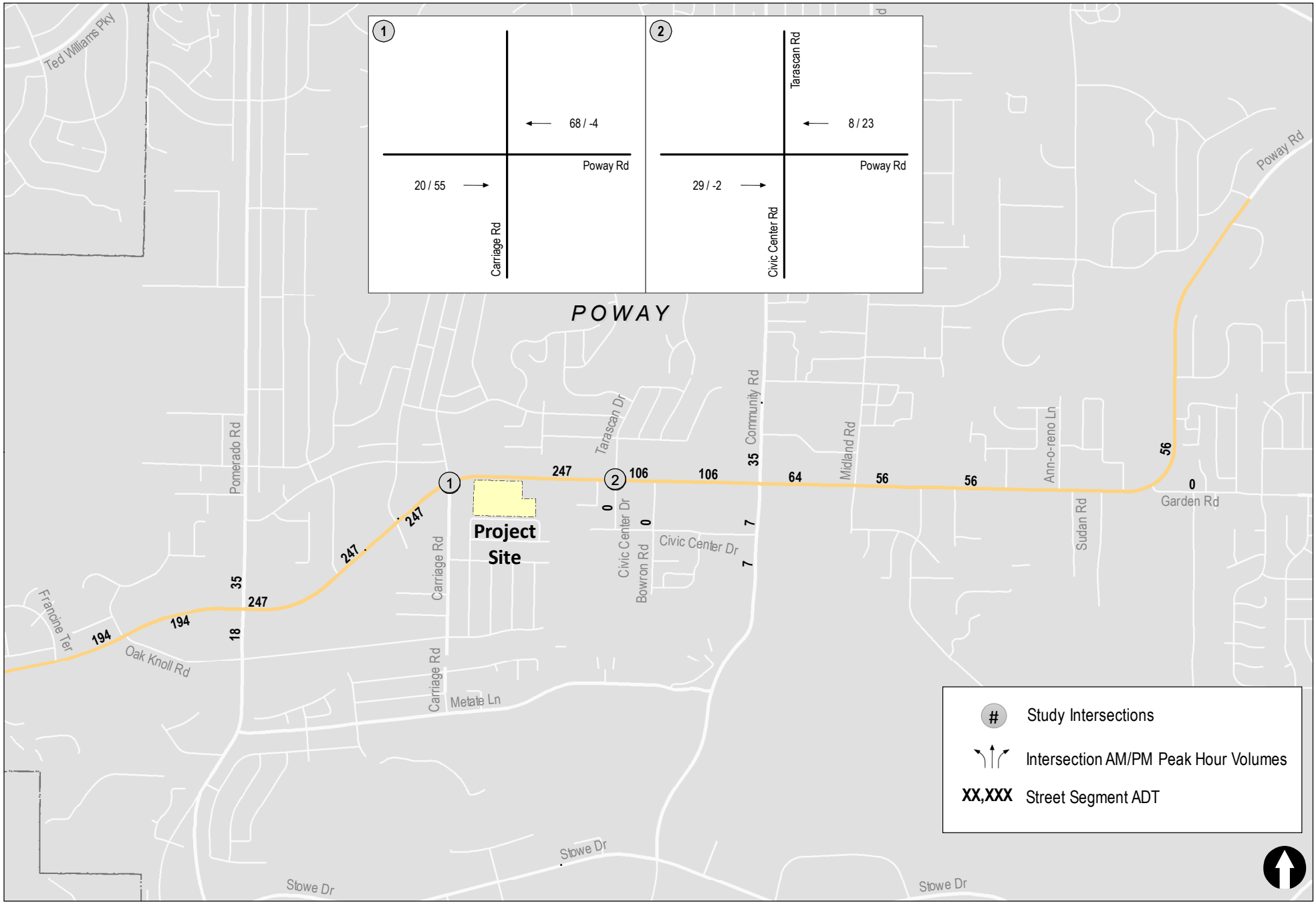
Date: 3/5/2020
Time: 11:43 AM

Figure 7-1

Project Traffic Distribution

POWAY ROAD MIXED USE



LINSCOTT LAW & GREENSPAN engineers

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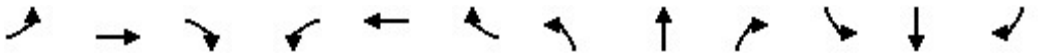
Figure 7-2

Project Traffic Volumes

POWAY ROAD MIXED USE

Appendix D: LOS Analysis Worksheets – Near-Term Base Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	930	420	40	1380	30	310	30	20	40	30	70
Future Volume (veh/h)	50	930	420	40	1380	30	310	30	20	40	30	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	989	181	43	1468	30	330	32	0	43	32	61
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	2038	886	56	2016	41	349	29		311	220	429
Arrive On Green	0.04	0.57	0.57	0.02	0.38	0.38	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1546	1781	3561	73	1079	105	1585	974	802	1561
Grp Volume(v), veh/h	53	989	181	43	732	766	362	0	0	75	0	61
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1857	1184	0	1585	1776	0	1561
Q Serve(g_s), s	3.8	21.4	7.4	3.1	45.9	46.0	31.6	0.0	0.0	0.0	0.0	3.8
Cycle Q Clear(g_c), s	3.8	21.4	7.4	3.1	45.9	46.0	35.7	0.0	0.0	4.1	0.0	3.8
Prop In Lane	1.00		1.00	1.00		0.04	0.91		1.00	0.57		1.00
Lane Grp Cap(c), veh/h	69	2038	886	56	1006	1051	378	0		531	0	429
V/C Ratio(X)	0.77	0.49	0.20	0.77	0.73	0.73	0.96	0.00		0.14	0.00	0.14
Avail Cap(c_a), veh/h	370	2038	886	301	1006	1051	378	0		531	0	429
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.9	16.4	13.4	63.2	31.8	31.8	50.8	0.0	0.0	35.7	0.0	35.6
Incr Delay (d2), s/veh	6.7	0.8	0.5	5.8	3.3	3.1	35.0	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	8.7	2.6	1.5	21.5	22.5	15.8	0.0	0.0	1.8	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	17.2	13.9	69.0	35.0	34.9	85.8	0.0	0.0	35.7	0.0	35.6
LnGrp LOS	E	B	B	E	D	C	F	A		D	A	D
Approach Vol, veh/h		1223			1541			362			136	
Approach Delay, s/veh		19.0			35.9			85.8			35.7	
Approach LOS		B			D			F			D	

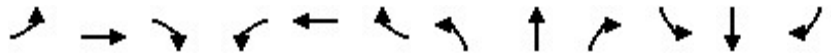
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	80.0		41.0	8.1	80.9		41.0				
Change Period (Y+Rc), s	4.0	6.4		* 5.3	4.0	* 6.4		* 5.3				
Max Green Setting (Gmax), s	27.0	31.6		* 36	22.0	* 37		* 16				
Max Q Clear Time (g_c+I1), s	5.8	48.0		37.7	5.1	23.4		6.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.1		0.2				

Intersection Summary		
HCM 6th Ctrl Delay	35.1	
HCM 6th LOS	D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	730	30	150	1080	160	110	300	80	190	330	260
Future Volume (veh/h)	180	730	30	150	1080	160	110	300	80	190	330	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	198	802	28	165	1187	143	121	330	77	209	363	149
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	1775	62	191	1919	852	178	451	104	265	666	293
Arrive On Green	0.02	0.17	0.17	0.11	0.54	0.54	0.05	0.16	0.16	0.08	0.19	0.19
Sat Flow, veh/h	3456	3502	122	1781	3554	1578	3456	2862	658	3456	3554	1562
Grp Volume(v), veh/h	198	407	423	165	1187	143	121	203	204	209	363	149
Grp Sat Flow(s),veh/h/ln	1728	1777	1848	1781	1777	1578	1728	1777	1743	1728	1777	1562
Q Serve(g_s), s	7.4	26.8	26.8	11.8	30.0	6.0	4.5	14.1	14.5	7.7	12.0	11.1
Cycle Q Clear(g_c), s	7.4	26.8	26.8	11.8	30.0	6.0	4.5	14.1	14.5	7.7	12.0	11.1
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	250	901	937	191	1919	852	178	280	275	265	666	293
V/C Ratio(X)	0.79	0.45	0.45	0.86	0.62	0.17	0.68	0.72	0.74	0.79	0.55	0.51
Avail Cap(c_a), veh/h	261	901	937	288	1919	852	516	513	503	526	1052	463
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	37.9	37.9	57.1	20.6	15.1	60.6	52.1	52.2	59.0	47.8	47.4
Incr Delay (d2), s/veh	10.1	1.2	1.2	11.0	1.5	0.4	5.1	4.1	4.5	2.0	0.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	13.1	13.6	5.9	12.4	2.2	2.1	6.5	6.6	3.4	5.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	39.1	39.0	68.1	22.1	15.5	65.7	56.1	56.7	61.0	48.6	49.1
LnGrp LOS	E	D	D	E	C	B	E	E	E	E	D	D
Approach Vol, veh/h		1028			1495			528			721	
Approach Delay, s/veh		45.5			26.6			58.6			52.3	
Approach LOS		D			C			E			D	

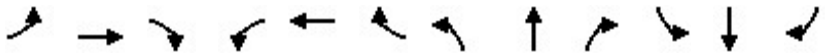
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	26.0	13.6	76.2	10.3	29.9	17.9	71.9
Change Period (Y+Rc), s	* 4.2	5.5	* 4.2	6.0	3.6	5.5	4.0	6.0
Max Green Setting (Gmax), s	* 20	37.5	* 9.8	38.0	19.4	38.5	21.0	32.0
Max Q Clear Time (g_c+I1), s	9.7	16.5	9.4	32.0	6.5	14.0	13.8	28.8
Green Ext Time (p_c), s	0.2	2.5	0.0	4.3	0.3	3.2	0.1	1.7

Intersection Summary	
HCM 6th Ctrl Delay	41.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	40	370	50	150	90	180	370	30	50	360	60
Future Volume (veh/h)	70	40	370	50	150	90	180	370	30	50	360	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	42	178	53	158	84	189	389	30	53	379	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	366	307	183	254	135	241	1021	78	73	739	323
Arrive On Green	0.08	0.20	0.20	0.10	0.22	0.22	0.14	0.31	0.31	0.04	0.21	0.21
Sat Flow, veh/h	1781	1870	1570	1781	1141	607	1781	3337	256	1781	3554	1555
Grp Volume(v), veh/h	74	42	178	53	0	242	189	206	213	53	379	58
Grp Sat Flow(s),veh/h/ln	1781	1870	1570	1781	0	1748	1781	1777	1817	1781	1777	1555
Q Serve(g_s), s	2.1	1.0	5.4	1.4	0.0	6.6	5.4	4.8	4.8	1.5	5.0	1.6
Cycle Q Clear(g_c), s	2.1	1.0	5.4	1.4	0.0	6.6	5.4	4.8	4.8	1.5	5.0	1.6
Prop In Lane	1.00		1.00	1.00		0.35	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	134	366	307	183	0	389	241	544	556	73	739	323
V/C Ratio(X)	0.55	0.11	0.58	0.29	0.00	0.62	0.79	0.38	0.38	0.73	0.51	0.18
Avail Cap(c_a), veh/h	1019	892	749	1019	0	833	679	1694	1732	662	3388	1482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	17.4	19.1	21.8	0.0	18.4	21.9	14.3	14.3	24.9	18.4	17.1
Incr Delay (d2), s/veh	1.3	0.1	0.6	0.3	0.0	0.6	2.1	0.5	0.5	5.0	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	1.9	0.6	0.0	2.5	2.0	1.6	1.7	0.7	1.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	17.4	19.8	22.1	0.0	19.0	24.1	14.8	14.8	29.9	19.1	17.4
LnGrp LOS	C	B	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		294			295			608			490	
Approach Delay, s/veh		20.7			19.5			17.7			20.0	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	21.3	8.0	17.0	11.3	16.2	9.4	15.6
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 5.3	* 4.2	* 5.3	4.0	* 5.3
Max Green Setting (Gmax), s	19.5	* 50	30.0	* 25	* 20	* 50	30.0	* 25
Max Q Clear Time (g_c+I1), s	3.5	6.8	4.1	8.6	7.4	7.0	3.4	7.4
Green Ext Time (p_c), s	0.0	2.9	0.1	0.9	0.2	3.2	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	0	120	290	0	0	0
Future Vol, veh/h	0	120	290	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	130	315	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	445	315
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	130	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	571	725
Stage 1	0	-	-	0	740	-
Stage 2	0	-	-	0	896	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	571	725
Mov Cap-2 Maneuver	-	-	-	-	571	-
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	896	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

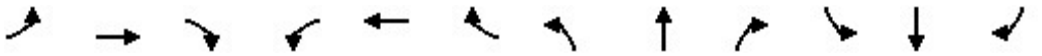
Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	10	0	0	34	14	4	1	0	4	2	43
Future Vol, veh/h	72	10	0	0	34	14	4	1	0	4	2	43
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	11	0	0	38	16	4	1	0	4	2	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.2	7.5	7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	80%	88%	0%	8%
Vol Thru, %	20%	12%	71%	4%
Vol Right, %	0%	0%	29%	88%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	82	48	49
LT Vol	4	72	0	4
Through Vol	1	10	34	2
RT Vol	0	0	14	43
Lane Flow Rate	6	92	54	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.007	0.109	0.059	0.056
Departure Headway (Hd)	4.39	4.257	3.935	3.679
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	842	906	960
Service Time	2.471	2.284	1.976	1.754
HCM Lane V/C Ratio	0.007	0.109	0.06	0.057
HCM Control Delay	7.5	7.8	7.2	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	0.2	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1270	390	50	1240	30	330	20	20	50	20	50
Future Volume (veh/h)	70	1270	390	50	1240	30	330	20	20	50	20	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	1396	209	55	1363	31	363	22	0	55	22	46
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	2007	876	71	1952	44	363	19		391	149	429
Arrive On Green	0.05	0.56	0.56	0.04	0.55	0.55	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1552	1781	3552	81	1128	68	1585	1252	543	1563
Grp Volume(v), veh/h	77	1396	209	55	681	713	385	0	0	77	0	46
Grp Sat Flow(s),veh/h/ln	1781	1777	1552	1781	1777	1856	1196	0	1585	1794	0	1563
Q Serve(g_s), s	5.6	36.6	8.8	4.0	36.4	36.5	31.5	0.0	0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s	5.6	36.6	8.8	4.0	36.4	36.5	35.7	0.0	0.0	4.2	0.0	2.9
Prop In Lane	1.00		1.00	1.00		0.04	0.94		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	98	2007	876	71	977	1020	382	0		540	0	429
V/C Ratio(X)	0.79	0.70	0.24	0.77	0.70	0.70	1.01	0.00		0.14	0.00	0.11
Avail Cap(c_a), veh/h	343	2007	876	370	977	1020	382	0		540	0	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.7	20.3	14.2	61.8	21.4	21.4	51.5	0.0	0.0	35.7	0.0	35.2
Incr Delay (d2), s/veh	5.1	2.0	0.6	4.0	2.5	2.4	47.9	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	15.0	3.2	1.9	15.2	15.9	17.9	0.0	0.0	1.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	22.3	14.9	65.8	23.9	23.8	99.3	0.0	0.0	35.8	0.0	35.3
LnGrp LOS	E	C	B	E	C	C	F	A		D	A	D
Approach Vol, veh/h		1682			1449			385			123	
Approach Delay, s/veh		23.4			25.4			99.3			35.6	
Approach LOS		C			C			F			D	

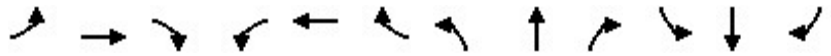
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	77.9		41.0	9.2	79.8		41.0				
Change Period (Y+Rc), s	4.0	6.4		* 5.3	4.0	* 6.4		* 5.3				
Max Green Setting (Gmax), s	25.0	35.6		* 36	27.0	* 34		* 14				
Max Q Clear Time (g_c+I1), s	7.6	38.5		37.7	6.0	38.6		6.2				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.0		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		32.6
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



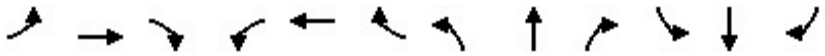
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1150	40	210	1030	280	150	430	190	350	360	150
Future Volume (veh/h)	230	1150	40	210	1030	280	150	430	190	350	360	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	240	1198	37	219	1073	188	156	448	120	365	375	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	1239	38	250	1436	640	218	576	153	430	975	425
Arrive On Green	0.09	0.35	0.35	0.14	0.40	0.40	0.06	0.21	0.21	0.12	0.27	0.27
Sat Flow, veh/h	3456	3516	109	1781	3554	1584	3456	2774	737	3456	3554	1551
Grp Volume(v), veh/h	240	605	630	219	1073	188	156	286	282	365	375	26
Grp Sat Flow(s),veh/h/ln	1728	1777	1848	1781	1777	1584	1728	1777	1734	1728	1777	1551
Q Serve(g_s), s	7.7	38.0	38.0	13.7	29.3	9.1	5.0	17.2	17.5	11.7	9.7	1.4
Cycle Q Clear(g_c), s	7.7	38.0	38.0	13.7	29.3	9.1	5.0	17.2	17.5	11.7	9.7	1.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	305	626	651	250	1436	640	218	369	360	430	975	425
V/C Ratio(X)	0.79	0.97	0.97	0.88	0.75	0.29	0.71	0.77	0.78	0.85	0.38	0.06
Avail Cap(c_a), veh/h	609	626	651	471	1436	640	609	783	764	609	1565	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	36.1	36.1	47.8	28.9	22.9	52.2	42.5	42.6	48.6	33.4	30.4
Incr Delay (d2), s/veh	1.7	27.8	27.3	3.8	2.3	0.3	1.6	4.2	4.5	5.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	20.7	21.5	6.3	12.5	3.3	2.2	7.7	7.7	5.2	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.4	63.9	63.4	51.7	31.1	23.2	53.8	46.6	47.1	54.3	33.7	30.5
LnGrp LOS	D	E	E	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1475			1480			724			766	
Approach Delay, s/veh		61.8			33.2			48.4			43.4	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	51.9	18.3	29.1	20.1	46.0	10.8	36.6
Change Period (Y+Rc), s	* 4.2	6.0	* 4.2	5.5	* 4.2	6.0	3.6	5.5
Max Green Setting (Gmax), s	* 20	40.0	* 20	50.0	* 30	40.0	20.0	50.0
Max Q Clear Time (g_c+I1), s	9.7	31.3	13.7	19.5	15.7	40.0	7.0	11.7
Green Ext Time (p_c), s	0.3	5.5	0.4	4.1	0.3	0.0	0.2	3.0

Intersection Summary	
HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	110	210	50	60	50	230	690	60	70	440	70
Future Volume (veh/h)	40	110	210	50	60	50	230	690	60	70	440	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	112	10	51	61	41	235	704	59	71	449	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	321	268	175	228	153	291	1135	95	91	804	347
Arrive On Green	0.05	0.17	0.17	0.10	0.22	0.22	0.16	0.34	0.34	0.05	0.23	0.23
Sat Flow, veh/h	1781	1870	1564	1781	1041	699	1781	3318	278	1781	3554	1534
Grp Volume(v), veh/h	41	112	10	51	0	102	235	377	386	71	449	66
Grp Sat Flow(s),veh/h/ln	1781	1870	1564	1781	0	1740	1781	1777	1819	1781	1777	1534
Q Serve(g_s), s	1.2	2.9	0.3	1.5	0.0	2.7	7.0	9.8	9.8	2.2	6.2	1.9
Cycle Q Clear(g_c), s	1.2	2.9	0.3	1.5	0.0	2.7	7.0	9.8	9.8	2.2	6.2	1.9
Prop In Lane	1.00		1.00	1.00		0.40	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	90	321	268	175	0	381	291	608	622	91	804	347
V/C Ratio(X)	0.45	0.35	0.04	0.29	0.00	0.27	0.81	0.62	0.62	0.78	0.56	0.19
Avail Cap(c_a), veh/h	969	848	709	969	0	789	646	1611	1650	630	3222	1391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	20.1	19.0	23.1	0.0	17.9	22.2	15.1	15.2	25.9	18.9	17.3
Incr Delay (d2), s/veh	1.3	0.2	0.0	0.3	0.0	0.1	2.1	1.3	1.2	5.5	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	0.1	0.6	0.0	1.0	2.7	3.3	3.4	0.9	2.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	20.4	19.1	23.4	0.0	18.0	24.3	16.4	16.4	31.4	19.6	17.6
LnGrp LOS	C	C	B	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		163			153			998			586	
Approach Delay, s/veh		21.9			19.8			18.3			20.8	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	24.2	6.8	17.4	13.2	17.8	9.4	14.8
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 5.3	* 4.2	* 5.3	4.0	* 5.3
Max Green Setting (Gmax), s	19.5	* 50	30.0	* 25	* 20	* 50	30.0	* 25
Max Q Clear Time (g_c+I1), s	4.2	11.8	3.2	4.7	9.0	8.2	3.5	4.9
Green Ext Time (p_c), s	0.1	6.0	0.0	0.3	0.2	3.9	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	0	240	160	0	0	0
Future Vol, veh/h	0	240	160	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	261	174	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	435	174
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	578	869
Stage 1	0	-	-	0	856	-
Stage 2	0	-	-	0	783	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	578	869
Mov Cap-2 Maneuver	-	-	-	-	578	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	783	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

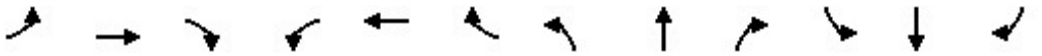
Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	110	50	10	10	20	10	10	10	0	10	10	60
Future Vol, veh/h	110	50	10	10	20	10	10	10	0	10	10	60
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	125	57	11	11	23	11	11	11	0	11	11	68
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.5	7.8	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	65%	25%	12%
Vol Thru, %	50%	29%	50%	12%
Vol Right, %	0%	6%	25%	75%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	170	40	80
LT Vol	10	110	10	10
Through Vol	10	50	20	10
RT Vol	0	10	10	60
Lane Flow Rate	23	193	45	91
Geometry Grp	1	1	1	1
Degree of Util (X)	0.03	0.229	0.054	0.103
Departure Headway (Hd)	4.675	4.26	4.287	4.079
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	769	833	839	884
Service Time	2.681	2.335	2.297	2.082
HCM Lane V/C Ratio	0.03	0.232	0.054	0.103
HCM Control Delay	7.8	8.6	7.5	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.9	0.2	0.3

Appendix E: LOS Analysis Worksheets – Near-Term Base Plus Project Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	931	428	40	1383	30	328	30	20	40	30	70
Future Volume (veh/h)	50	931	428	40	1383	30	328	30	20	40	30	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	990	189	43	1471	30	349	32	0	43	32	61
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	2038	886	56	2016	41	351	27		312	221	429
Arrive On Green	0.04	0.57	0.57	0.02	0.38	0.38	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1546	1781	3562	73	1083	99	1585	976	805	1561
Grp Volume(v), veh/h	53	990	189	43	733	768	381	0	0	75	0	61
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1857	1183	0	1585	1781	0	1561
Q Serve(g_s), s	3.8	21.4	7.7	3.1	46.0	46.1	31.6	0.0	0.0	0.0	0.0	3.8
Cycle Q Clear(g_c), s	3.8	21.4	7.7	3.1	46.0	46.1	35.7	0.0	0.0	4.1	0.0	3.8
Prop In Lane	1.00		1.00	1.00		0.04	0.92		1.00	0.57		1.00
Lane Grp Cap(c), veh/h	69	2038	886	56	1006	1051	378	0		533	0	429
V/C Ratio(X)	0.77	0.49	0.21	0.77	0.73	0.73	1.01	0.00		0.14	0.00	0.14
Avail Cap(c_a), veh/h	370	2038	886	301	1006	1051	378	0		533	0	429
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.70	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.9	16.4	13.5	63.2	31.8	31.8	51.4	0.0	0.0	35.7	0.0	35.6
Incr Delay (d2), s/veh	6.7	0.8	0.5	5.8	3.3	3.2	48.4	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	8.7	2.8	1.5	21.6	22.6	17.7	0.0	0.0	1.8	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	17.2	14.0	69.0	35.1	35.0	99.8	0.0	0.0	35.7	0.0	35.6
LnGrp LOS	E	B	B	E	D	C	F	A		D	A	D
Approach Vol, veh/h		1232			1544			381			136	
Approach Delay, s/veh		19.0			36.0			99.8			35.7	
Approach LOS		B			D			F			D	

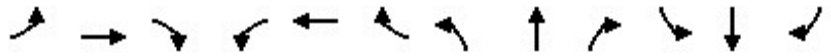
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	80.0		41.0	8.1	80.9		41.0				
Change Period (Y+Rc), s	4.0	6.4		* 5.3	4.0	* 6.4		* 5.3				
Max Green Setting (Gmax), s	27.0	31.6		* 36	22.0	* 37		* 16				
Max Q Clear Time (g_c+I1), s	5.8	48.1		37.7	5.1	23.4		6.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.1		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		37.0
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	730	31	150	1080	160	113	304	80	190	332	260
Future Volume (veh/h)	180	730	31	150	1080	160	113	304	80	190	332	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	198	802	29	165	1187	143	124	334	77	209	365	149
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	1769	64	191	1916	851	182	455	104	265	666	293
Arrive On Green	0.02	0.17	0.17	0.11	0.54	0.54	0.05	0.16	0.16	0.08	0.19	0.19
Sat Flow, veh/h	3456	3497	126	1781	3554	1578	3456	2869	652	3456	3554	1562
Grp Volume(v), veh/h	198	407	424	165	1187	143	124	205	206	209	365	149
Grp Sat Flow(s),veh/h/ln	1728	1777	1847	1781	1777	1578	1728	1777	1744	1728	1777	1562
Q Serve(g_s), s	7.4	26.9	26.9	11.8	30.1	6.0	4.6	14.3	14.6	7.7	12.1	11.1
Cycle Q Clear(g_c), s	7.4	26.9	26.9	11.8	30.1	6.0	4.6	14.3	14.6	7.7	12.1	11.1
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	250	899	934	191	1916	851	182	282	277	265	666	293
V/C Ratio(X)	0.79	0.45	0.45	0.86	0.62	0.17	0.68	0.73	0.74	0.79	0.55	0.51
Avail Cap(c_a), veh/h	261	899	934	288	1916	851	516	513	503	526	1052	463
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	37.9	38.0	57.1	20.7	15.2	60.5	52.0	52.2	59.0	47.8	47.4
Incr Delay (d2), s/veh	10.1	1.2	1.2	11.0	1.5	0.4	5.1	4.0	4.5	2.0	0.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	13.1	13.6	5.9	12.5	2.2	2.1	6.5	6.6	3.4	5.3	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.6	39.2	39.1	68.1	22.3	15.6	65.6	56.0	56.6	61.0	48.7	49.1
LnGrp LOS	E	D	D	E	C	B	E	E	E	E	D	D
Approach Vol, veh/h		1029			1495			535			723	
Approach Delay, s/veh		45.6			26.7			58.5			52.3	
Approach LOS		D			C			E			D	

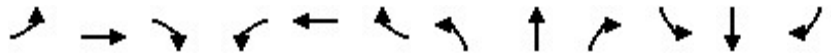
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	26.1	13.6	76.1	10.4	29.9	17.9	71.8
Change Period (Y+Rc), s	* 4.2	5.5	* 4.2	6.0	3.6	5.5	4.0	6.0
Max Green Setting (Gmax), s	* 26	37.5	* 9.8	38.0	19.4	38.5	21.0	32.0
Max Q Clear Time (g_c+I1), s	9.7	16.6	9.4	32.1	6.6	14.1	13.8	28.9
Green Ext Time (p_c), s	0.2	2.6	0.0	4.2	0.3	3.2	0.1	1.7

Intersection Summary	
HCM 6th Ctrl Delay	41.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	48	370	55	168	97	180	370	32	53	360	60
Future Volume (veh/h)	70	48	370	55	168	97	180	370	32	53	360	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	51	178	58	177	91	189	389	32	56	379	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	365	306	193	264	136	240	1007	82	75	736	322
Arrive On Green	0.08	0.19	0.19	0.11	0.23	0.23	0.14	0.30	0.30	0.04	0.21	0.21
Sat Flow, veh/h	1781	1870	1570	1781	1156	594	1781	3319	272	1781	3554	1554
Grp Volume(v), veh/h	74	51	178	58	0	268	189	207	214	56	379	58
Grp Sat Flow(s),veh/h/ln	1781	1870	1570	1781	0	1750	1781	1777	1813	1781	1777	1554
Q Serve(g_s), s	2.1	1.2	5.5	1.6	0.0	7.4	5.4	4.9	4.9	1.6	5.0	1.6
Cycle Q Clear(g_c), s	2.1	1.2	5.5	1.6	0.0	7.4	5.4	4.9	4.9	1.6	5.0	1.6
Prop In Lane	1.00		1.00	1.00		0.34	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	134	365	306	193	0	399	240	539	550	75	736	322
V/C Ratio(X)	0.55	0.14	0.58	0.30	0.00	0.67	0.79	0.38	0.39	0.74	0.52	0.18
Avail Cap(c_a), veh/h	1008	882	741	1008	0	826	672	1676	1711	655	3352	1466
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	17.7	19.4	21.8	0.0	18.6	22.2	14.6	14.6	25.1	18.7	17.3
Incr Delay (d2), s/veh	1.3	0.1	0.7	0.3	0.0	0.7	2.2	0.5	0.5	5.3	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.5	1.9	0.6	0.0	2.8	2.1	1.6	1.7	0.7	1.8	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.0	17.7	20.0	22.1	0.0	19.4	24.3	15.1	15.1	30.4	19.3	17.6
LnGrp LOS	C	B	C	C	A	B	C	B	B	C	B	B
Approach Vol, veh/h		303			326			610			493	
Approach Delay, s/veh		20.8			19.9			18.0			20.4	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	21.4	8.0	17.4	11.4	16.3	9.7	15.6
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 5.3	* 4.2	* 5.3	4.0	* 5.3
Max Green Setting (Gmax), s	19.5	* 50	30.0	* 25	* 20	* 50	30.0	* 25
Max Q Clear Time (g_c+I1), s	3.6	6.9	4.1	9.4	7.4	7.0	3.6	7.5
Green Ext Time (p_c), s	0.0	2.9	0.1	1.0	0.2	3.2	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	13	120	290	2	5	31
Future Vol, veh/h	13	120	290	2	5	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	14	130	315	2	5	34

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	317	0	-	0	474	316
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1243	-	-	-	549	724
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1243	-	-	-	542	724
Mov Cap-2 Maneuver	-	-	-	-	542	-
Stage 1	-	-	-	-	730	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	10.5
HCM LOS			B

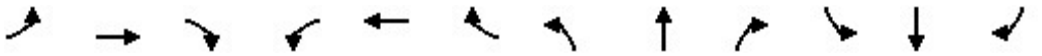
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1243	-	-	-	692
HCM Lane V/C Ratio	0.011	-	-	-	0.057
HCM Control Delay (s)	7.9	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	10	0	0	34	14	4	1	0	4	2	43
Future Vol, veh/h	72	10	0	0	34	14	4	1	0	4	2	43
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	11	0	0	38	16	4	1	0	4	2	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.2	7.5	7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	80%	88%	0%	8%
Vol Thru, %	20%	12%	71%	4%
Vol Right, %	0%	0%	29%	88%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	5	82	48	49
LT Vol	4	72	0	4
Through Vol	1	10	34	2
RT Vol	0	0	14	43
Lane Flow Rate	6	92	54	55
Geometry Grp	1	1	1	1
Degree of Util (X)	0.007	0.109	0.059	0.056
Departure Headway (Hd)	4.39	4.257	3.935	3.679
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	842	906	960
Service Time	2.471	2.284	1.976	1.754
HCM Lane V/C Ratio	0.007	0.109	0.06	0.057
HCM Control Delay	7.5	7.8	7.2	7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.4	0.2	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1274	413	50	1242	30	340	20	20	50	20	50
Future Volume (veh/h)	70	1274	413	50	1242	30	340	20	20	50	20	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	77	1400	234	55	1365	31	374	22	0	55	22	46
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	2007	876	71	1952	44	364	18		392	149	429
Arrive On Green	0.05	0.56	0.56	0.04	0.55	0.55	0.27	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	1781	3554	1552	1781	3552	81	1129	66	1585	1253	543	1563
Grp Volume(v), veh/h	77	1400	234	55	682	714	396	0	0	77	0	46
Grp Sat Flow(s),veh/h/ln	1781	1777	1552	1781	1777	1856	1196	0	1585	1797	0	1563
Q Serve(g_s), s	5.6	36.8	10.0	4.0	36.5	36.6	31.5	0.0	0.0	0.0	0.0	2.9
Cycle Q Clear(g_c), s	5.6	36.8	10.0	4.0	36.5	36.6	35.7	0.0	0.0	4.2	0.0	2.9
Prop In Lane	1.00		1.00	1.00		0.04	0.94		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	98	2007	876	71	977	1020	382	0		541	0	429
V/C Ratio(X)	0.79	0.70	0.27	0.77	0.70	0.70	1.04	0.00		0.14	0.00	0.11
Avail Cap(c_a), veh/h	343	2007	876	370	977	1020	382	0		541	0	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.60	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.7	20.3	14.5	61.8	21.4	21.4	51.5	0.0	0.0	35.7	0.0	35.2
Incr Delay (d2), s/veh	5.1	2.0	0.7	4.0	2.5	2.4	55.7	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	15.1	3.7	1.9	15.3	16.0	18.7	0.0	0.0	1.9	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.8	22.4	15.3	65.8	23.9	23.8	107.2	0.0	0.0	35.8	0.0	35.3
LnGrp LOS	E	C	B	E	C	C	F	A		D	A	D
Approach Vol, veh/h		1711			1451			396			123	
Approach Delay, s/veh		23.4			25.5			107.2			35.6	
Approach LOS		C			C			F			D	

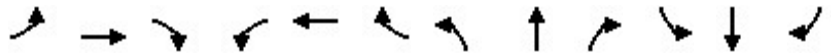
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.1	77.9		41.0	9.2	79.8		41.0				
Change Period (Y+Rc), s	4.0	6.4		* 5.3	4.0	* 6.4		* 5.3				
Max Green Setting (Gmax), s	25.0	35.6		* 36	27.0	* 34		* 14				
Max Q Clear Time (g_c+I1), s	7.6	38.6		37.7	6.0	38.8		6.2				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.0		0.2				

Intersection Summary	
HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.



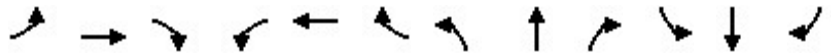
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1150	44	210	1030	280	152	432	190	350	364	150
Future Volume (veh/h)	230	1150	44	210	1030	280	152	432	190	350	364	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	240	1198	41	219	1073	188	158	450	120	365	379	26
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	1233	42	250	1435	640	220	578	153	430	975	425
Arrive On Green	0.09	0.35	0.35	0.14	0.40	0.40	0.06	0.21	0.21	0.12	0.27	0.27
Sat Flow, veh/h	3456	3503	120	1781	3554	1584	3456	2777	735	3456	3554	1551
Grp Volume(v), veh/h	240	607	632	219	1073	188	158	287	283	365	379	26
Grp Sat Flow(s),veh/h/ln	1728	1777	1846	1781	1777	1584	1728	1777	1734	1728	1777	1551
Q Serve(g_s), s	7.7	38.3	38.3	13.7	29.3	9.1	5.1	17.3	17.6	11.8	9.8	1.4
Cycle Q Clear(g_c), s	7.7	38.3	38.3	13.7	29.3	9.1	5.1	17.3	17.6	11.8	9.8	1.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	305	625	650	250	1435	640	220	370	361	430	975	425
V/C Ratio(X)	0.79	0.97	0.97	0.88	0.75	0.29	0.72	0.77	0.78	0.85	0.39	0.06
Avail Cap(c_a), veh/h	608	625	650	470	1435	640	608	782	763	608	1564	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.7	36.3	36.3	47.9	28.9	22.9	52.2	42.5	42.6	48.7	33.5	30.4
Incr Delay (d2), s/veh	1.7	28.8	28.4	3.9	2.3	0.3	1.6	4.2	4.5	5.7	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	21.0	21.8	6.3	12.5	3.3	2.2	7.7	7.7	5.2	4.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	65.1	64.7	51.7	31.2	23.2	53.8	46.7	47.1	54.4	33.8	30.5
LnGrp LOS	D	E	E	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1479			1480			728			770	
Approach Delay, s/veh		62.9			33.2			48.4			43.5	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	51.9	18.3	29.2	20.1	46.0	10.8	36.7
Change Period (Y+Rc), s	* 4.2	6.0	* 4.2	5.5	* 4.2	6.0	3.6	5.5
Max Green Setting (Gmax), s	* 20	40.0	* 20	50.0	* 30	40.0	20.0	50.0
Max Q Clear Time (g_c+I1), s	9.7	31.3	13.8	19.6	15.7	40.3	7.1	11.8
Green Ext Time (p_c), s	0.3	5.5	0.4	4.1	0.3	0.0	0.2	3.0

Intersection Summary	
HCM 6th Ctrl Delay	47.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	132	210	53	70	54	230	690	67	78	440	70
Future Volume (veh/h)	40	132	210	53	70	54	230	690	67	78	440	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	135	10	54	71	45	235	704	66	80	449	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	331	277	181	243	154	290	1093	102	103	797	344
Arrive On Green	0.05	0.18	0.18	0.10	0.23	0.23	0.16	0.33	0.33	0.06	0.22	0.22
Sat Flow, veh/h	1781	1870	1564	1781	1068	677	1781	3283	308	1781	3554	1533
Grp Volume(v), veh/h	41	135	10	54	0	116	235	381	389	80	449	66
Grp Sat Flow(s),veh/h/ln	1781	1870	1564	1781	0	1744	1781	1777	1814	1781	1777	1533
Q Serve(g_s), s	1.3	3.6	0.3	1.6	0.0	3.1	7.2	10.2	10.2	2.5	6.3	2.0
Cycle Q Clear(g_c), s	1.3	3.6	0.3	1.6	0.0	3.1	7.2	10.2	10.2	2.5	6.3	2.0
Prop In Lane	1.00		1.00	1.00		0.39	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	90	331	277	181	0	398	290	591	604	103	797	344
V/C Ratio(X)	0.46	0.41	0.04	0.30	0.00	0.29	0.81	0.64	0.64	0.78	0.56	0.19
Avail Cap(c_a), veh/h	951	832	696	951	0	776	634	1581	1614	618	3162	1365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	20.5	19.1	23.4	0.0	17.9	22.7	15.9	15.9	26.1	19.4	17.7
Incr Delay (d2), s/veh	1.3	0.3	0.0	0.3	0.0	0.1	2.1	1.4	1.4	4.7	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.5	0.1	0.6	0.0	1.2	2.7	3.6	3.6	1.1	2.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	20.8	19.2	23.7	0.0	18.1	24.8	17.3	17.3	30.8	20.1	18.0
LnGrp LOS	C	C	B	C	A	B	C	B	B	C	C	B
Approach Vol, veh/h		186			170			1005			595	
Approach Delay, s/veh		22.1			19.9			19.1			21.3	
Approach LOS		C			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	24.0	6.8	18.1	13.3	17.9	9.7	15.2
Change Period (Y+Rc), s	4.0	* 5.3	4.0	* 5.3	* 4.2	* 5.3	4.0	* 5.3
Max Green Setting (Gmax), s	19.5	* 50	30.0	* 25	* 20	* 50	30.0	* 25
Max Q Clear Time (g_c+I1), s	4.5	12.2	3.3	5.1	9.2	8.3	3.6	5.6
Green Ext Time (p_c), s	0.1	6.0	0.0	0.4	0.2	3.9	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↱	
Traffic Vol, veh/h	37	240	160	7	3	16
Future Vol, veh/h	37	240	160	7	3	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	261	174	8	3	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	182	0	-	0	519	178
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1393	-	-	-	517	865
Stage 1	-	-	-	-	853	-
Stage 2	-	-	-	-	720	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1393	-	-	-	499	865
Mov Cap-2 Maneuver	-	-	-	-	499	-
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	720	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1393	-	-	-	775
HCM Lane V/C Ratio	0.029	-	-	-	0.027
HCM Control Delay (s)	7.7	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	113	50	10	10	20	10	10	10	0	10	10	67
Future Vol, veh/h	113	50	10	10	20	10	10	10	0	10	10	67
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	128	57	11	11	23	11	11	11	0	11	11	76
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	7.6	7.8	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	65%	25%	11%
Vol Thru, %	50%	29%	50%	11%
Vol Right, %	0%	6%	25%	77%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	173	40	87
LT Vol	10	113	10	10
Through Vol	10	50	20	10
RT Vol	0	10	10	67
Lane Flow Rate	23	197	45	99
Geometry Grp	1	1	1	1
Degree of Util (X)	0.03	0.234	0.054	0.112
Departure Headway (Hd)	4.693	4.276	4.31	4.075
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	830	834	884
Service Time	2.699	2.355	2.32	2.078
HCM Lane V/C Ratio	0.03	0.237	0.054	0.112
HCM Control Delay	7.8	8.7	7.6	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.9	0.2	0.4