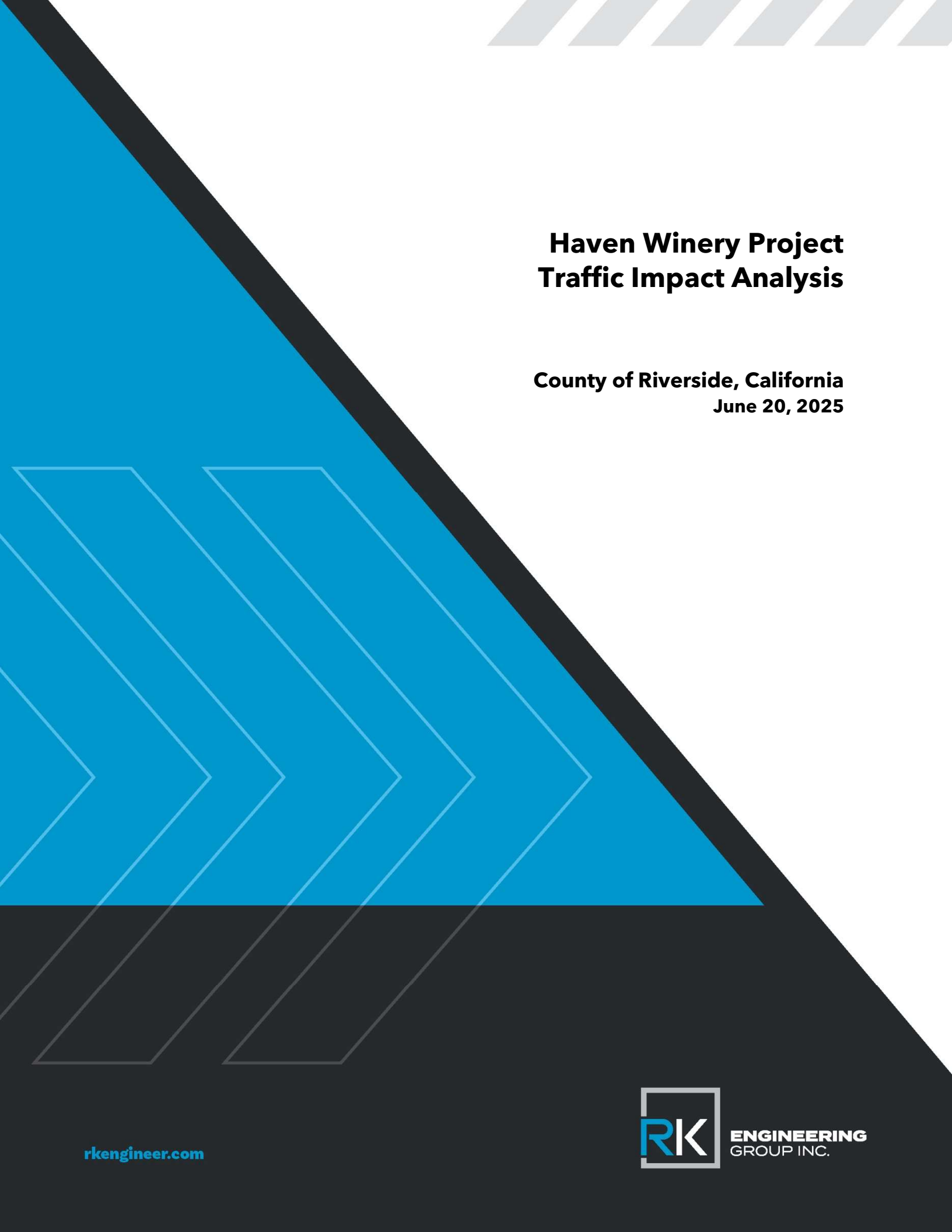




Haven Winery Project Traffic Impact Analysis

**County of Riverside, California
June 20, 2025**

Haven Winery Project Traffic Impact Analysis

County of Riverside, California

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1.0 Introduction

1.1 Purpose of Report & Study Objectives

The purpose of this traffic impact study is to evaluate the Haven Winery Project (hereinafter referred to as “project”) from a traffic and circulation standpoint and to determine whether the Project has a significant traffic impact. This traffic study has been conducted pursuant to the *County of Riverside Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled*, dated December 2020, and the California Environmental Quality Act (CEQA) requirements.

This study is prepared in accordance with the scope of work that has been approved by the County of Riverside, which is contained in **Appendix A**.

1.2 Site Location & Project Description

The proposed project is located near the southwest corner of De Portola Road and Camino Del Vino, in the Temecula Valley Wine County Community Plan area of the unincorporated County of Riverside. The proposed project consists of constructing and operating a Class II winery that will include 5,182 square feet (SF) of production, 1,640 SF of general office space, and 2,794 SF for wine tasting.

Access to the project site will be provided via one (1) full access unsignalized driveway located along Camino Del Vino.

The project is anticipated to open in 2027 and will be evaluated in one single phase.

Exhibit 1-1 shows the location map of the proposed project. **Exhibit 1-2** shows the proposed site plan.

1.3 Traffic Study Area & Analysis Scenarios

Exhibit 1-3 illustrates the traffic analysis study area. The study area consists of the following three (3) study intersections, which are all located within the County of Riverside.

1. De Portola Road (NS) at Camino Del Vino (EW)
2. De Portola Road (NS) at Pauba Road (EW)
3. Project Access (NS) at Camino Del Vino (EW)

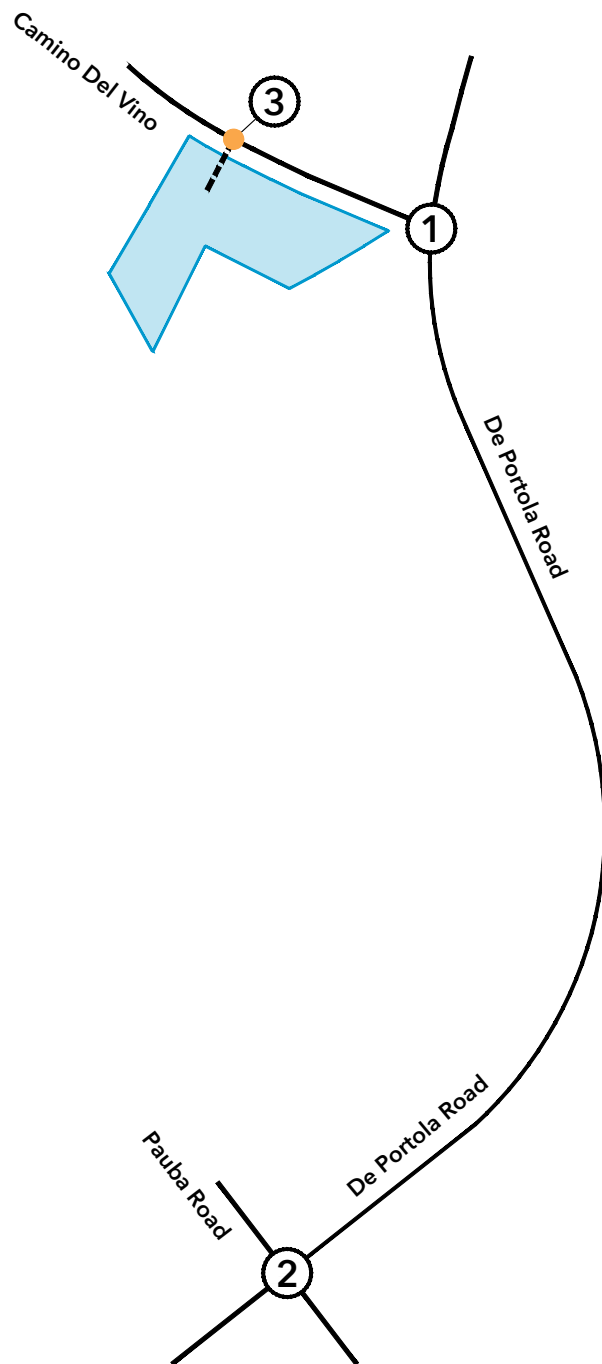


Legend

 = Project Site Boundary

Exhibit 1-1 Location Map

Haven Winery Project // County of Riverside
2459-2025-01



Legend

- ① = Study Intersection
- = Project Site Boundary
- = Project Access Driveway

Exhibit 1-3

Study Area



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The analysis evaluates traffic conditions of the aforementioned study intersections for the following scenarios during the weekday AM (7:00 AM to 9:00 AM), weekday PM (4:00 PM to 6:00 PM), and Saturday midday peak periods:

- Existing Conditions;
- Project Opening Year (2027) With Ambient Growth With Project Conditions
- Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions

2.0 Analysis Methodologies & Performance Criteria

This section of the report summarizes the methodologies used to perform the traffic analyses in this report and discusses the agency-established applicable performance criteria and thresholds for requiring LOS improvements for the study facilities.

2.1 Study Intersection Peak Hour Level of Service (LOS) Analysis Methodology

In accordance with the County of Riverside's TIA Guidelines, the Highway Capacity Manual Seventh Edition (HCM 7) is utilized as the technical guide in the evaluation of traffic operations.

The HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of factors such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS (Level of Service) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

- **LOS A** (Free Flow / Insignificant Delays) describes traffic operations in which progression is exceptionally favorable or the cycle length is extremely short. Generally, LOS A operations for signalized intersections tend to result in most vehicles arriving during the green phase and traveling through the intersection without stopping.
- **LOS B** (Stable Operation / Minimal Delays) describes traffic operations in which progression slightly diminishes but is still considered highly favorable and the cycle length is short. Vehicles stop more often causing a marginal increase in average delay.
- **LOS C** (Stable Operation / Acceptable Delays) describes traffic operations in which progression is favorable and the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Many vehicles still pass through the intersection, but a significant number of vehicles are stopping. Average delay is fair.
- **LOS D** (Approaching Unstable / Tolerable Delays) describes traffic operations in which progression is ineffective and/or cycle length is long. Considerable amount of vehicles stop and individual cycle failures are noticeable. Average delay is adequate.
- **LOS E** (Unstable Operation / Significant Delays) describes traffic operations in which progression is unfavorable and the cycle length is exceedingly long. Individual cycle failures are frequent. Average delay is high.
- **LOS F** (Forced Flow / Excessive Delays) describes traffic operations in which progression is extremely poor and the cycle.

2.1.1 HCM (7th Edition) Methodology

Level of service is typically dependent on the quality of traffic flow at the intersection along a roadway. The Highway Capacity Manual 7th Edition (HCM 7) expresses the level of service at an intersection in terms of delay time for various intersection approaches. The HCM 7 uses different procedures depending on the type of intersection control. The levels of service determined in this study are calculated using the HCM 7 methodology.

For signalized intersections, average control delay per vehicle is used to determine the LOS. For all-way stop-controlled intersections, average control delay per vehicle is also used to determine the LOS.

For intersections with stop control on the minor approach only, the calculation of LOS is dependent on the occurrence of gaps in the free-flow traffic movement of the major street, and the LOS is determined based on the worst stop-controlled approach from the minor street or an individual movement from the major street, whichever is worse.

Table 2-1 shows the level of service criteria based on the HCM 7 methodology.

Table 2-1 | HCM Intersection LOS & Delay Ranges

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

2.1.2 Analysis Parameters

For this study, the HCM level of service grades will be determined utilizing the HCM 7 methodology and the PTV Vistro analysis software. All analysis parameters utilized in this analysis are in accordance with the County of Riverside’s TIA Guidelines. Existing peak hour factors have been calculated based upon the manual turning movement counts collected at the study area intersections.

2.2 LOS Performance Criteria & Thresholds for Requiring LOS Improvements

According to the Riverside County General Plan, Section C 2.1, the following countywide target Levels of Service shall be maintained:

- LOS "C" shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/ Woodcrest, Mead Valley, and Temescal Canyon Area Plans.
- LOS "D" shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley, and Temescal Canyon Area Plans.
- LOS "E" may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.

Based on the above-mentioned level of service performance criteria, LOS D is the minimum acceptable LOS at the three (3) study intersections. As such, operational improvements would be required when project traffic will deteriorate the LOS to below the target LOS.

3.0 Circulation System & Existing Conditions

This section provides a discussion of existing study area conditions and traffic volumes.

3.1 Existing Traffic Controls & Intersection Geometrics

Exhibit 3-1 identifies the existing roadway conditions for the study area roadways. The number of through traffic lanes for existing roadways and the existing intersection controls are identified. The type of traffic control and number of lanes at an intersection are key inputs for the calculation of level of service.

3.2 Existing Traffic Volumes

RK has utilized historical turning movement count data collected in June 2022 during typical weekday and Saturday conditions, to determine the existing year (2025) traffic volumes.

The weekday AM and PM peak hour traffic volumes were determined by counting the two-hour peak period between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively, and using the highest hour within each two-hour peak period. The Saturday peak period was determined by utilizing historical 24-hour roadway volumes along the following two (2) roadway segments from June 2022 and observing which three-hour period resulted in the highest volumes:

1. De Portola Road, South of Camino Del Vino
2. De Portola Road, North of Pauba Road

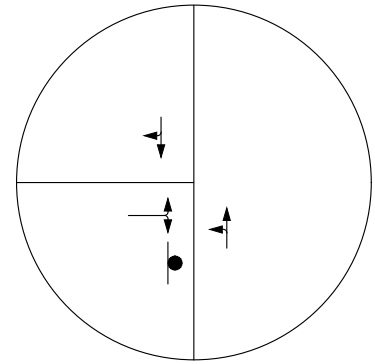
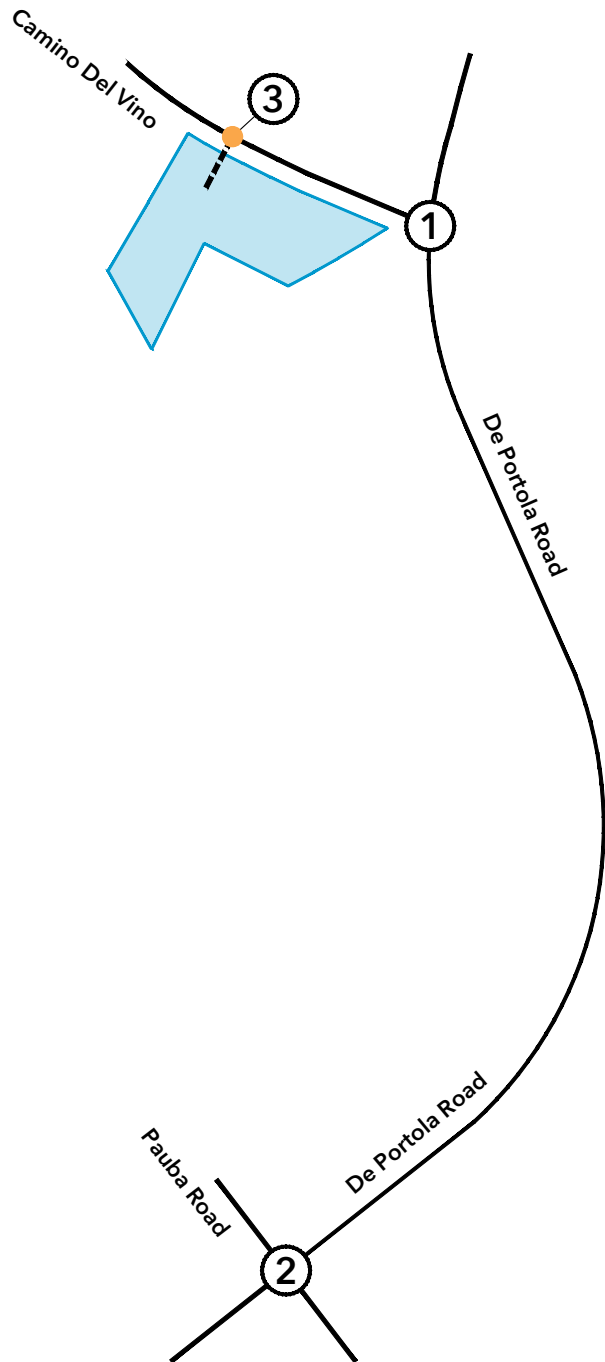
As a result of the ADT surveys, the Saturday midday peak period was determined to be between 2:00 PM and 5:00 PM and the highest hour within the three-hour peak period was utilized.

To assess the existing year (2025) traffic conditions and account for area-wide/ambient growth in the study area, a linear annual growth rate of two percent (2%) per year has been applied to the 2022 traffic volumes over a three-year period totaling 6% growth.

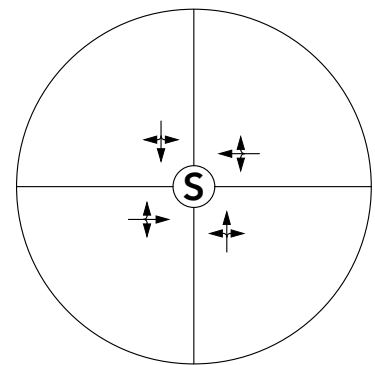
The traffic count worksheets are included in **Appendix B**. Existing (2025) traffic volumes are provided in **Exhibit 3-2**.

3.3 County of Riverside General Plan & Southwest Area Plan Circulation Element

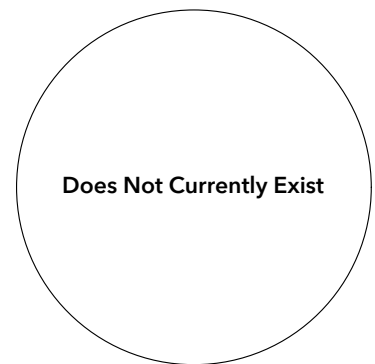
The County of Riverside Southwest Area Plan Circulation Element is shown on **Exhibit 3-3**. The County of Riverside General Plan Typical Roadway Cross-Sections are shown on **Exhibit 3-4**.



1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



Legend

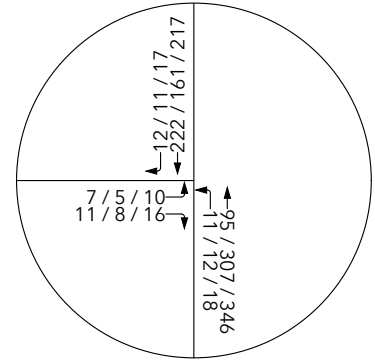
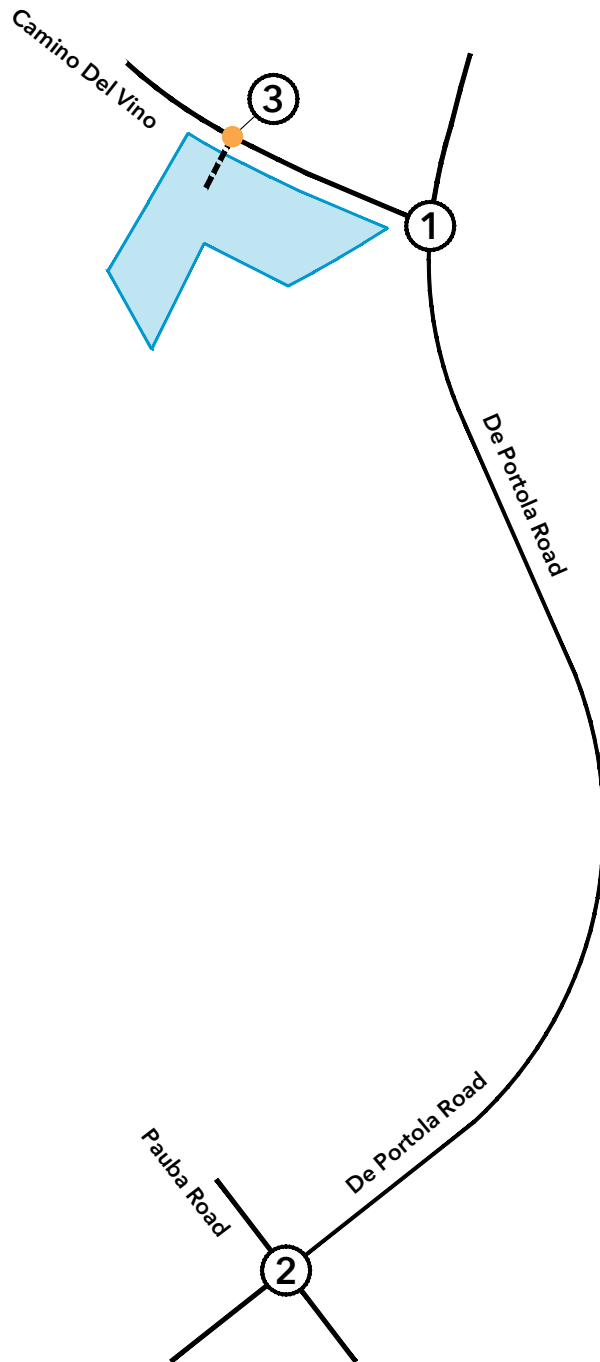
- ① = Study Intersection
- = Project Site Boundary
- = Project Access Driveway
- Ⓢ = All-Way Stop
- = Stop Sign

Exhibit 3-1

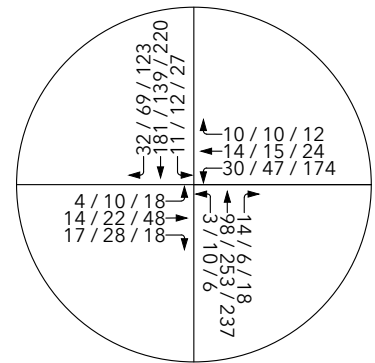
Existing Lane Geometry & Traffic Controls



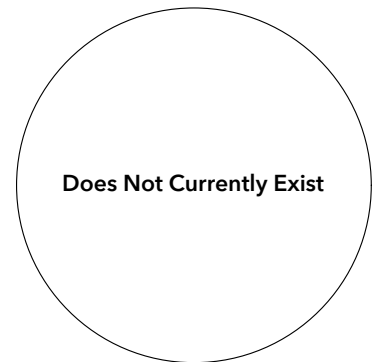
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1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



Legend

① = Study Intersection

— = Project Site Boundary

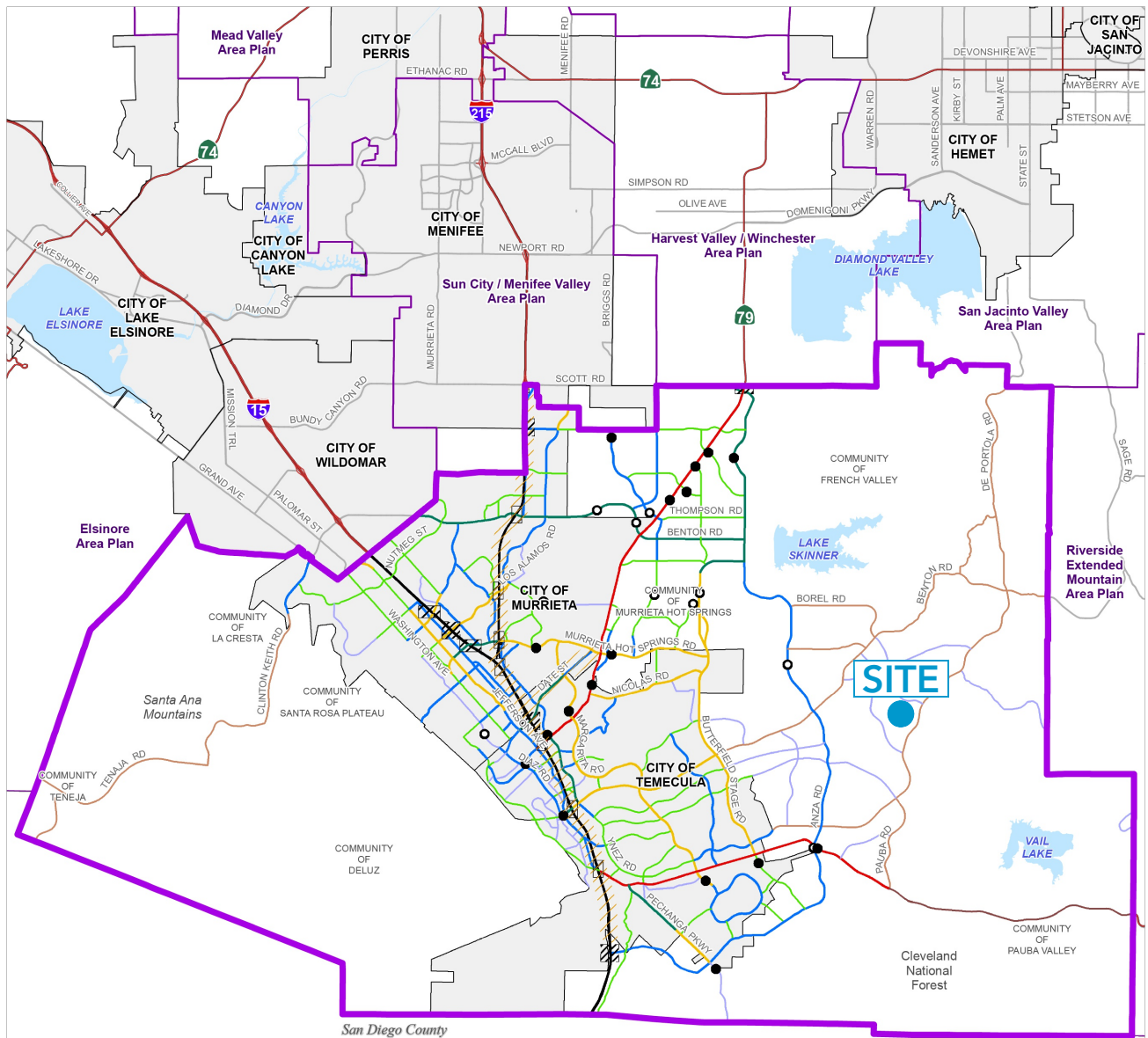
--- = Project Access Driveway

x / x / x = AM / PM / Saturday Midday Peak Hour Volumes

Exhibit 3-2 Existing Traffic Volumes



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Data Source: Riverside County Transportation

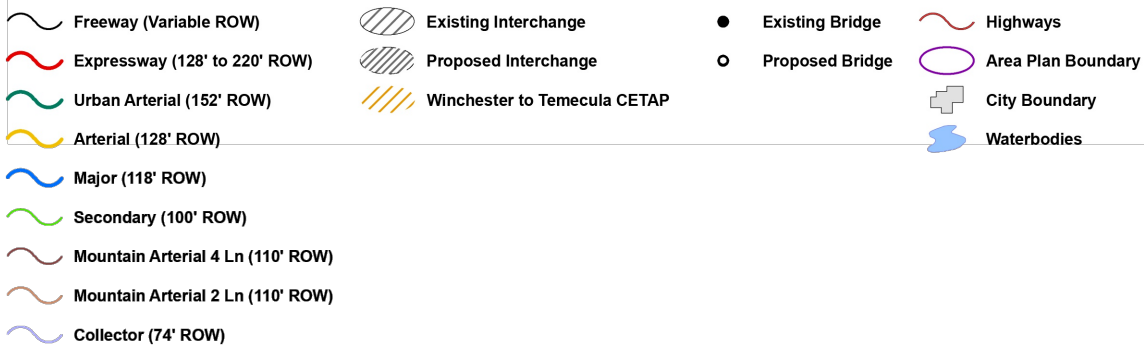


Exhibit 3-3

County of Riverside Southwest Area Plan Circulation Element

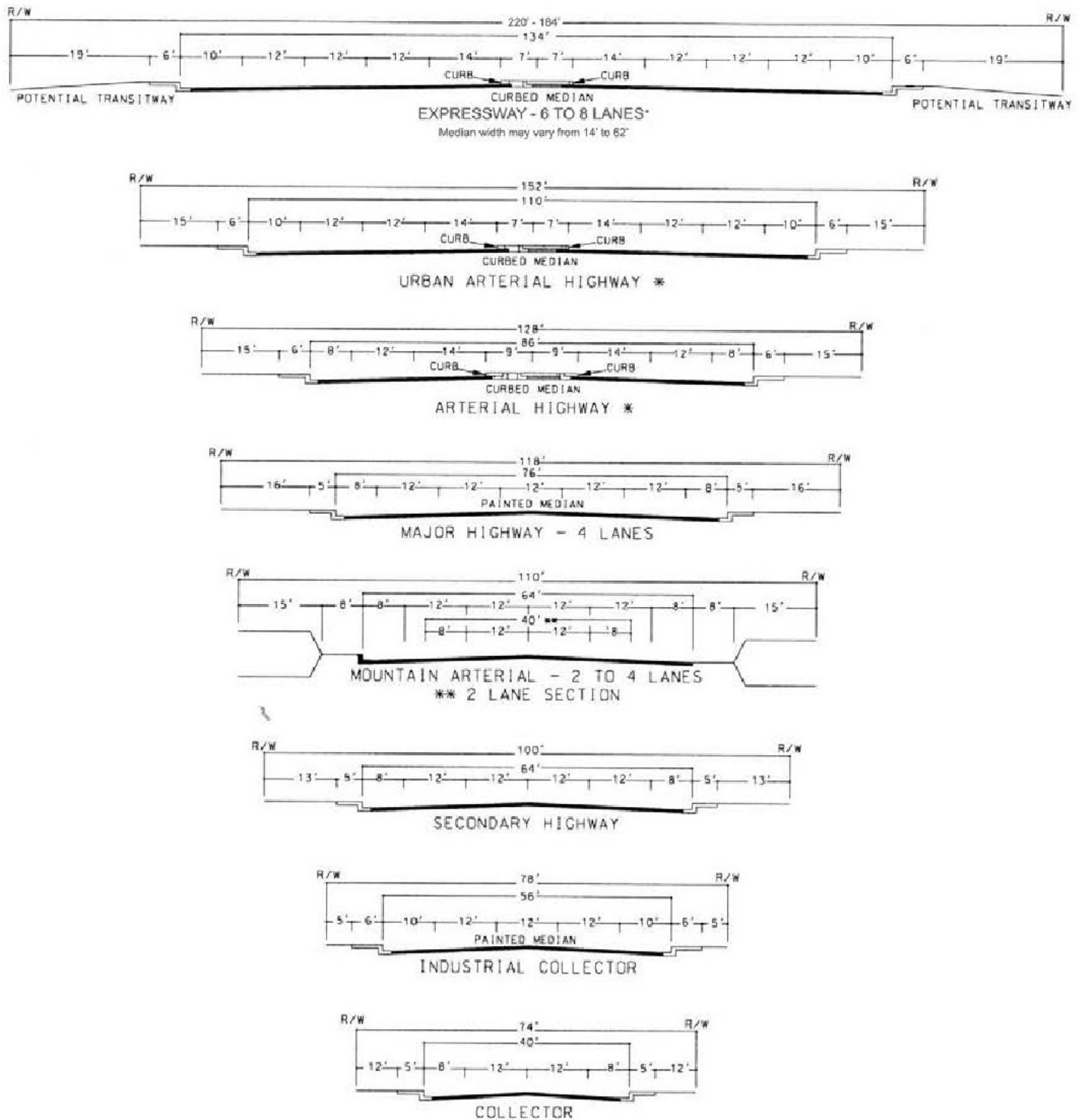


Exhibit 3-4

County of Riverside General Plan Roadway Cross-Sections

4.0 Future Traffic Volumes

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

4.1 Project Traffic Conditions

4.1.1 Project Trip Generation

Trip generation represents the amount of traffic that is attracted and produced by a development. Typically, trip generation rates from the latest Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) are used when calculating a proposed project’s trip generation forecast. This publication provides a comprehensive evaluation of trip generation rates for a variety of land uses.

The project proposes to construct and operate a Class II winery that will include 5,182 square feet (SF) of production, 1,640 SF of general office space, and 2,794 SF for wine tasting. As such, the following trip rates have been utilized:

- ITE Land Use 110: General Light Industrial
- ITE Land Use 710: General Office
- ITE Land Use 970: Wine Tasting Room

Table 4-1 shows the ITE trip generation rates and the forecasted trip generation for the proposed project.

Table 4-1 | Project Trip Generation Rates & Forecast¹

Land Use (ITE Code)	Quantity	Units ²	Weekday							Saturday			
			AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour			Daily
			In	Out	Total	In	Out	Total		In	Out	Total	
General Light Industrial (110)	5,182	TSF	3	1	4	0	3	3	25	0	1	1	4
General Office (710)	1,640	TSF	2	0	2	0	2	2	18	0	1	1	4
Wine Tasting Room (970)	2,794	TSF	4	2	6	10	10	20	128	48	54	102	569
Total Trip Generation			9	3	12	10	15	25	171	48	56	104	577

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

² TSF = Thousand Square Feet.

As shown in Table 4-1, based on the ITE trip generation rates, the proposed project is forecast to generate approximately 171 daily trips during a typical weekday, which include approximately 12 AM peak hour trips and 25 PM peak hour trips as well as 577 daily trips on a typical Saturday, which includes approximately 104 midday peak hour trips.

4.1.2 Project Trip Distribution & Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of residential, employment and recreational opportunities, and the proximity to the regional freeway system. The directional orientation of traffic was determined by evaluating existing and proposed land uses, highways within the community, and existing traffic volumes.

The assignment of traffic from the project site to the adjoining roadway system has been based upon the site's trip generation, trip distribution, existing and proposed arterial highways, and local street systems, which would be in place by the time of initial occupancy of the site.

Exhibit 4-1 shows forecast project trip distribution.

4.1.3 Modal Split

Modal split denotes the proportion of traffic generated by a project that would use any of the transportation modes, namely buses, cars, bicycles, motorcycles, trains, carpools, etc. The traffic-reducing potential of public transit and other modes is significant. However, the traffic projections in this study are conservative in that public transit and alternative transportation may be able to reduce the traffic volumes, but no modal split reduction is applied to the projections. With the implementation of transit service and provision of alternative transportation ideas and incentives, the automobile traffic demand can be reduced significantly.

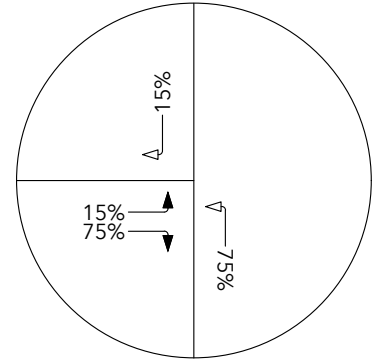
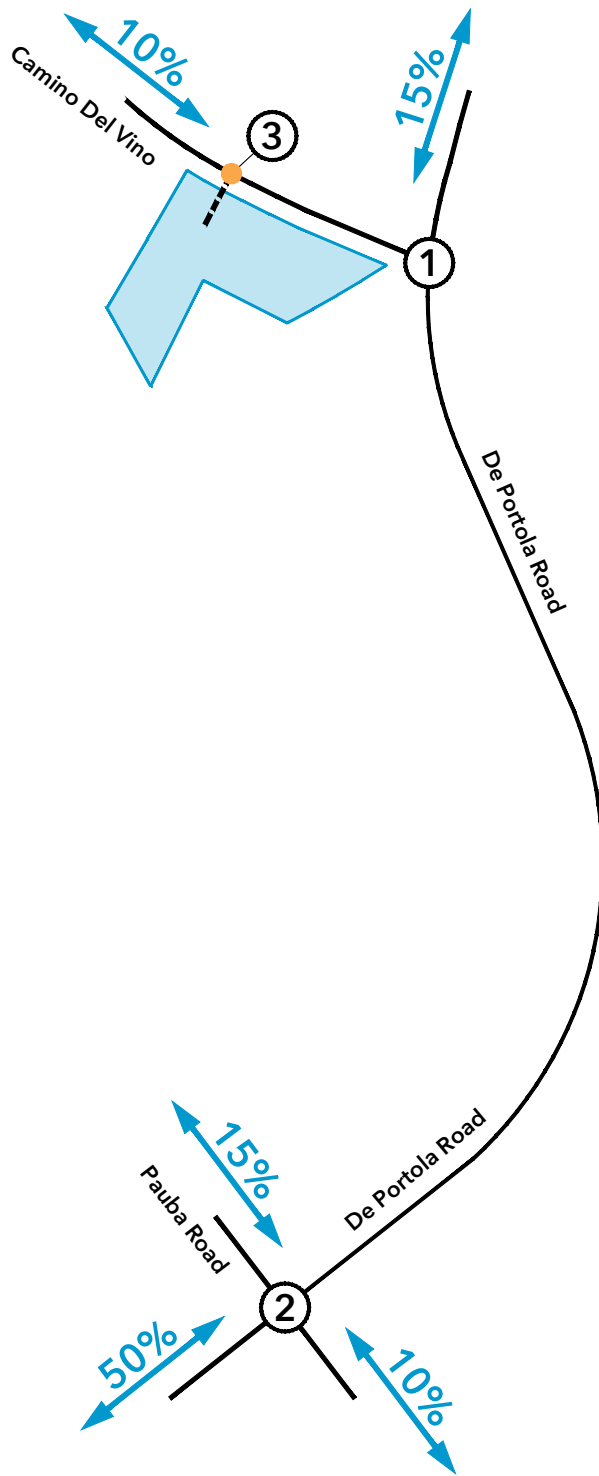
4.1.4 Project Peak Hour Traffic Volumes

Project peak hour and daily traffic volumes have been calculated throughout the study area. The project's AM and PM peak hour intersection turning movement volumes are shown on **Exhibit 4-2**.

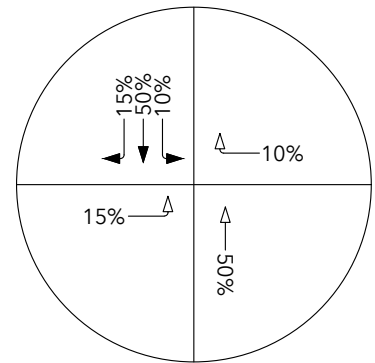
4.2 Background Traffic for Opening Year Conditions

4.2.1 Method of Projection

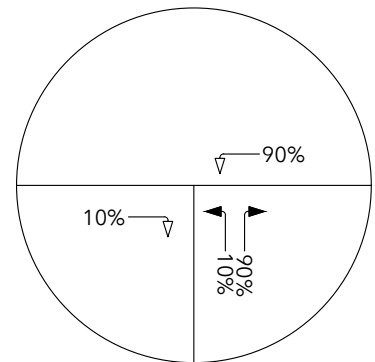
To assess future opening year traffic conditions, project traffic is combined with existing traffic and area-wide growth. As directed by City staff, to account for area-wide/ambient growth in the study area, a linear annual growth rate of two percent (2%) per year has been applied to the existing (2025) traffic volumes over a two-year period for project opening year (2027) conditions (i.e. 4% total growth).



1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



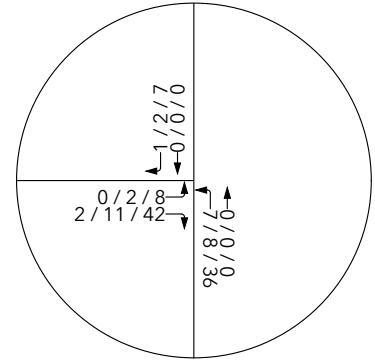
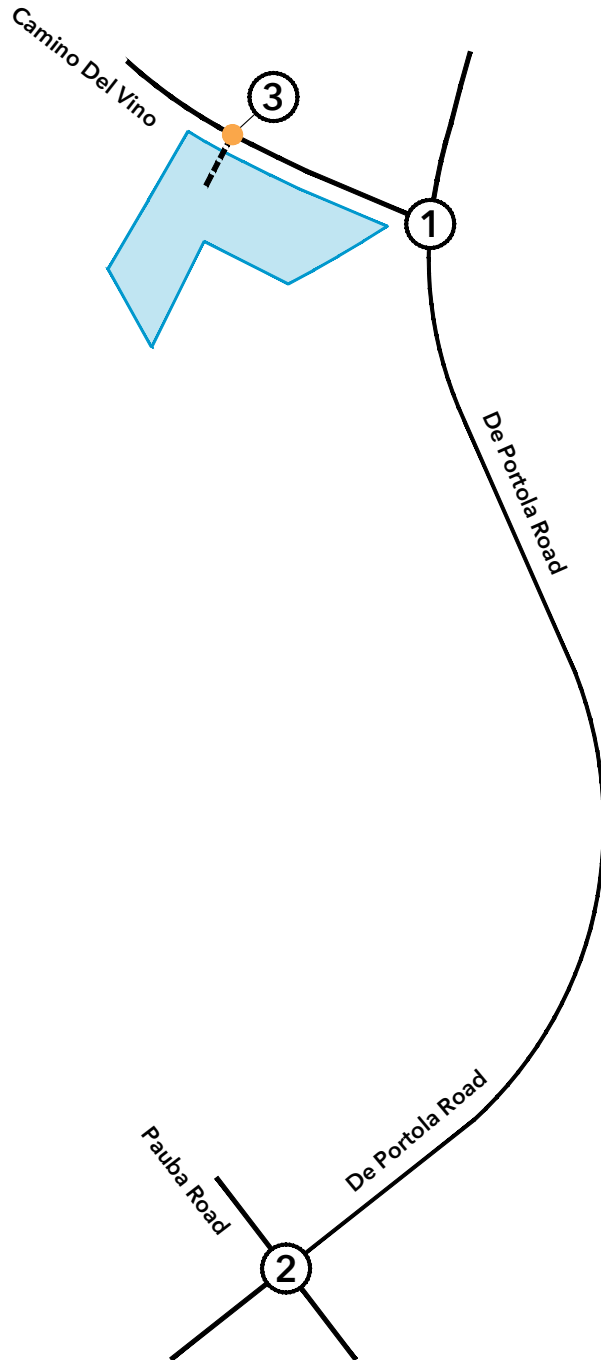
Legend

- ① = Study Intersection
- = Project Site Boundary
- = Project Access Driveway
- = Outbound Percentage
- ← = Inbound Percentage

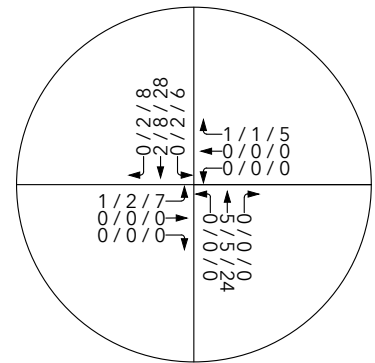
Exhibit 4-1 Project Trip Distribution



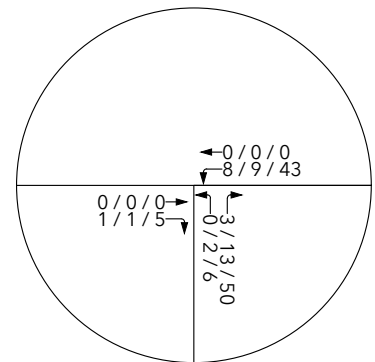
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1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



Legend

① = Study Intersection

— = Project Site Boundary

--- = Project Access Driveway

x / x / x = AM / PM / Saturday Midday Peak Hour Volumes

Exhibit 4-2 Project Traffic Volumes



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4.2.2 Cumulative Projects Traffic Volumes

Information on future projects in the vicinity of the study area has been provided by County of Riverside staff for inclusion in this analysis and is shown in **Table 4-2**. Table 4-2 shows the land uses, and daily and peak hour trip generation for the nearby cumulative projects provided by the public agencies.

A location map of the cumulative projects is shown on **Exhibit 4-3**. Cumulative projects traffic volumes are shown on **Exhibit 4-4**

In reality, some of the cumulative projects may be downsized or may not be developed by the project opening year (2027). In addition, many of the cumulative projects have been or will be subject to a variety of mitigation measures that will reduce the potential environmental impacts associated with those projects. However, those mitigation measures have not been taken into account in projecting the environmental impact of the related projects. Therefore, the cumulative analyses set forth below are conservative and could result in greater impacts than actually anticipated.

Table 4-2 | Cumulative Projects Trip Generation¹

ID No.	Jurisdiction	Project Name / Case Number	Land Use (ITE Code ²)	Quantity	Units ³	Weekday							Saturday			
						AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour			Daily
						In	Out	Total	In	Out	Total		In	Out	Total	
TAZ 1																
R1	County of Riverside	PPT220006 ⁴	--	--	--	13	5	18	22	27	49	314	20	22	42	240
TAZ 1 Total						13	5	18	22	27	49	314	20	22	42	240
TAZ 2																
R2	County of Riverside	PPT180003	Class V Winery	--	--	42	12	54	50	60	110	917	130	133	263	1,639
R3	County of Riverside	PP05531R01 ⁵	--	--	--	7	2	9	14	16	30	189	67	76	143	801
R4	County of Riverside	PPT230020	General Light Industrial (110)	3.127	TSF	2	0	2	0	2	2	15	0	0	0	2
R5	County of Riverside	PPT190036 ⁶	--	--	--	3	2	5	8	8	16	101	37	43	80	448
TAZ 2 Total						54	16	70	72	86	158	1,222	234	252	486	2,890
TAZ 3																
R6	County of Riverside	PPT250006	Class V Winery	--	--	20	5	25	33	37	70	453	151	171	322	1,794
R7	County of Riverside	PPT220037	Class III Winery	--	--	4	1	5	15	11	26	218	40	41	81	505
TAZ 3 Total						24	6	30	48	48	96	671	191	212	403	2,299
TAZ 4																
R8	County of Riverside	TPM38993	Single-Family Detached Housing (210)	4	DU	1	2	3	2	2	4	38	2	2	4	38
TAZ 4 Total						1	2	3	2	2	4	38	2	2	4	38
Total Cumulative Projects Trip Generation						92	29	121	144	163	307	2,245	447	488	935	5,467

¹ Cumulative project information provided by the County of Riverside staff.

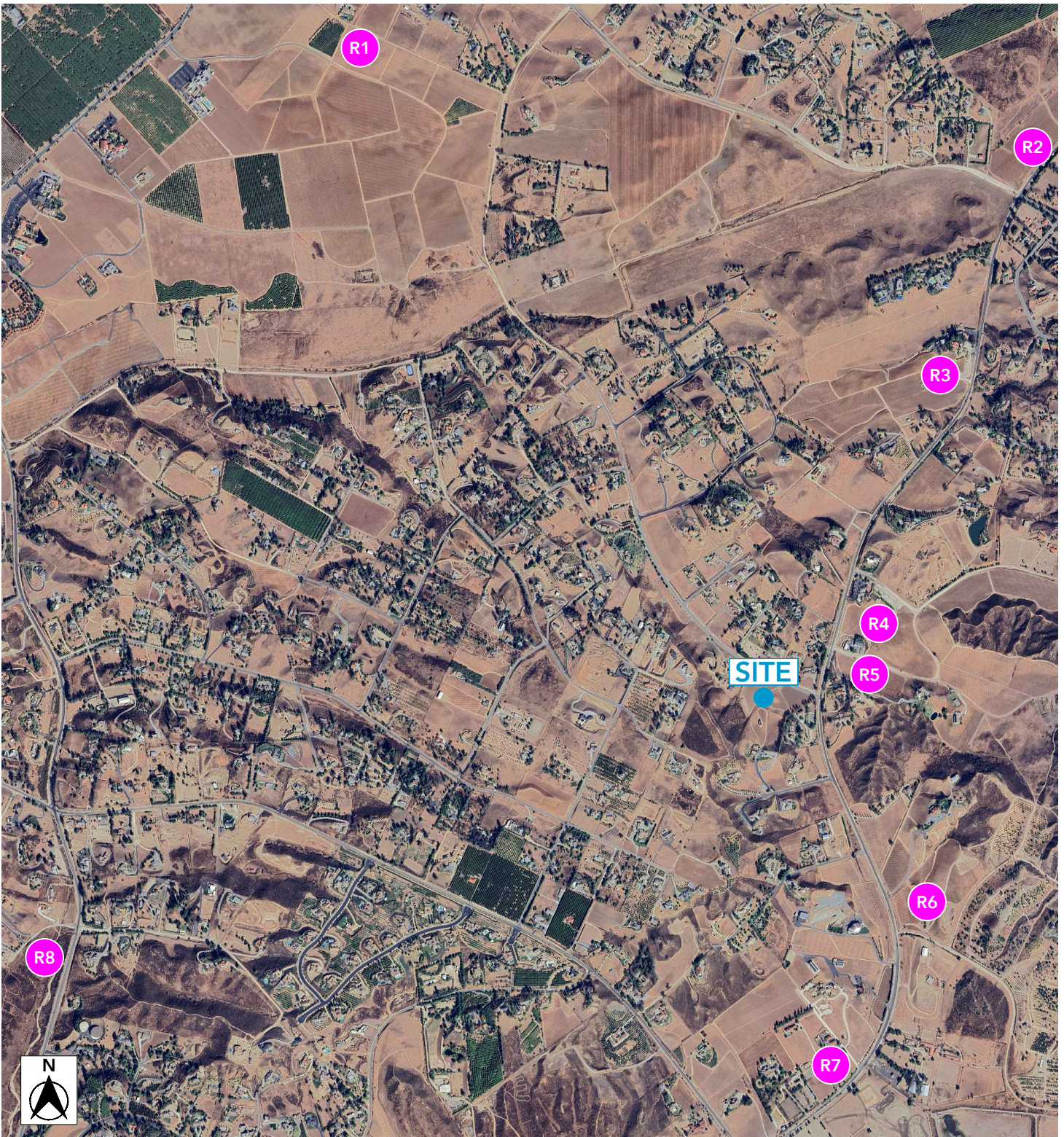
² *Source: ITE Trip Generation Manual (11th Edition, 2021).*

³ TSF = Thousand Square Feet;
DU = Dwelling Units

⁴ Cumulative project trip generation sourced from *Austin Vineyard Class V Winery Traffic Impact Analysis County of Riverside*, dated August 9,2022, prepared by RK Engineering Group, Inc.

⁵ Cumulative project trip generation sourced from *Danza Del Sol Winery Project Traffic Impact Analysis County of Riverside*, dated September 19,2023, prepared by RK Engineering Group, Inc.

⁶ Cumulative project trip generation sourced from *Mexin Teme Winery Project Traffic Impact Analysis County of Riverside*, revised July 19,2022, prepared by RK Engineering Group, Inc.

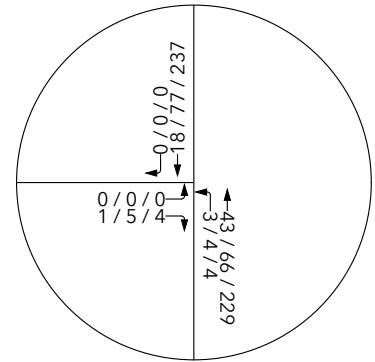
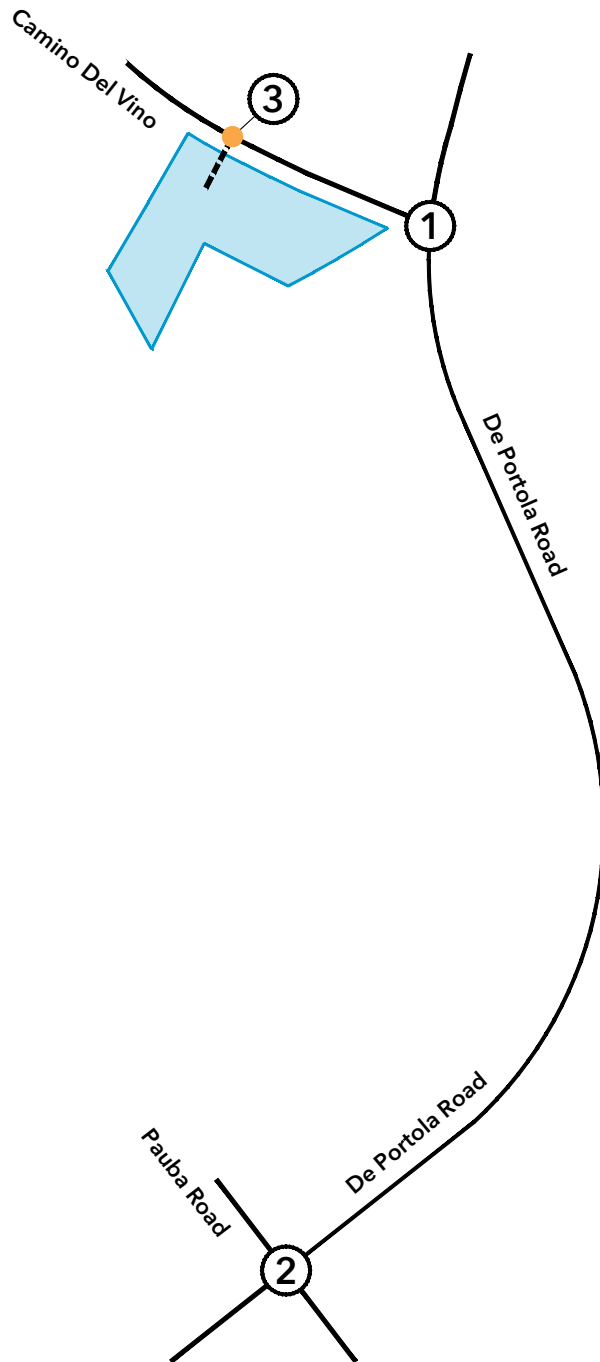


Legend

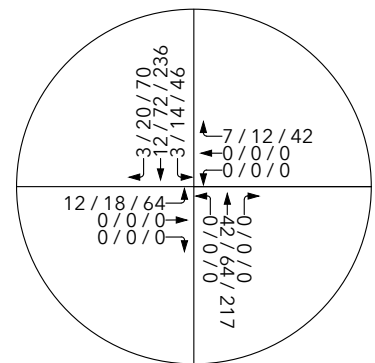
-  = Project Site
-  = County of Riverside Cumulative Projects

Exhibit 4-3

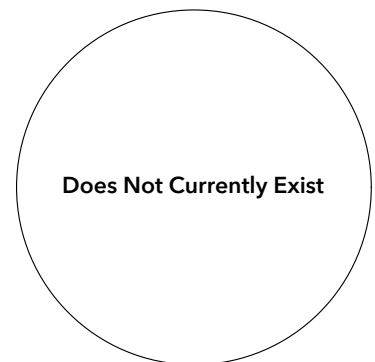
Cumulative Projects Location Map



1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



Legend

① = Study Intersection

— = Project Site Boundary

--- = Project Access Driveway

x / x / x = AM / PM / Saturday Midday Peak Hour Volumes

Exhibit 4-4

Cumulative Projects Traffic Volumes



ENGINEERING
GROUP INC.

4.2.3 Project Opening Year (2027) With Ambient Growth With Project Conditions Traffic Volumes

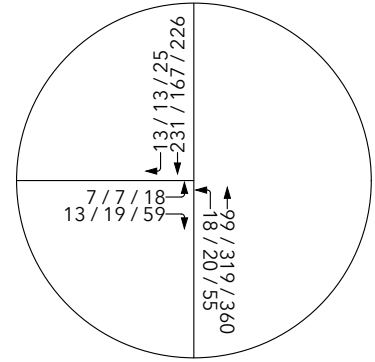
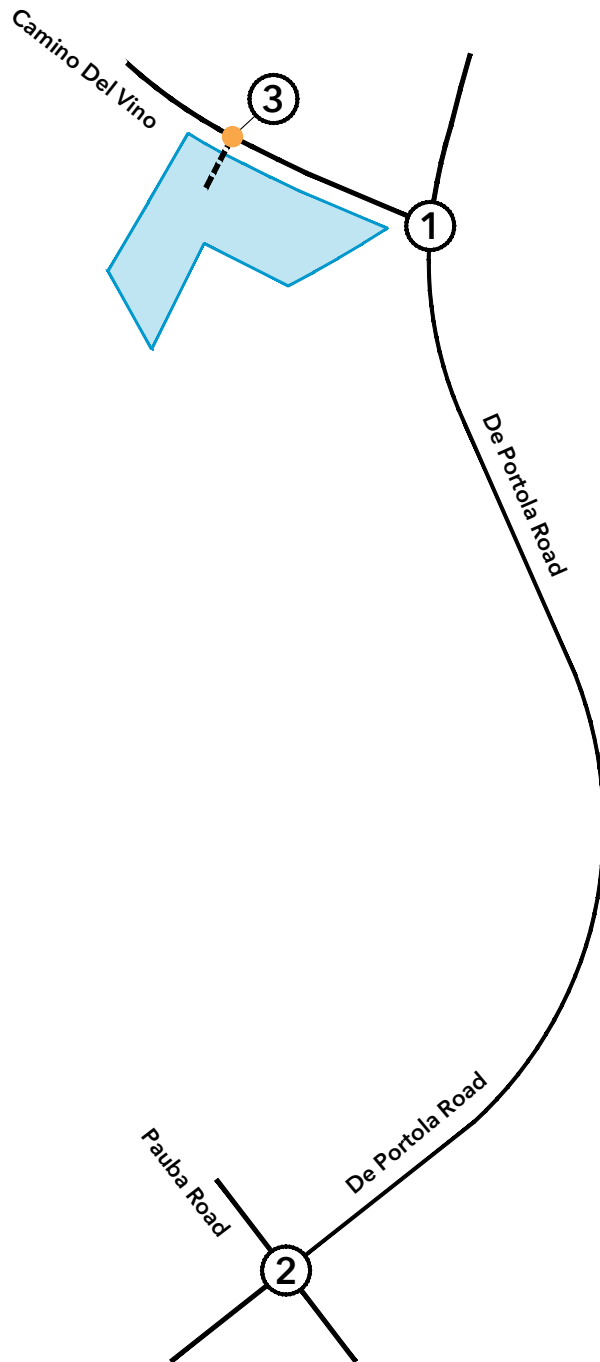
Project Opening Year (2027) With Ambient Growth With Project Conditions traffic volumes consist of two (2) years of linear annual growth on top of existing (2025) traffic volumes at two percent (2%) per year (i.e. 4% total growth), plus traffic generated by the proposed project.

Project Opening Year (2027) With Ambient Growth With Project Conditions traffic volumes are shown on **Exhibit 4-5**.

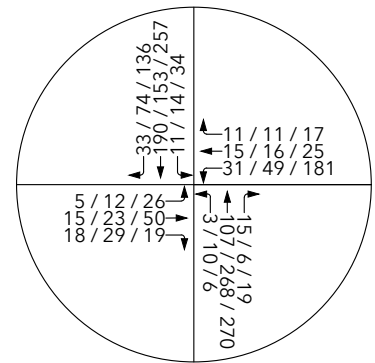
4.2.4 Project Opening Year (2027) With Ambient Growth With Cumulative Projects With Project Conditions Traffic Volumes

Project Opening Year (2027) With Ambient Growth With Cumulative Projects With Project Conditions traffic volumes consist of two (2) years of linear annual growth on top of existing (2025) traffic volumes at two percent (2%) per year (i.e. 4% total growth), plus traffic generated by the cumulative projects and the proposed project.

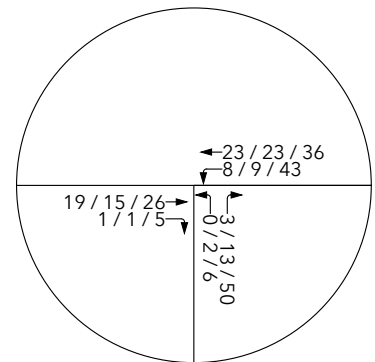
Project Opening Year (2027) With Ambient Growth With Cumulative Projects With Project Conditions traffic volumes are shown on **Exhibit 4-6**.



1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



Legend

① = Study Intersection

— = Project Site Boundary

--- = Project Access Driveway

x / x / x = AM / PM / Saturday Midday Peak Hour Volumes

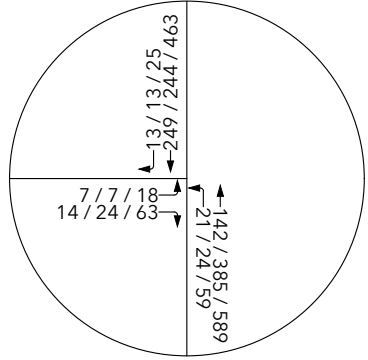
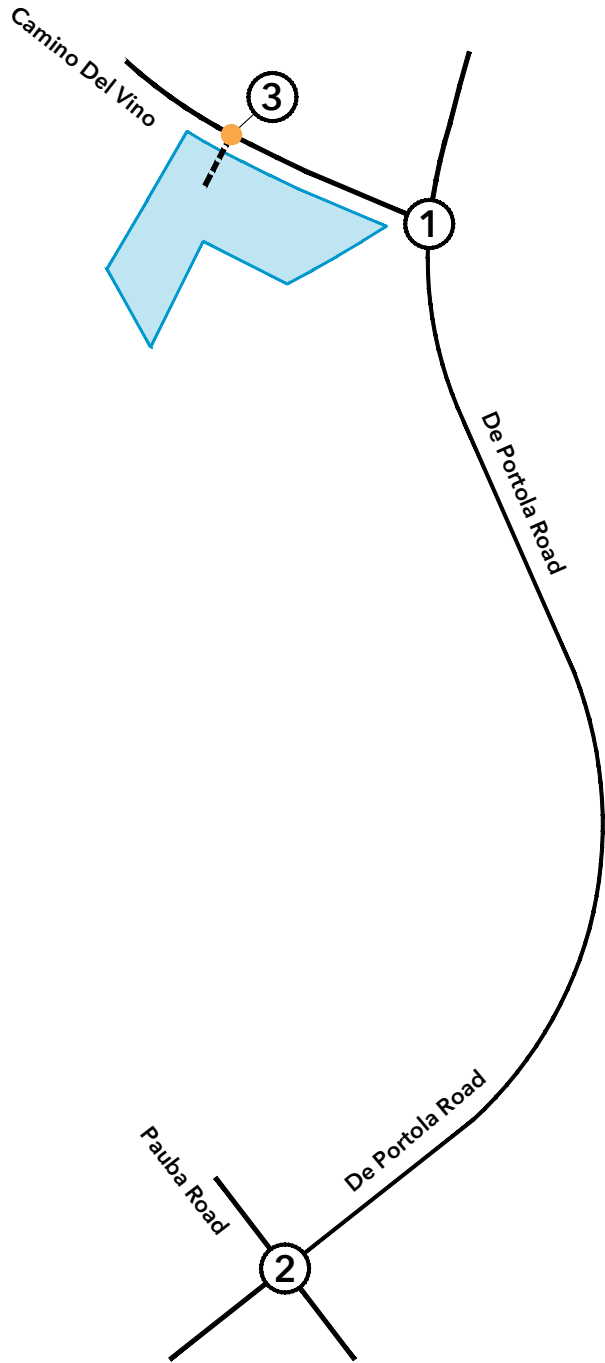
Exhibit 4-5

Project Opening Year (2027) With Ambient Growth
With Project Conditions Traffic Volumes

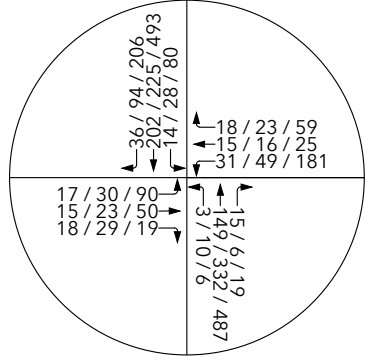
Haven Winery Project // County of Riverside
2459-2025-01



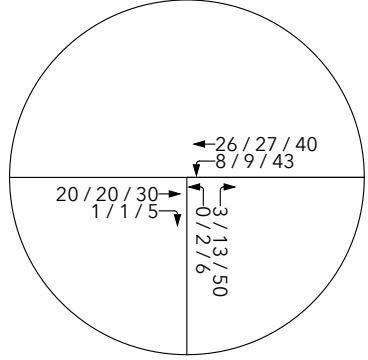
ENGINEERING
GROUP INC.



1. De Portola Road (N/S) & Camino Del Vino (E/W)



2. De Portola Road (N/S) & Pauba Road (E/W)



3. Project Access Driveway (N/S) & Camino Del Vino (E/W)



Legend

- ① = Study Intersection
- = Project Site Boundary
- = Project Access Driveway

x / x / x = AM / PM / Saturday Midday Peak Hour Volumes

Exhibit 4-6

Project Opening Year (2027) With Ambient Growth & Cumulative Projects
With Project Conditions Traffic Volumes

5.0 Study Intersection Peak Hour Level of Service Analysis

This section of the report provides a discussion on the study intersection peak hour LOS analysis and findings. As discussed in Section 2.3, improvements shall be identified for any of the study intersections deemed to be impacted by the proposed project.

5.1 Existing Conditions Level of Service

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

As shown in Table 5-1, the study intersection currently operates at an acceptable LOS during all peak hours under Existing Conditions.

Detailed LOS analysis worksheets for Existing Conditions are contained in **Appendix C**.

5.2 Project Opening Year (2027) With Ambient Growth With Project Conditions Level of Service

Project Opening Year (2027) With Ambient Growth With Project Conditions LOS calculations for the study intersection is shown on **Table 5-2** and is based on the Project Opening Year (2027) With Ambient Growth With Project Conditions AM and PM peak hour traffic volumes shown on Exhibit 4-6 and the existing lane geometry shown on Exhibit 3-1.

As shown in Table 5-2, the study intersections are forecast to continue to operate at an acceptable LOS during all peak hours under Project Opening Year (2027) With Ambient Growth With Project Conditions.

Detailed LOS analysis worksheets for Project Opening Year (2027) With Ambient Growth With Project Conditions are contained in **Appendix D**.

Table 5-1 | Study Intersection LOS Summary – Existing Conditions

Study Intersection	Traffic Control ¹	Methodology	Acceptable LOS	Delay (sec/veh) ^{2,3}			Level of Service		
				AM	PM	SAT	AM	PM	SAT
1. De Portola Road (NS) at Camino Del Vino (EW)	CSS	HCM 7	D	10.4	10.4	11.3	B	B	B
2. De Portola Road (NS) at Pauba Road (EW)	AWS	HCM 7	D	9.0	9.7	12.6	A	A	B
3. Project Access (NS) at Camino Del Vino (EW)	CSS	HCM 7	D	Does Not Currently Exist					

¹ TS = Traffic Signal; CSS = Cross-Street Stop; AWS = All-Way Stop

² Deficient operations shown in **Bold**.

³ HCM Analysis Software: PTV Vistro, Version 2025.

Table 5-2 | Study Intersection LOS Summary – Project Opening Year (2027) With Ambient Growth With Project Conditions

Study Intersection	Traffic Control ¹	Methodology	Acceptable LOS	Delay (sec/veh) ^{2,3}			Level of Service			Requires LOS Improvement?		
				AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
1. De Portola Road (NS) at Camino Del Vino (EW)	CSS	HCM 7	D	10.5	10.4	11.7	B	B	B	NO	NO	NO
2. De Portola Road (NS) at Pauba Road (EW)	AWS	HCM 7	D	9.2	10.0	15.3	A	B	C	NO	NO	NO
3. Project Access (NS) at Camino Del Vino (EW)	CSS	HCM 7	D	8.4	8.5	8.8	A	A	A	NO	NO	NO

¹ TS = Traffic Signal; CSS = Cross-Street Stop; AWS = All-Way Stop

² Deficient operations shown in **Bold**.

³ HCM Analysis Software: PTV Vistro, Version 2025.

5.3 Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions Level of Service

Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions LOS calculations for the study intersection is shown on Table 5-3 and is based on the Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions traffic volumes shown on Exhibit 4-8 and the existing lane geometry shown on Exhibit 3-1.

As shown in Table 5-3, the study intersections are forecast to continue to operate at an acceptable LOS during all peak hours under Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions with the exception of the following intersection:

Deficient Intersection

- Intersection No. 2 – De Portola Road (N/S) at Pauba Road (E/W)
 - Saturday Midday Peak Hour – LOS F (135.3 seconds/vehicle)

The project will be required to contribute funding towards improvements needed to restore an acceptable level of service at the deficient intersection which is further discussed in Section 5.6. The following improvements are recommended for Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions:

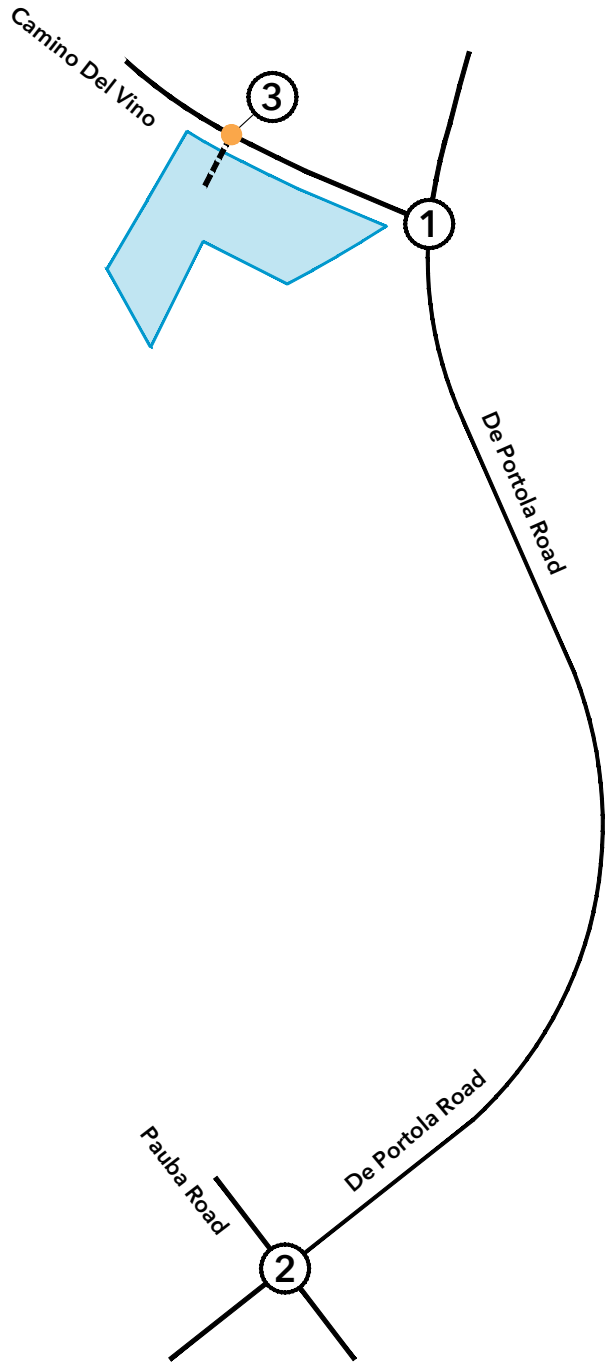
Recommended Improvement:

- Intersection No. 2 – De Portola Road (N/S) at Pauba Road (E/W)
 - Install a traffic signal with permissive left-turn phasing in all directions.

The recommended improvement is shown in **Exhibit 5-1**.

As shown in Table 5-3, the recommended improvement identified above reduces the delay to acceptable operations for the deficient intersection and offsets the project's effect for Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions.

Detailed LOS analysis worksheets for Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions are contained in **Appendix E**. Detailed LOS analysis worksheets for Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions With Improvements are contained in **Appendix F**.



Study Intersection	
2. De Portola Road (N/S) & Pauba Road (E/W)	
Analysis Scenario	Existing Conditions
	Project Opening Year (2027) With Ambient Growth With Project Conditions
	Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions
	No improvements required.

Legend

- N
- ① = Study Intersection
- = Project Site Boundary
- = Project Access Driveway
- = Traffic Signal
- ⑤ = All-Way Stop
- = Recommended Improvements

Exhibit 5-1 Recommended Improvements

5.4 Peak Hour Signal Warrant Analysis

Intersection No. 2 (i.e., De Portola Road at Pauba Road) has been evaluated for signalization based on the peak hour traffic signal warrants (i.e., Warrant 3) and procedures contained in the latest *California Manual on Uniform Traffic Control Devices (CA MUTCD), 2014 Edition*.

It should be noted that the purpose of the traffic signal warrant analysis is to determine if an intersection meets the minimum traffic volume requirements to be eligible for the installation of a traffic signal. The actual need for signalization is determined based on the LOS evaluation conducted in Section 5.0 of this report.

Table 5-4 summarizes the results of the CA MUTCD peak hour traffic signal warrant analysis for all traffic analysis scenarios evaluated as a part of this study.

As shown in **Table 5-4**, the peak hour traffic signal warrant is satisfied for the intersection under all scenarios during the Saturday midday peak hour only.

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

Table 5-3 | Study Intersection LOS Summary – Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions

Study Intersection	Traffic Control ¹	Methodology	Acceptable LOS	Delay (sec/veh) ^{2,3}			Level of Service			Requires LOS Improvement?		
				AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
1. De Portola Road (NS) at Camino Del Vino (EW)	CSS	HCM 7	D	10.9	11.2	17.2	B	B	C	NO	NO	NO
2. De Portola Road (NS) at Pauba Road (EW) <i>With Improvements</i>	AWS	HCM 7	D	9.8	12.5	151.7	A	B	F	NO	NO	YES
	TS	HCM 7	D	7.4	7.4	14.4	A	A	B	--	--	--
3. Project Access (NS) at Camino Del Vino (EW)	CSS	HCM 7	D	9.4	8.5	8.8	A	A	A	NO	NO	NO

¹ TS = Traffic Signal; CSS = Cross-Street Stop; AWS = All-Way Stop

² Deficient operations shown in **Bold**.

³ HCM Analysis Software: PTV Vistro, Version 2025.

Table 5-4 | CA MUTCD Peak Hour Traffic Signal Warrant Summary

Study Intersection	Analysis Scenarios								
	Existing (2025) Conditions			Project Opening Year With Ambient Growth With Project Conditions			Project Opening Year With Ambient Growth & Cumulative Projects With Project Conditions		
	AM	PM	SAT	AM	PM	SAT	AM	PM	SAT
2. De Portola Road (NS) at Pauba Road (EW)	Does Not Satisfy	Does Not Satisfy	Satisfy	Does Not Satisfy	Does Not Satisfy	Satisfy	Does Not Satisfy	Does Not Satisfy	Satisfy

¹ Study intersections that meet the MUTCD peak hour traffic signal warrant (i.e., Warrant 3) under each opening year and future year scenario are shown in **Bold**.

5.5 Project Fair-Share Contribution

Funding for transportation improvements within the County of Riverside is a combination of developmental impact fees (DIF), Transportation Uniform Mitigation Fee (TUMF) program, fair-share contributions, or construction.

Due to the location of the deficient study intersection, there are not any applicable TUMF or DIF programs for the recommended improvement. Therefore, the project would be responsible for its fair-share contribution of the cost required to implement the identified improvements. Fair-share contribution is based on project trip contribution relative to the amount of overall growth from existing traffic conditions at each impacted study area intersection.

Fair-share contribution percentages for the proposed project under Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions are provided in **Table 5-5**.

Table 5-5 | Project Fair-Share Contribution Summary

Study Intersection	Existing (2025) Traffic	Project Opening Year (2027) Traffic	Growth in Traffic	Total Project Traffic	Project Fair-Share ²
	Saturday Midday Peak Hour ³				
2. De Portola Road (N/S) at Pauba Road (E/W)	925	1,715	790	78	9.9%

¹ Project Fair-Share Contribution represents the project's traffic contribution at each impacted study area intersection as a percentage of the overall growth in traffic for Project Opening Year (2026) With Project scenario. This table is for informational purposes only and is not tied to any mitigation.

² The Project's Fair-Share Contribution is shown in **Bold**.

³ The LOS remains acceptable under the AM and PM peak hours the deficient intersection. As such, the AM and PM peak hour traffic volumes are not shown since it is not applicable to the fair-share contribution percentage.

As shown in Table 5-5, the project-fair share contribution percentages are identified below:

Fair-Share Contribution Percentage:

- Intersection No. 2 – De Portola Road (N/S) at Pauba Road (E/W)
 - 9.9% (Saturday Midday Peak Hour)

6.0 Conclusion

6.1 Project Summary

The proposed project is located near the southwest corner of De Portola Road and Camino Del Vino, in the Temecula Valley Wine County Community Plan area of the unincorporated County of Riverside. The proposed project consists of constructing and operating a Class II winery that will include 5,182 square feet (SF) of production, 1,640 SF of general office space, and 2,794 SF for wine tasting.

Access to the project site will be provided via one (1) full access unsignalized driveway located along Camino Del Vino.

Based on the ITE trip generation rates, the proposed project is forecast to generate approximately 171 daily trips during a typical weekday, which include approximately 12 AM peak hour trips and 25 PM peak hour trips as well as 577 daily trips on a typical Saturday, which includes approximately 104 midday peak hour trips.

6.2 Traffic Study Area & Analysis Scenarios

The study area included in this analysis has been determined based on the applicable jurisdictional traffic guidelines. The study area consists of three (3) intersections all located within the County of Riverside.

The analysis evaluates traffic conditions for the following scenarios during the weekday (7:00 AM to 9:00 AM), weekday PM (4:00 PM to 6:00 PM) peak periods, and Saturday midday peak periods:

- Existing Conditions;
- Project Opening Year (2027) With Ambient Growth With Project Conditions
- Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions

6.3 Study Intersection LOS Summary

The intersection level of service analysis has been performed at the three (3) study intersections within the vicinity of the site where the project may contribute a significant amount of traffic. Based on the LOS analysis, all study intersections are forecast to operate at an acceptable, with the exception of the following intersection during the following scenario:

Deficient Intersection

- Intersection No. 2 – De Portola Road (N/S) at Pauba Road (E/W)
 - Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions (Saturday Midday Peak Hour)

As such, the following improvements are recommended for Project Opening Year (2027) With Ambient Growth & Cumulative Projects With Project Conditions to reduce the delay to acceptable operations for the deficient intersection and offset the project's effect:

Recommended Improvement:

- Intersection No. 2 – De Portola Road (N/S) at Pauba Road (E/W)
 - Install a traffic signal with permissive left-turn phasing in all directions.

6.4 Project Fair-Share Contribution

The project is responsible for its fair-share contribution of the cost required to implement the identified improvement. Fair-share contribution is based on project trip contribution relative to the amount of overall growth from existing traffic conditions at each impacted study area intersection. As such, the project-fair share contribution percentage for Project Opening Year (2027) is as follows:

- Intersection No. 2 – De Portola Road (N/S) at Pauba Road (E/W)
 - 9.9% (Saturday Midday Peak Hour)



Appendices



Appendix A

Scope of Work



SCOPING AGREEMENT FOR TRANSPORTATION LOS ANALYSIS

This letter acknowledges the Riverside County Transportation Department requirements for transportation level of service analysis of the following project. The analysis must follow the Riverside County Transportation Department Transportation Analysis Guidelines, December 2020.

Case No.	PPT240015
Related Cases	--
Project Name:	Haven Winery
Project Address:	Located near southwest corner of De Portola Road and Camino Del Vino
Project Description:	Class II Winery on 9.62 acres with 5,182 SF Production, 1,640 SF Office, and 2,794 SF of wine tasting room.

<u>Traffic Consultant</u>	<u>Applicant/Developer</u>
Name: <u>RK Engineering Group, Inc.</u>	<u>RTN DEVELOPMENT</u>
Address: <u>1401 Dove Street, Suite 540</u>	<u>27555 Ynez Road</u>
<u>Newport Beach, CA 92660</u>	<u>Temecula, CA 92592</u>
Telephone: <u>(949) 474-0871</u>	<u>(760) 594-1107</u>
E-mail: <u>be@rkengineer.com</u>	<u>rneuge@gmail.com</u>
Current GP Land Use <u>AG</u>	Proposed Land Use <u>AG</u>
Current Zoning <u>WC-W</u>	Proposed Zoning <u>WC-W</u>

A. Trip Generation Source: ITE Trip Generation Manual 11th Edition, 2021

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	--	--	--	9	3	12
PM Trips	--	--	--	10	15	25
Sat Trips				48	56	104
Internal Trip Allowance	☐	Yes	☒ No	(_____ % Trip Discount)		
Pass-By Trip Allowance	☐	Yes	☒ No	(_____ % Trip Discount)		

A pass-by trip discount of 25% is allowed for appropriate land uses. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: N 15 % S 50 % E 10 % W 25 %
(attach exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year:	2027	Annual Ambient Growth Rate:	2 %
Phase Year(s)	N/A		
Other projects to be analyzed:	To be provided by the County.		
Model/Forecast methodology	Ambient growth plus cumulative projects.		

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

- | | |
|---|-----------|
| 1. <u>De Portola Road (NS) at Camino Del Vino (EW)</u> | 6. _____ |
| 2. <u>De Portola Road (NS) at Pauba Road (EW)</u> | 7. _____ |
| 3. <u>Project Driveway (NS) at Camino Del Vino (EW)</u> | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

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

- | | |
|---------------|-----------|
| 1. <u>N/A</u> | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

F. Other Jurisdictional

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? ☐ Yes ☒ No
If yes, name of jurisdiction(s): _____

G. Site Plan (please attach reduced copy) Please see Exhibit B attached.

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Transportation Department)

(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

Existing traffic counts from 2022 to be utilized and grown by 2% per year for 2025 baseline conditions.

- Saturday conditions to be analyzed.

If the project is not scheduled for a hearing once school resumes session, the County will require new counts to be taken and the traffic study to be updated with these new accounts.

I. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts 2022

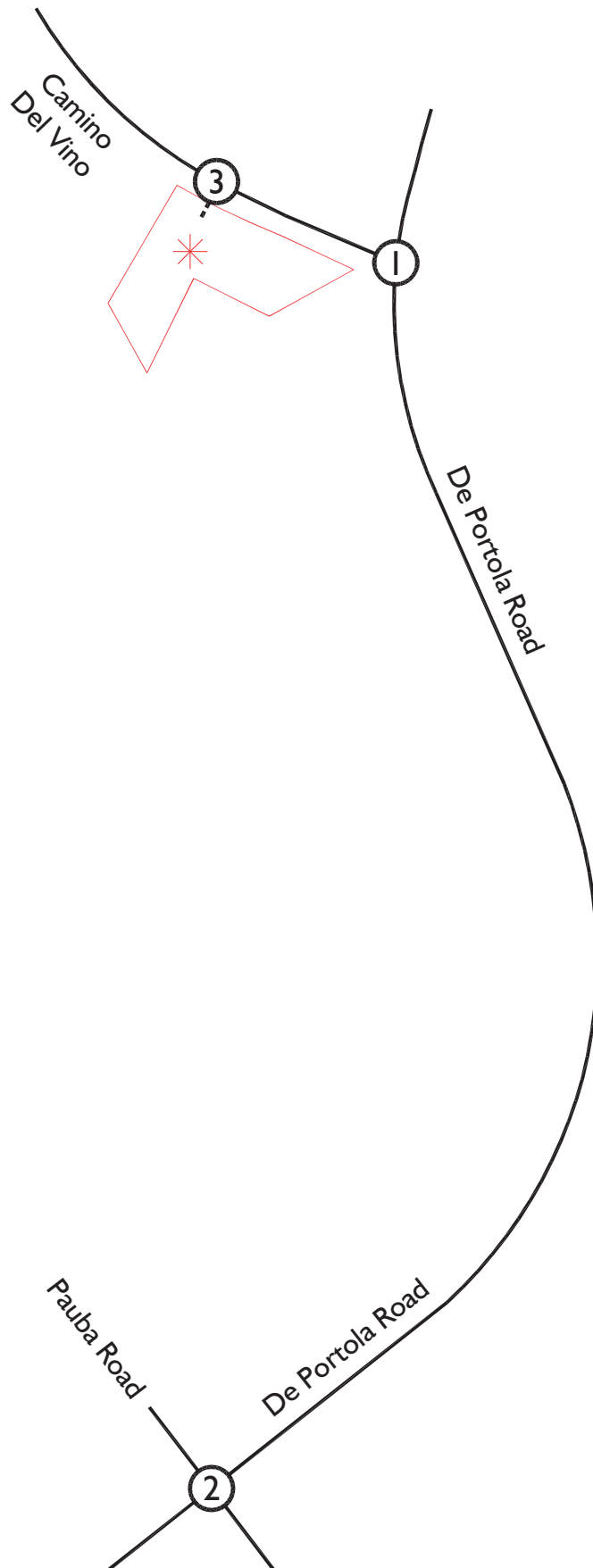
***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with this form.**

Recommended by:

Justin Tucker, P.E., T.E.	<u>04/25/2025</u>
Traffic Consultant	Date
Scoping Agreement Submitted on	<u>04/29/2025</u>
Revised on	<u>06/10/2025</u>

Approved Scoping Agreement

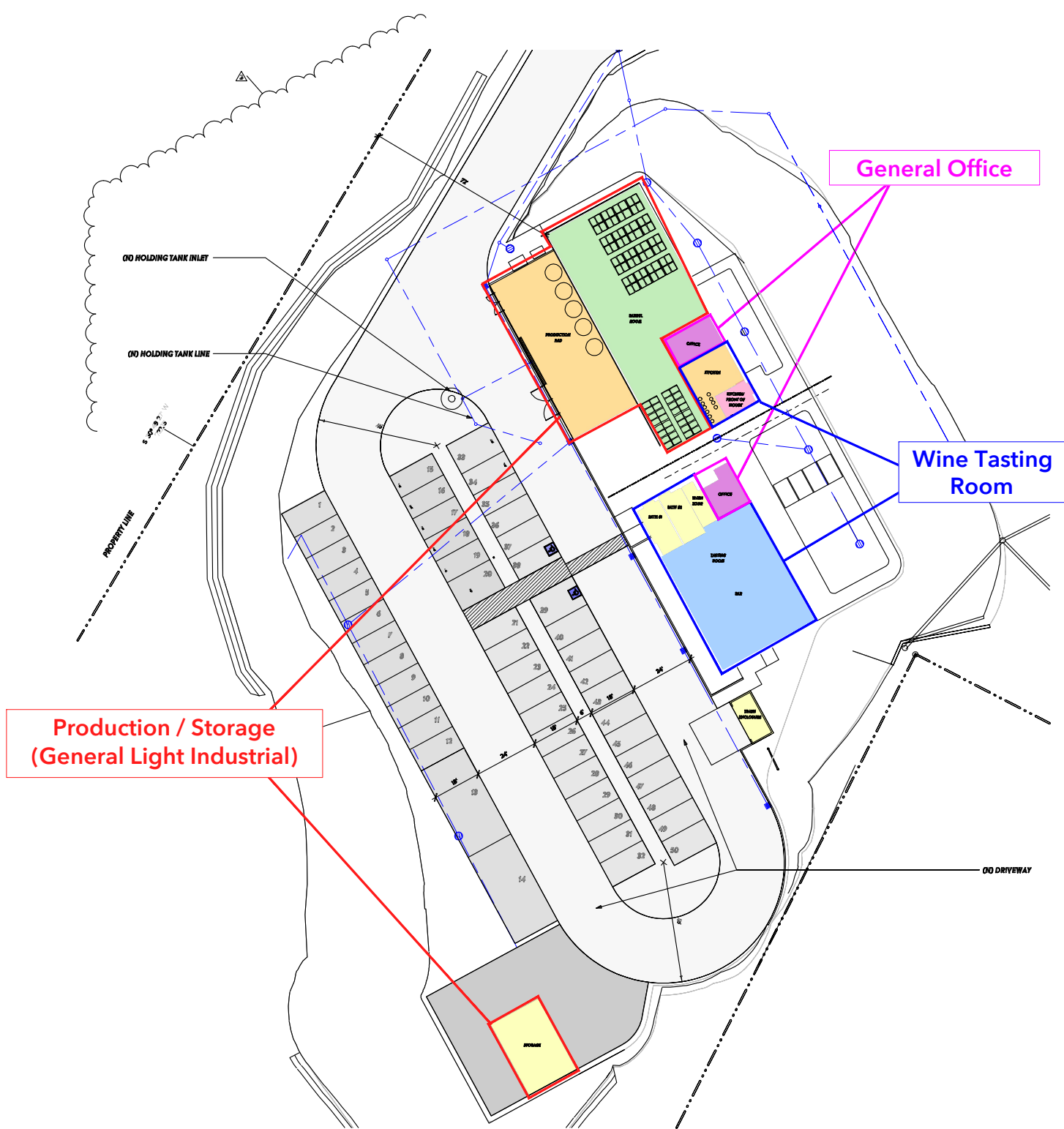
<u>Eva Covarrubias</u>	<u>6/17/2025</u>
Riverside County Transportation Department	Date



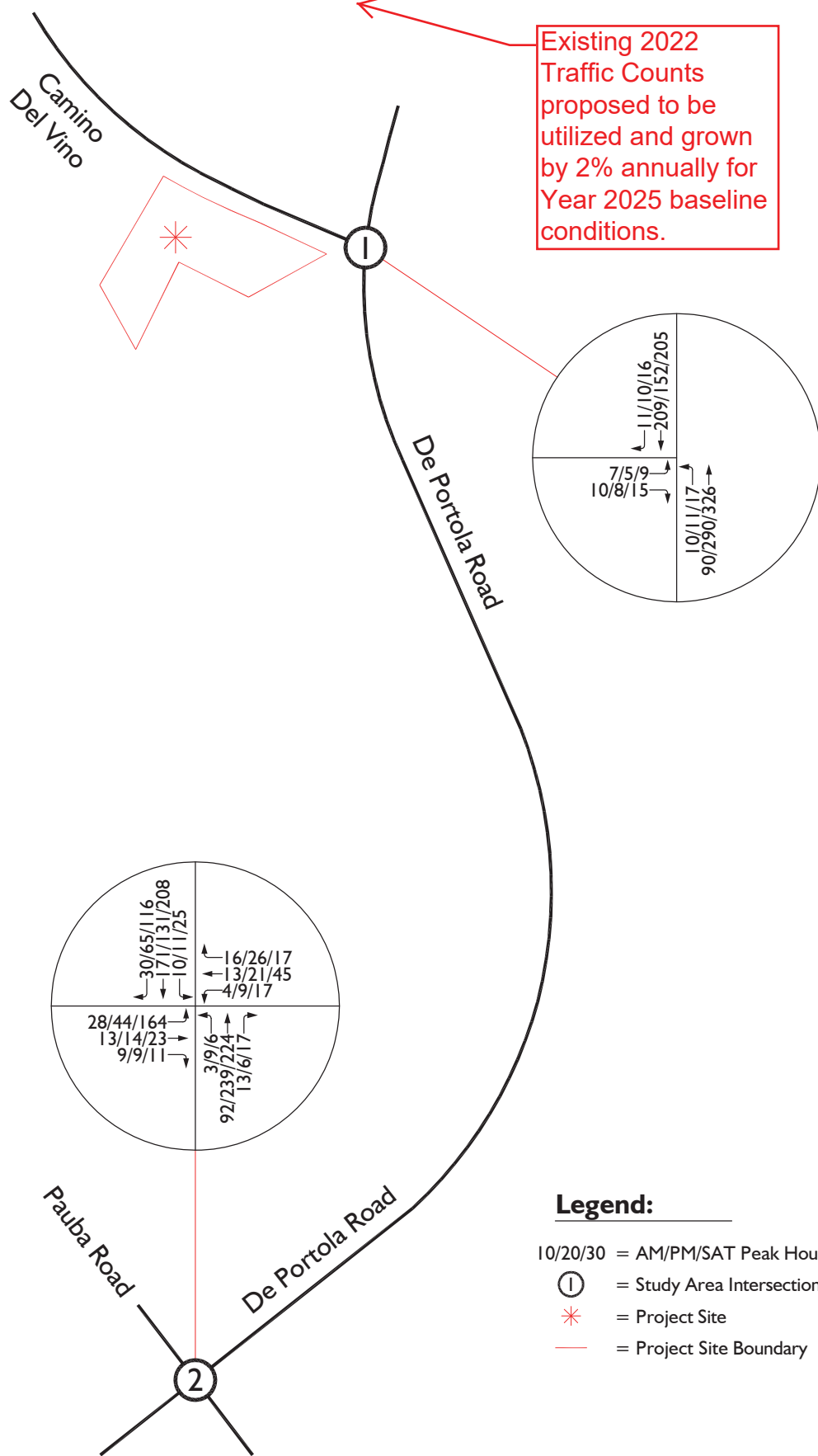
Legend:

- ① = Study Area Intersection
- * = Project Site
- = Project Access Driveway
- = Project Site Boundary





Existing Conditions Traffic Volumes



Project Trip Distribution



Legend:

- 10 = Percent from Project
- * = Project Site
- = Project Access Driveway
- = Project Site Boundary



Table 1
ITE Trip Generation Rates¹

Land Use	ITE Code	Units ²	Weekday							Saturday			
			AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour			Daily
			In	Out	Total	In	Out	Total		In	Out	Total	
General Light Industrial ³	110	TSF	0.65	0.09	0.74	0.09	0.56	0.65	4.87	0.05	0.05	0.10	0.69
General Office	710	TSF	1.34	0.18	1.52	0.24	1.20	1.44	10.84	0.29	0.24	0.53	2.21
Wine Tasting Room	970	TSF	1.45	0.62	2.07	3.66	3.65	7.31	45.96	17.15	19.35	36.50	203.48

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

² TSF = Thousand Square Feet.

³ The *ITE Trip Generation Manual* does not provide a Saturday midday peak hour trip generation rate for ITE Land Use 110: General Light Industrial. As such, the Saturday midday peak hour rate has been calculated by comparing the ratio between the weekday AM and weekday daily trip rates, and applying the ratio to the Saturday daily trip rate [i.e. $(0.74 / 4.87) * 0.69 = 0.10$]. A 50/50 inbound/outbound split was assumed.

Table 2
Project Trip Generation¹

Land Use (ITE Code)	Quantity	Units ²	Weekday							Saturday			
			AM Peak Hour			PM Peak Hour			Daily	Midday Peak Hour			Daily
			In	Out	Total	In	Out	Total		In	Out	Total	
General Light Industrial (110)	5.182	TSF	3	1	4	0	3	3	25	0	1	1	4
General Office (710)	1.640	TSF	2	0	2	0	2	2	18	0	1	1	4
Wine Tasting Room (970)	2.794	TSF	4	2	6	10	10	20	128	48	54	102	569
Total Trip Generation			9	3	12	10	15	25	171	48	56	104	577

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

² TSF = Thousand Square Feet.



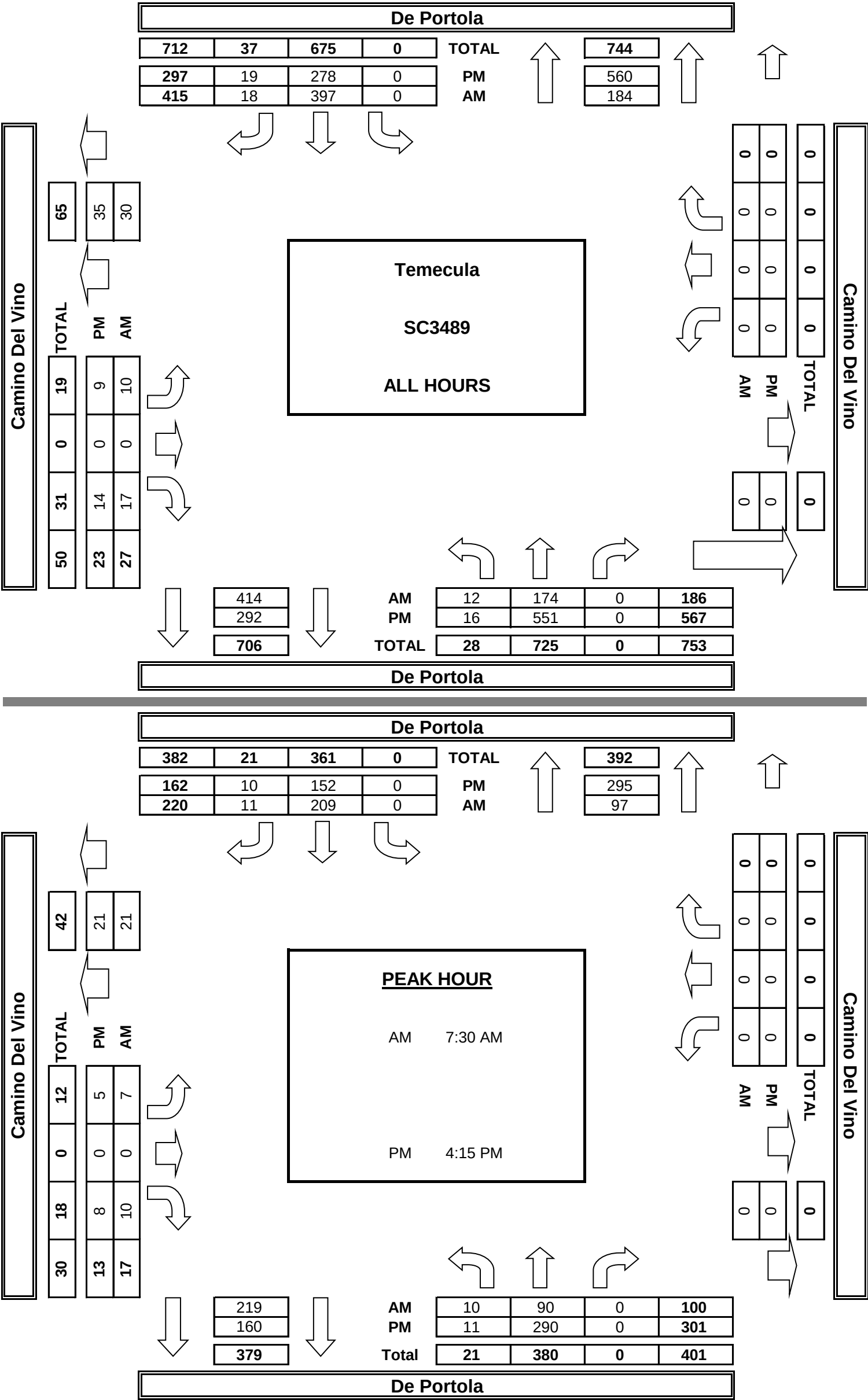
Appendix B

Traffic Count Worksheets

AM Period	NB		SB			PM Period	NB		SB		
0:00	6		4			12:00	42		55		
0:15	3		0			12:15	59		62		
0:30	2		6			12:30	64		46		
0:45	0	11	1	11	22	12:45	51	216	50	213	429
1:00	1		2			13:00	57		49		
1:15	2		1			13:15	76		60		
1:30	4		0			13:30	64		62		
1:45	4	11	0	3	14	13:45	65	262	54	225	487
2:00	5		1			14:00	75		70		
2:15	0		0			14:15	66		75		
2:30	2		0			14:30	73		47		
2:45	2	9	2	3	12	14:45	82	296	55	247	543
3:00	1		2			15:00	80		55		
3:15	2		1			15:15	82		57		
3:30	0		2			15:30	99		53		
3:45	0	3	3	8	11	15:45	62	323	58	223	546
4:00	1		2			16:00	83		65		
4:15	1		3			16:15	70		52		
4:30	0		7			16:30	56		69		
4:45	2	4	5	17	21	16:45	69	278	53	239	517
5:00	0		4			17:00	68		55		
5:15	0		7			17:15	60		63		
5:30	2		13			17:30	51		63		
5:45	3	5	13	37	42	17:45	57	236	45	226	462
6:00	7		17			18:00	51		54		
6:15	7		16			18:15	44		51		
6:30	11		18			18:30	57		49		
6:45	15	40	25	76	116	18:45	45	197	49	203	400
7:00	12		22			19:00	28		30		
7:15	13		21			19:15	33		17		
7:30	15		27			19:30	32		34		
7:45	31	71	47	117	188	19:45	34	127	51	132	259
8:00	12		28			20:00	27		33		
8:15	23		43			20:15	27		23		
8:30	28		36			20:30	20		25		
8:45	13	76	41	148	224	20:45	27	101	33	114	215
9:00	31		38			21:00	27		34		
9:15	19		26			21:15	19		27		
9:30	22		27			21:30	21		23		
9:45	39	111	46	137	248	21:45	18	85	23	107	192
10:00	34		37			22:00	23		42		
10:15	33		46			22:15	19		34		
10:30	45		54			22:30	19		34		
10:45	40	152	53	190	342	22:45	18	79	23	133	212
11:00	55		50			23:00	13		7		
11:15	46		50			23:15	8		10		
11:30	52		76			23:30	14		6		
11:45	69	222	53	229	451	23:45	8	43	3	26	69
Total Vol.	715		976		1691		2243		2088		4331
								Daily Totals			
						NB		SB		Combined	
						2958		3064		6022	
AM						PM					
Split %	42.3%		57.7%		28.1%		51.8%		48.2%		71.9%
Peak Hour	11:45		11:30		11:30		14:45		13:30		14:45
Volume	234		246		468		343		261		563
P.H.F.	0.85		0.81		0.91		0.99		0.87		0.93

Saturday, June 04, 2022						CITY: Temecula						PROJECT: sc3489					
ADT2 De Portola west of Pauba.												Prepared by AimTD LLC tel. 714 253 7888					
AM Period		EB		WB		PM Period		EB		WB							
0:00		4		1		12:00		56		40							
0:15		1		0		12:15		61		56							
0:30		1		6		12:30		66		27							
0:45		0		6		12:45		50		233		53		176 409			
1:00		2		2		13:00		65		42							
1:15		0		0		13:15		64		44							
1:30		6		0		13:30		52		48							
1:45		3		11		13:45		42		223		46		180 403			
2:00		4		0		14:00		61		58							
2:15		1		0		14:15		54		63							
2:30		1		0		14:30		59		40							
2:45		1		7		14:45		64		238		49		210 448			
3:00		1		3		15:00		65		47							
3:15		1		1		15:15		61		47							
3:30		1		2		15:30		66		71							
3:45		0		3		15:45		62		254		51		216 470			
4:00		1		2		16:00		58		66							
4:15		2		1		16:15		49		47							
4:30		1		2		16:30		46		61							
4:45		1		5		16:45		44		197		49		223 420			
5:00		0		4		17:00		47		67							
5:15		1		5		17:15		59		58							
5:30		1		9		17:30		44		55							
5:45		7		9		17:45		39		189		45		225 414			
6:00		6		10		18:00		37		74							
6:15		9		13		18:15		37		71							
6:30		9		9		18:30		34		50							
6:45		12		36		18:45		35		143		53		248 391			
7:00		13		11		19:00		22		36							
7:15		14		14		19:15		34		30							
7:30		21		23		19:30		27		32							
7:45		31		79		19:45		28		111		43		141 252			
8:00		16		34		20:00		19		40							
8:15		24		38		20:15		27		30							
8:30		27		25		20:30		12		32							
8:45		18		85		20:45		25		83		32		134 217			
9:00		33		32		21:00		20		28							
9:15		21		21		21:15		14		26							
9:30		23		27		21:30		15		29							
9:45		42		119		21:45		14		63		32		115 178			
10:00		27		33		22:00		19		33							
10:15		41		42		22:15		17		35							
10:30		36		46		22:30		9		26							
10:45		46		150		22:45		17		62		31		125 187			
11:00		51		39		23:00		13		18							
11:15		57		33		23:15		8		18							
11:30		46		53		23:30		10		29							
11:45		54		208		23:45		5		36		18		83 119			
Total Vol.		718		774		1492		1832		2076		3908					
								Daily Totals									
								EB		WB		Combined					
								2550		2850		5400					
AM								PM									
Split %		48.1%		51.9%		27.6%		46.9%		53.1%		72.4%					
Peak Hour		11:45		11:30		11:30		14:45		18:00		15:15					
Volume		237		195		412		256		248		482					
P.H.F.		0.90		0.87		0.88		0.97		0.84		0.88					
cs@aimtd.com						Tell. 714 253 7888											

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Wed, Jun 1, 22

LOCATION:
NORTH & SOUTH: Temecula
EAST & WEST: De Portola
Camino Del Vino

PROJECT #: SC3489
LOCATION #: 1
CONTROL: STOP E

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
OTHER		▼		

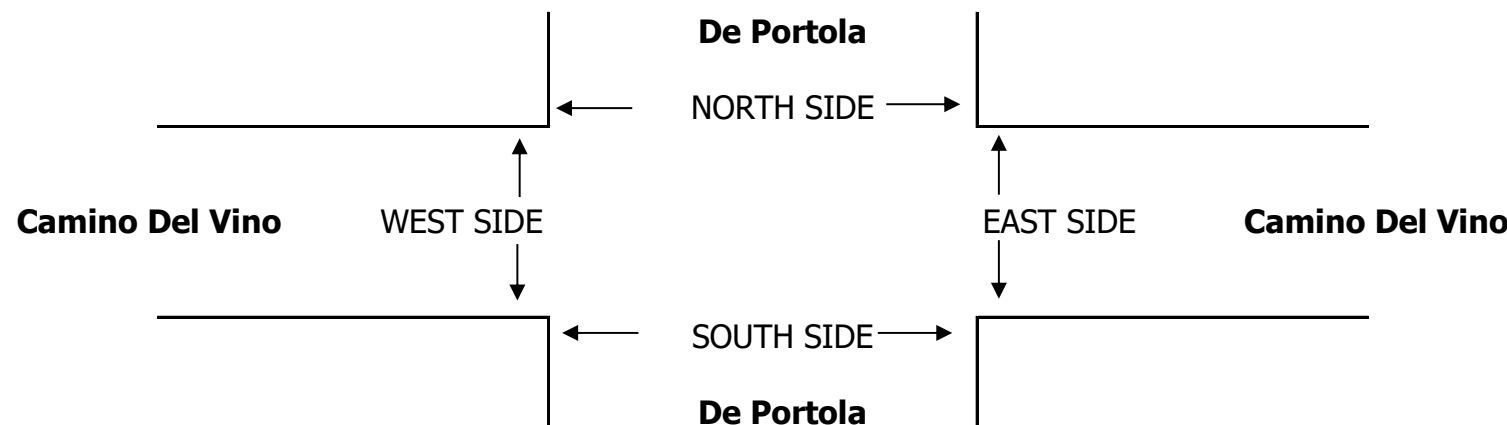
☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	De Portola			De Portola			Camino Del Vino			Camino Del Vino			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	X	X	1	0	0	X	0	X	X	X	

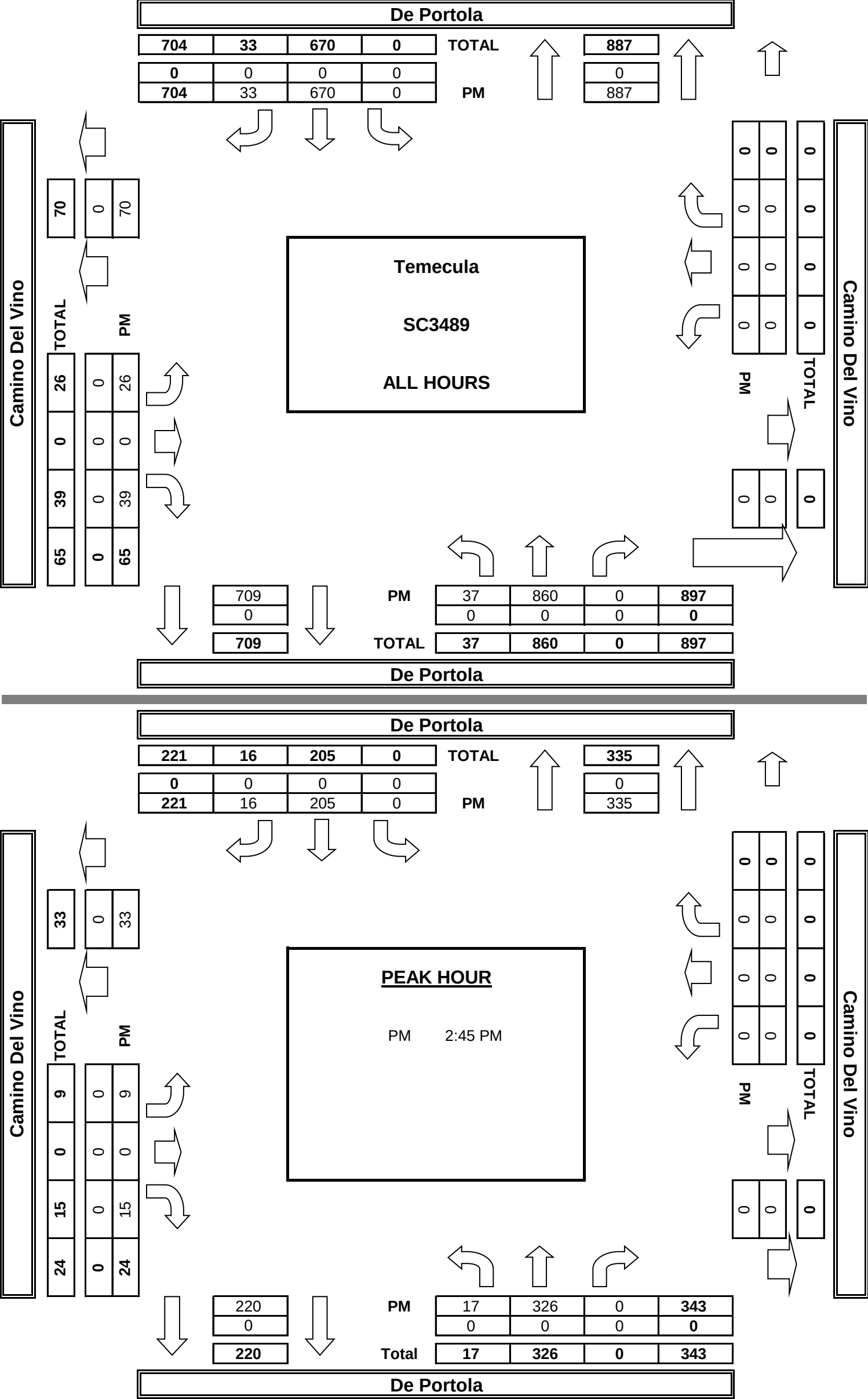
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	1	14	0	0	45	3	0	0	0	0	0	0	63
	7:15 AM	1	17	0	0	43	1	0	0	1	0	0	0	63
	7:30 AM	2	24	0	0	54	3	2	0	1	0	0	0	86
	7:45 AM	3	22	0	0	67	2	2	0	5	0	0	0	101
	8:00 AM	2	18	0	0	46	3	1	0	3	0	0	0	73
	8:15 AM	3	26	0	0	42	3	2	0	1	0	0	0	77
	8:30 AM	0	25	0	0	45	1	2	0	4	0	0	0	77
	8:45 AM	0	28	0	0	55	2	1	0	2	0	0	0	88
	VOLUMES	12	174	0	0	397	18	10	0	17	0	0	0	628
	APPROACH %	6%	94%	0%	0%	96%	4%	37%	0%	63%	0%	0%	0%	
PM	APP/DEPART	186	/	184	415	/	414	27	/	0	0	/	30	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	10	90	0	0	209	11	7	0	10	0	0	0	337
	APPROACH %	10%	90%	0%	0%	95%	5%	41%	0%	59%	0%	0%	0%	
	PEAK HR FACTOR	0.862			0.797			0.607			0.000			0.834
	APP/DEPART	100	/	97	220	/	219	17	/	0	0	/	21	0
	4:00 PM	1	83	0	0	33	3	1	0	2	0	0	0	123
	4:15 PM	1	76	0	0	37	4	2	0	2	0	0	0	122
	4:30 PM	4	60	0	0	28	3	0	0	3	0	0	0	98
	4:45 PM	2	71	0	0	51	1	3	0	2	0	0	0	130
PM	5:00 PM	4	83	0	0	36	2	0	0	1	0	0	0	126
	5:15 PM	1	59	0	0	27	0	0	0	3	0	0	0	90
	5:30 PM	1	63	0	0	30	3	2	0	0	0	0	0	99
	5:45 PM	2	56	0	0	36	3	1	0	1	0	0	0	99
	VOLUMES	16	551	0	0	278	19	9	0	14	0	0	0	887
	APPROACH %	3%	97%	0%	0%	94%	6%	39%	0%	61%	0%	0%	0%	
	APP/DEPART	567	/	560	297	/	292	23	/	0	0	/	35	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	11	290	0	0	152	10	5	0	8	0	0	0	476
	APPROACH %	4%	96%	0%	0%	94%	6%	38%	0%	62%	0%	0%	0%	
PM	PEAK HR FACTOR	0.865			0.779			0.650			0.000			0.915
	APP/DEPART	301	/	295	162	/	160	13	/	0	0	/	21	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Sat, Jun 4, 22

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Temecula
De Portola
Camino Del Vino

PROJECT #:
LOCATION #:
CONTROL:

SC3489
1
STOP E

NOTES:

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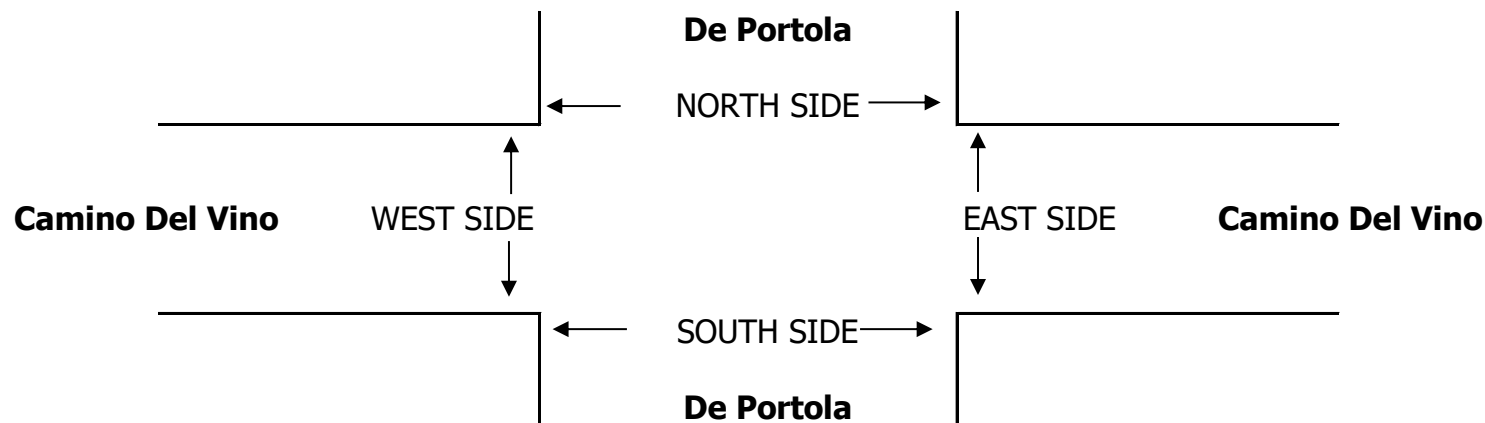
☐ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	De Portola			De Portola			Camino Del Vino			Camino Del Vino			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	X	X	1	0	0	X	0	X	X	X	

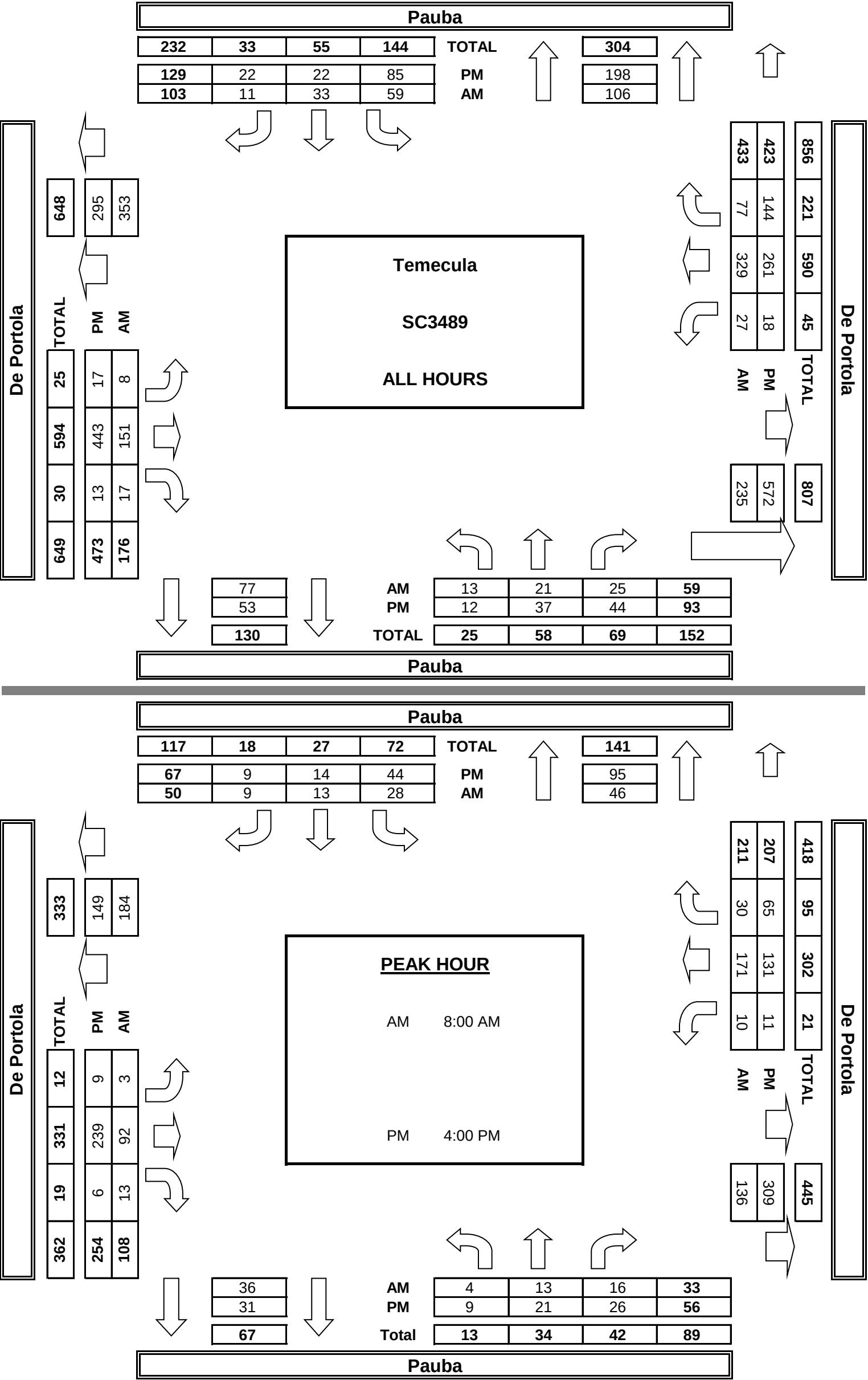
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

PM	2:00 PM	6	69	0	0	67	2	2	0	3	0	0	0	149
	2:15 PM	1	65	0	0	72	3	2	0	3	0	0	0	146
	2:30 PM	1	72	0	0	46	1	0	0	1	0	0	0	121
	2:45 PM	4	78	0	0	53	4	3	0	2	0	0	0	144
	3:00 PM	4	76	0	0	50	3	2	0	5	0	0	0	140
	3:15 PM	4	78	0	0	54	3	2	0	3	0	0	0	144
	3:30 PM	5	94	0	0	48	6	2	0	5	0	0	0	160
	3:45 PM	1	61	0	0	56	5	2	0	2	0	0	0	127
	4:00 PM	1	82	0	0	61	2	4	0	4	0	0	0	154
	4:15 PM	3	67	0	0	49	1	1	0	3	0	0	0	124
	4:30 PM	4	52	0	0	66	1	2	0	3	0	0	0	128
	4:45 PM	3	66	0	0	48	2	4	0	5	0	0	0	128
	VOLUMES	37	860	0	0	670	33	26	0	39	0	0	0	1,666
	APPROACH %	4%	96%	0%	0%	95%	5%	40%	0%	60%	0%	0%	0%	
	APP/DEPART	897	/	887	704	/	709	65	/	0	0	/	70	0
	BEGIN PEAK HR	2:45 PM												
	VOLUMES	17	326	0	0	205	16	9	0	15	0	0	0	588
	APPROACH %	5%	95%	0%	0%	93%	7%	38%	0%	63%	0%	0%	0%	
	PEAK HR FACTOR	0.866			0.969			0.857			0.000			0.919
	APP/DEPART	343	/	335	221	/	220	24	/	0	0	/	33	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

T218

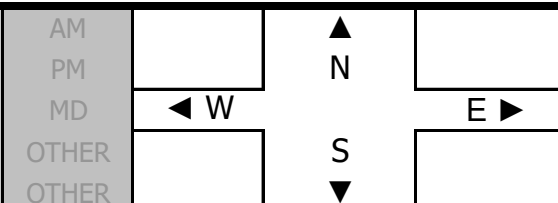
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Wed, Jun 1, 22

LOCATION:
NORTH & SOUTH: Temecula
EAST & WEST: Pauba
De Portola

PROJECT #: SC3489
LOCATION #: 2
CONTROL: STOP ALL

NOTES:



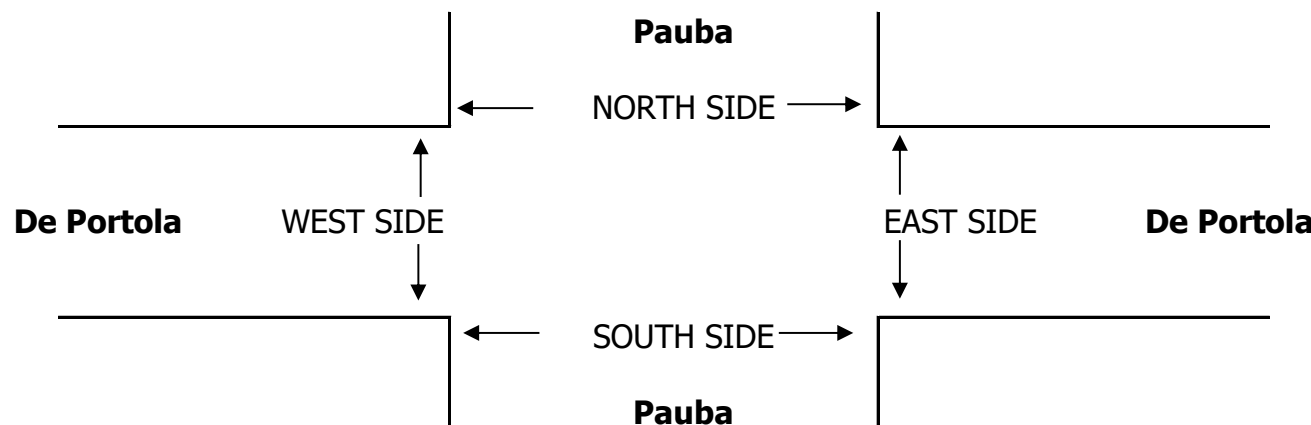
☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Pauba			Pauba			De Portola			De Portola			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

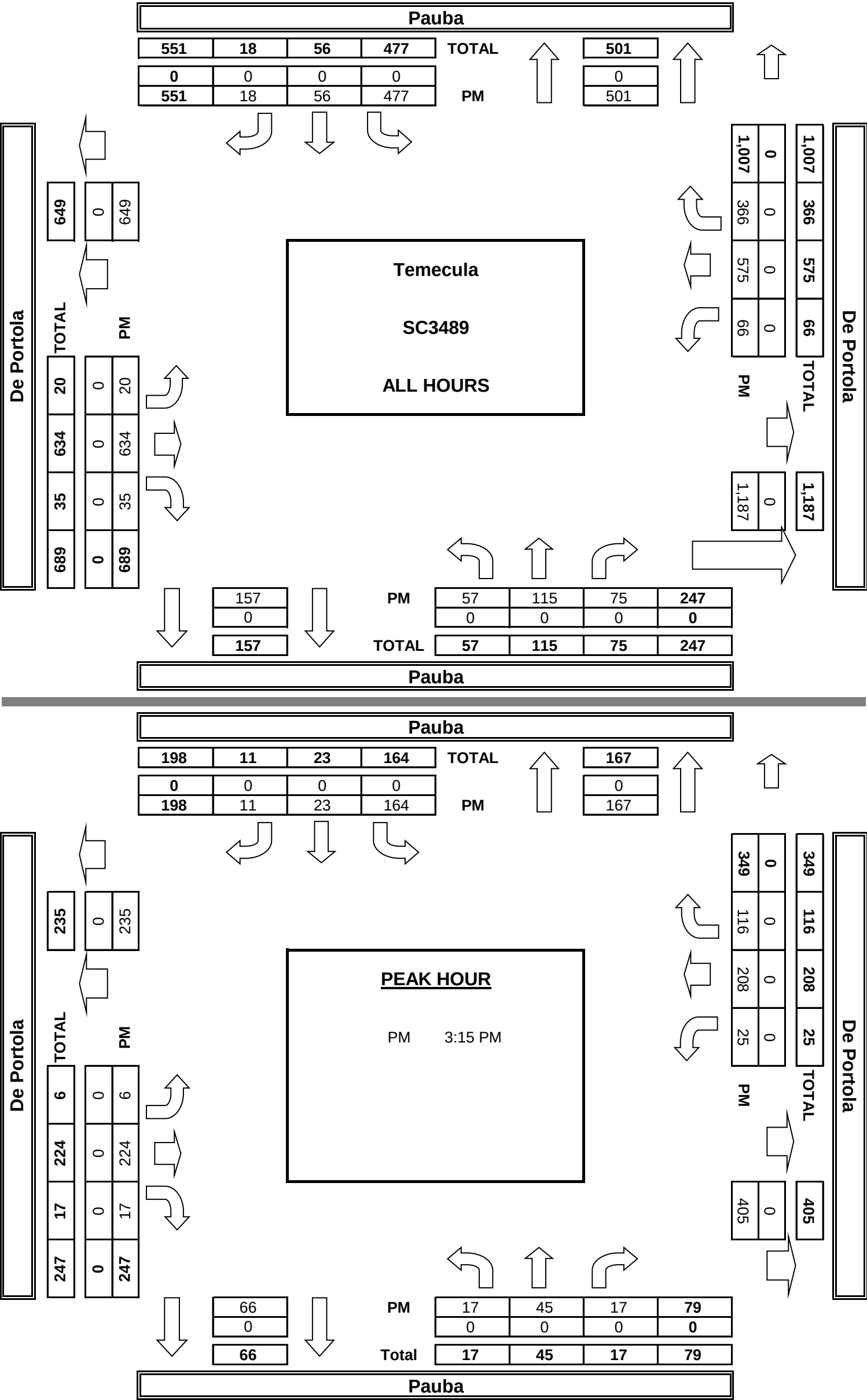
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

AM	7:00 AM	3	1	3	3	3	0	0	9	1	6	33	5	67
	7:15 AM	2	1	0	6	8	0	0	19	2	3	31	15	87
	7:30 AM	1	6	6	13	6	2	3	13	1	7	33	14	105
	7:45 AM	3	0	0	9	3	0	2	18	0	1	61	13	110
	8:00 AM	0	2	2	10	4	0	1	19	4	5	31	10	88
	8:15 AM	0	4	6	4	1	6	0	26	5	1	32	12	97
	8:30 AM	1	3	2	7	4	1	0	22	1	0	45	4	90
	8:45 AM	3	4	6	7	4	2	2	25	3	4	63	4	127
	VOLUMES	13	21	25	59	33	11	8	151	17	27	329	77	771
	APPROACH %	22%	36%	42%	57%	32%	11%	5%	86%	10%	6%	76%	18%	
PM	APP/DEPART	59	/	106	103	/	77	176	/	235	433	/	353	0
	BEGIN PEAK HR	8:00 AM												
	VOLUMES	4	13	16	28	13	9	3	92	13	10	171	30	402
	APPROACH %	12%	39%	48%	56%	26%	18%	3%	85%	12%	5%	81%	14%	
	PEAK HR FACTOR	0.635			0.893			0.871			0.743			0.791
	APP/DEPART	33	/	46	50	/	36	108	/	136	211	/	184	0
	4:00 PM	5	6	7	10	5	3	2	71	2	3	29	16	159
	4:15 PM	0	1	9	14	2	4	4	58	2	5	27	16	142
	4:30 PM	3	6	6	8	6	2	1	52	1	1	31	15	132
	4:45 PM	1	8	4	12	1	0	2	58	1	2	44	18	151
PM	5:00 PM	1	4	6	9	3	3	1	71	3	2	31	22	156
	5:15 PM	1	3	3	9	4	3	2	47	0	3	31	18	124
	5:30 PM	0	6	5	9	1	7	3	46	2	0	29	12	120
	5:45 PM	1	3	4	14	0	0	2	40	2	2	39	27	134
	VOLUMES	12	37	44	85	22	22	17	443	13	18	261	144	1,118
	APPROACH %	13%	40%	47%	66%	17%	17%	4%	94%	3%	4%	62%	34%	
	APP/DEPART	93	/	198	129	/	53	473	/	572	423	/	295	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	9	21	26	44	14	9	9	239	6	11	131	65	584
	APPROACH %	16%	38%	46%	66%	21%	13%	4%	94%	2%	5%	63%	31%	
PM	PEAK HR FACTOR	0.778			0.838			0.847			0.809			0.918
	APP/DEPART	56	/	95	67	/	31	254	/	309	207	/	149	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

T218

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Sat, Jun 4, 22

LOCATION:
NORTH & SOUTH: Temecula
EAST & WEST: Pauba
De Portola

PROJECT #: SC3489
LOCATION #: 2
CONTROL: STOP ALL

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
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	OTHER		▼	

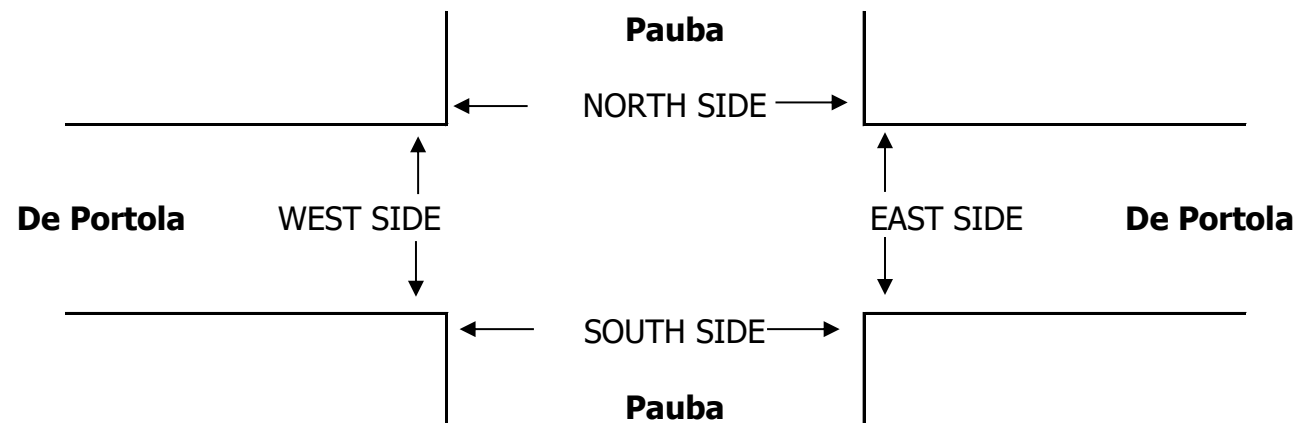
☒ Add U-Turns to Left Turns

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Pauba			Pauba			De Portola			De Portola			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

PM	2:00 PM	10	17	13	43	8	1	0	58	3	3	47	34	237
	2:15 PM	7	14	4	35	3	1	5	48	1	9	55	39	221
	2:30 PM	7	9	11	52	4	0	1	57	1	2	33	23	200
	2:45 PM	2	4	5	36	4	1	3	59	2	7	46	22	191
	3:00 PM	3	11	9	39	4	1	2	58	5	3	43	34	212
	3:15 PM	5	16	4	50	12	2	2	56	3	4	40	28	222
	3:30 PM	6	10	7	30	3	5	1	61	4	5	60	32	224
	3:45 PM	1	9	4	45	6	2	2	55	5	5	48	26	208
	4:00 PM	5	10	2	39	2	2	1	52	5	11	60	30	219
	4:15 PM	2	6	8	41	2	1	1	46	2	5	44	43	201
	4:30 PM	5	3	4	28	5	2	1	43	2	8	54	35	190
	4:45 PM	4	6	4	39	3	0	1	41	2	4	45	20	169
	VOLUMES	57	115	75	477	56	18	20	634	35	66	575	366	2,494
	APPROACH %	23%	47%	30%	87%	10%	3%	3%	92%	5%	7%	57%	36%	
	APP/DEPART	247	/	501	551	/	157	689	/	1,187	1,007	/	649	0
	BEGIN PEAK HR	3:15 PM												
	VOLUMES	17	45	17	164	23	11	6	224	17	25	208	116	873
	APPROACH %	22%	57%	22%	83%	12%	6%	2%	91%	7%	7%	60%	33%	
	PEAK HR FACTOR	0.790			0.773			0.936			0.864			0.974
	APP/DEPART	79	/	167	198	/	66	247	/	405	349	/	235	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
1	0	0	1	2





Appendix C

Intersection Analysis Worksheets

Existing Conditions

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	11	95	222	12	7	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	95	222	12	7	11
Peak Hour Factor	0.8340	0.8340	0.8340	0.8340	0.8340	0.8340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	28	67	4	2	3
Total Analysis Volume [veh/h]	13	114	266	14	8	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.82	0.00	0.00	0.00	11.28	9.87
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.55	0.55	0.00	0.00	2.36	2.36
d_A, Approach Delay [s/veh]	0.80		0.00		10.40	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.75					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	9.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	3	98	14	11	181	32	4	14	17	30	14	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	98	14	11	181	32	4	14	17	30	14	10
Peak Hour Factor	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	31	4	3	57	10	1	4	5	9	4	3
Total Analysis Volume [veh/h]	4	124	18	14	229	40	5	18	21	38	18	13
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	807	835	760	726
Degree of Utilization, x	0.18	0.34	0.06	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.66	1.50	0.18	0.31
95th-Percentile Queue Length [ft]	16.43	37.62	4.60	7.84
Approach Delay [s/veh]	8.44	9.50	8.03	8.48
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.97			
Intersection LOS	A			

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	12	307	161	11	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	307	161	11	5	8
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	84	44	3	1	2
Total Analysis Volume [veh/h]	13	336	176	12	5	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.61	0.00	0.00	0.00	12.39	9.29
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.06	0.06
95th-Percentile Queue Length [ft/ln]	0.55	0.55	0.00	0.00	1.57	1.57
d_A, Approach Delay [s/veh]	0.28		0.00		10.40	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.375

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	10	253	6	12	139	69	10	22	28	47	15	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	253	6	12	139	69	10	22	28	47	15	10
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	69	2	3	38	19	3	6	8	13	4	3
Total Analysis Volume [veh/h]	11	276	7	13	151	75	11	24	31	51	16	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	784	802	714	678
Degree of Utilization, x	0.37	0.30	0.09	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.75	1.25	0.30	0.39
95th-Percentile Queue Length [ft]	43.75	31.30	7.61	9.71
Approach Delay [s/veh]	10.32	9.39	8.56	9.00
Approach LOS	B	A	A	A
Intersection Delay [s/veh]	9.67			
Intersection LOS	A			

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	13.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.025

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	18	346	217	17	10	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	346	217	17	10	16
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	91	57	4	3	4
Total Analysis Volume [veh/h]	19	364	228	18	11	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.03	0.02
d_M, Delay for Movement [s/veh]	7.75	0.00	0.00	0.00	13.62	9.78
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.15	0.15
95th-Percentile Queue Length [ft/ln]	0.80	0.80	0.00	0.00	3.66	3.66
d_A, Approach Delay [s/veh]	0.38		0.00		11.29	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.71					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.539

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	6	237	18	27	220	123	18	48	18	174	24	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	237	18	27	220	123	18	48	18	174	24	12
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	61	5	7	56	32	5	12	5	45	6	3
Total Analysis Volume [veh/h]	6	243	18	28	226	126	18	49	18	179	25	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	666	705	597	606
Degree of Utilization, x	0.40	0.54	0.14	0.36

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.94	3.25	0.49	1.61
95th-Percentile Queue Length [ft]	48.38	81.29	12.35	40.21
Approach Delay [s/veh]	11.99	13.93	10.03	12.19
Approach LOS	B	B	B	B
Intersection Delay [s/veh]	12.64			
Intersection LOS	B			

Appendix D
Intersection Analysis Worksheets
Project Opening Year (2027) With Ambient Growth
With Project Conditions

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.014

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	18	99	231	13	7	13
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	99	231	13	7	13
Peak Hour Factor	0.8340	0.8340	0.8340	0.8340	0.8340	0.8340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	30	69	4	2	4
Total Analysis Volume [veh/h]	22	119	277	16	8	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.01	0.02
d_M, Delay for Movement [s/veh]	7.86	0.00	0.00	0.00	11.65	9.97
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.11	0.11
95th-Percentile Queue Length [ft/ln]	0.93	0.93	0.00	0.00	2.76	2.76
d_A, Approach Delay [s/veh]	1.23		0.00		10.53	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.93					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.357

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	3	107	15	11	190	33	5	15	18	31	15	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	107	15	11	190	33	5	15	18	31	15	11
Peak Hour Factor	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	34	5	3	60	10	2	5	6	10	5	3
Total Analysis Volume [veh/h]	4	135	19	14	240	42	6	19	23	39	19	14
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	800	828	750	717
Degree of Utilization, x	0.20	0.36	0.06	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.73	1.63	0.20	0.33
95th-Percentile Queue Length [ft]	18.29	40.73	5.12	8.34
Approach Delay [s/veh]	8.60	9.75	8.13	8.58
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	9.15			
Intersection LOS	A			

Intersection Level Of Service Report**Intersection 3: Project Access Driveway (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Base Volume Input [veh/h]	0	3	19	1	8	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	19	1	8	23
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	5	0	2	6
Total Analysis Volume [veh/h]	0	3	20	1	8	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	8.83	8.42	0.00	0.00	7.27	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.21	0.21	0.00	0.00	0.33	0.33
d_A, Approach Delay [s/veh]	8.42		0.00		1.82	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.49					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	20	319	167	13	7	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	319	167	13	7	19
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	87	46	4	2	5
Total Analysis Volume [veh/h]	22	349	183	14	8	21
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.02	0.02
d_M, Delay for Movement [s/veh]	7.64	0.00	0.00	0.00	12.97	9.45
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.93	0.93	0.00	0.00	3.27	3.27
d_A, Approach Delay [s/veh]	0.45		0.00		10.42	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.401

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	10	268	6	14	153	74	12	23	29	49	16	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	268	6	14	153	74	12	23	29	49	16	11
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	73	2	4	42	20	3	6	8	13	4	3
Total Analysis Volume [veh/h]	11	292	7	15	167	81	13	25	32	53	17	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	774	791	696	664
Degree of Utilization, x	0.40	0.33	0.10	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.94	1.46	0.33	0.42
95th-Percentile Queue Length [ft]	48.56	36.55	8.35	10.51
Approach Delay [s/veh]	10.74	9.80	8.75	9.19
Approach LOS	B	A	A	A
Intersection Delay [s/veh]	10.03			
Intersection LOS	B			

Intersection Level Of Service Report**Intersection 3: Project Access Driveway (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Base Volume Input [veh/h]	2	13	15	1	9	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	13	15	1	9	23
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	4	0	2	6
Total Analysis Volume [veh/h]	2	14	16	1	9	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	8.87	8.44	0.00	0.00	7.26	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.16	1.16	0.00	0.00	0.38	0.38
d_A, Approach Delay [s/veh]	8.50		0.00		1.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.05					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	15.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.053

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	55	360	226	25	18	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	360	226	25	18	59
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	95	59	7	5	16
Total Analysis Volume [veh/h]	58	379	238	26	19	62
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.00	0.00	0.00	0.05	0.08
d_M, Delay for Movement [s/veh]	7.84	0.00	0.00	0.00	15.90	10.45
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.45	0.45
95th-Percentile Queue Length [ft/ln]	2.50	2.50	0.00	0.00	11.29	11.29
d_A, Approach Delay [s/veh]	1.04		0.00		11.73	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.80					
Intersection LOS	C					

Intersection Level Of Service Report

Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	15.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	6	270	19	34	257	136	26	50	19	181	25	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	270	19	34	257	136	26	50	19	181	25	17
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	69	5	9	66	35	7	13	5	46	6	4
Total Analysis Volume [veh/h]	6	277	20	35	264	140	27	51	20	186	26	17
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	628	668	553	568
Degree of Utilization, x	0.48	0.66	0.18	0.40

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.62	4.90	0.64	1.94
95th-Percentile Queue Length [ft]	65.55	122.42	15.99	48.40
Approach Delay [s/veh]	13.94	18.06	10.91	13.54
Approach LOS	B	C	B	B
Intersection Delay [s/veh]	15.27			
Intersection LOS	C			

Intersection Level Of Service Report**Intersection 3: Project Access Driveway (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Base Volume Input [veh/h]	6	50	26	5	43	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	50	26	5	43	36
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	13	7	1	11	9
Total Analysis Volume [veh/h]	6	53	27	5	45	38
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.05	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	9.67	8.66	0.00	0.00	7.33	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	4.62	4.62	0.00	0.00	1.92	1.92
d_A, Approach Delay [s/veh]	8.77		0.00		3.97	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.87					
Intersection LOS	A					

Appendix E
Intersection Analysis Worksheets
Project Opening Year (2027) With Ambient Growth
& Cumulative Projects With Project Conditions

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	12.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	21	142	249	13	7	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	142	249	13	7	14
Peak Hour Factor	0.8340	0.8340	0.8340	0.8340	0.8340	0.8340
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	43	75	4	2	4
Total Analysis Volume [veh/h]	25	170	299	16	8	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.02	0.02
d_M, Delay for Movement [s/veh]	7.92	0.00	0.00	0.00	12.43	10.14
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	1.06	1.06	0.00	0.00	3.05	3.05
d_A, Approach Delay [s/veh]	1.02		0.00		10.87	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.88					
Intersection LOS	B					

Intersection Level Of Service Report

Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⬆			⬆			⬆			⬆		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	3	149	15	14	202	36	17	15	18	31	15	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	149	15	14	202	36	17	15	18	31	15	18
Peak Hour Factor	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	47	5	4	64	11	5	5	6	10	5	6
Total Analysis Volume [veh/h]	4	188	19	18	255	46	21	19	23	39	19	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	777	801	700	694
Degree of Utilization, x	0.27	0.40	0.09	0.12

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.10	1.93	0.30	0.39
95th-Percentile Queue Length [ft]	27.57	48.14	7.38	9.86
Approach Delay [s/veh]	9.36	10.44	8.65	8.87
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	9.75			
Intersection LOS	A			

Intersection Level Of Service Report**Intersection 3: Project Access Driveway (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Base Volume Input [veh/h]	0	3	20	1	8	26
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	20	1	8	26
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	5	0	2	7
Total Analysis Volume [veh/h]	0	3	21	1	8	27
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	8.85	8.42	0.00	0.00	7.27	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.21	0.21	0.00	0.00	0.33	0.33
d_A, Approach Delay [s/veh]	8.42		0.00		1.66	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.39					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 1: De Portola Road (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	15.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	De Portola Road		De Portola Road		Camino Del Vino	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	De Portola Road		De Portola Road		Camino Del Vino	
Base Volume Input [veh/h]	24	385	244	13	7	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	385	244	13	7	24
Peak Hour Factor	0.9150	0.9150	0.9150	0.9150	0.9150	0.9150
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	105	67	4	2	7
Total Analysis Volume [veh/h]	26	421	267	14	8	26
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.02	0.03
d_M, Delay for Movement [s/veh]	7.84	0.00	0.00	0.00	15.06	10.05
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.18	0.18
95th-Percentile Queue Length [ft/ln]	1.10	1.10	0.00	0.00	4.40	4.40
d_A, Approach Delay [s/veh]	0.46		0.00		11.23	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.77					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	12.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	10	332	6	28	225	94	30	23	29	49	16	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	332	6	28	225	94	30	23	29	49	16	23
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	90	2	8	61	26	8	6	8	13	4	6
Total Analysis Volume [veh/h]	11	362	7	31	245	102	33	25	32	53	17	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	720	739	615	606
Degree of Utilization, x	0.53	0.51	0.15	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.12	2.95	0.51	0.55
95th-Percentile Queue Length [ft]	78.03	73.74	12.78	13.82
Approach Delay [s/veh]	13.44	12.86	9.86	10.04
Approach LOS	B	B	A	B
Intersection Delay [s/veh]	12.52			
Intersection LOS	B			

Intersection Level Of Service Report**Intersection 3: Project Access Driveway (N/S) at Camino Del Vino (E/W)**

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00		45.00		45.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Project Access Driveway		Camino Del Vino		Camino Del Vino	
Base Volume Input [veh/h]	2	13	20	1	9	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	13	20	1	9	27
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	3	5	0	2	7
Total Analysis Volume [veh/h]	2	14	21	1	9	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	8.92	8.46	0.00	0.00	7.27	0.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.02	0.02
95th-Percentile Queue Length [ft/ln]	1.17	1.17	0.00	0.00	0.38	0.38
d_A, Approach Delay [s/veh]	8.52		0.00		1.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.69					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	All-way stop	Delay (sec / veh):	151.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.544

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⬆			⬆			⬆			⬆		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	55.00			50.00			45.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	6	487	19	80	493	206	90	50	19	181	25	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	487	19	80	493	206	90	50	19	181	25	59
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	125	5	21	127	53	23	13	5	46	6	15
Total Analysis Volume [veh/h]	6	500	20	82	506	211	92	51	20	186	26	61
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	526	799	418	448
Degree of Utilization, x	1.03	1.54	0.39	0.61

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	15.17	42.29	1.82	3.95
95th-Percentile Queue Length [ft]	379.13	1057.32	45.46	98.83
Approach Delay [s/veh]	75.60	273.33	17.05	22.73
Approach LOS	F	F	C	C
Intersection Delay [s/veh]	151.70			
Intersection LOS	F			

Appendix F
Intersection Analysis Worksheets
Project Opening Year (2027) With Ambient Growth
& Cumulative Projects With Project Conditions With Improvements

Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.288

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	3	149	15	14	202	36	17	15	18	31	15	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	149	15	14	202	36	17	15	18	31	15	18
Peak Hour Factor	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910	0.7910
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	47	5	4	64	11	5	5	6	10	5	6
Total Analysis Volume [veh/h]	4	188	19	18	255	46	21	19	23	39	19	23
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	24	0	0	24	0	0	28	0	0	28	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	28.0	0.0	0.0	28.0	0.0	0.0	32.0	0.0	0.0	32.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46.7	46.7	5.3	5.3
g / C, Green / Cycle	0.78	0.78	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.13	0.20	0.04	0.05
s, saturation flow rate [veh/h]	1652	1617	1587	1549
c, Capacity [veh/h]	1345	1321	222	227
d1, Uniform Delay [s]	1.71	1.85	25.90	26.18
k, delay calibration	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.25	0.43	0.69	0.94
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.16	0.24	0.28	0.36
d, Delay for Lane Group [s/veh]	1.95	2.28	26.60	27.13
Lane Group LOS	A	A	C	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.12	0.21	0.81	1.05
50th-Percentile Queue Length [ft/ln]	3.06	5.19	20.15	26.29
95th-Percentile Queue Length [veh/ln]	0.22	0.37	1.45	1.89
95th-Percentile Queue Length [ft/ln]	5.51	9.34	36.27	47.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.95	1.95	1.95	2.28	2.28	2.28	26.60	26.60	26.60	27.13	27.13	27.13
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	1.95			2.28			26.60			27.13		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	7.44											
Intersection LOS	A											
Intersection V/C	0.288											

Emissions

Vehicle Miles Traveled [mph]	5.66			9.28			2.16			2.63		
Stops [stops/h]	7.35			12.45			48.36			63.09		
Fuel consumption [US gal/h]	0.37			0.62			1.02			1.32		
CO [g/h]	25.81			43.40			71.04			92.38		
NOx [g/h]	5.02			8.44			13.82			17.97		
VOC [g/h]	5.98			10.06			16.46			21.41		

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			0.000			0.000			0.000		
Crosswalk LOS	F			F			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	800			800			933			933		
d_b, Bicycle Delay [s]	10.80			10.80			8.53			8.53		
I_b,int, Bicycle LOS Score for Intersection	1.908			2.086			1.664			1.693		
Bicycle LOS	A			B			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.353

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	10	332	6	28	225	94	30	23	29	49	16	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	10	332	6	28	225	94	30	23	29	49	16	23
Peak Hour Factor	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180	0.9180
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	90	2	8	61	26	8	6	8	13	4	6
Total Analysis Volume [veh/h]	11	362	7	31	245	102	33	25	32	53	17	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	25	0	0	25	0	0	27	0	0	27	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	33.0	0.0	0.0	33.0	0.0	0.0	27.0	0.0	0.0	27.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	46.4	46.4	5.6	5.6
g / C, Green / Cycle	0.77	0.77	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.23	0.24	0.06	0.06
s, saturation flow rate [veh/h]	1666	1549	1603	1544
c, Capacity [veh/h]	1347	1261	234	240
d1, Uniform Delay [s]	2.02	2.05	26.02	26.13
k, delay calibration	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.52	0.61	1.03	1.06
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.28	0.30	0.38	0.40
d, Delay for Lane Group [s/veh]	2.55	2.66	27.06	27.18
Lane Group LOS	A	A	C	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.30	0.32	1.17	1.24
50th-Percentile Queue Length [ft/ln]	7.62	8.08	29.16	30.90
95th-Percentile Queue Length [veh/ln]	0.55	0.58	2.10	2.22
95th-Percentile Queue Length [ft/ln]	13.72	14.54	52.50	55.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.55	2.55	2.55	2.66	2.66	2.66	27.06	27.06	27.06	27.18	27.18	27.18
Movement LOS	A	A	A	A	A	A	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	2.55			2.66			27.06			27.18		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	7.41											
Intersection LOS	A											
Intersection V/C	0.353											

Emissions

Vehicle Miles Traveled [mph]	10.19			11.00			3.09			3.08		
Stops [stops/h]	18.29			19.39			70.00			74.16		
Fuel consumption [US gal/h]	0.77			0.82			1.47			1.55		
CO [g/h]	54.06			57.48			102.87			108.57		
NOx [g/h]	10.52			11.18			20.01			21.12		
VOC [g/h]	12.53			13.32			23.84			25.16		

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			0.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			0.00			0.00		
I_p,int, Pedestrian LOS Score for Intersectio	0.000			0.000			0.000			0.000		
Crosswalk LOS	F			F			F			F		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	967			967			767			767		
d_b, Bicycle Delay [s]	8.01			8.01			11.41			11.41		
I_b,int, Bicycle LOS Score for Intersection	2.187			2.183			1.708			1.716		
Bicycle LOS	B			B			A			A		

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: De Portola Road (N/S) at Pauba Road (E/W)

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.850

Intersection Setup

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			No			No			No		

Volumes

Name	De Portola Road			De Portola Road			Pauba Road			Pauba Road		
Base Volume Input [veh/h]	6	487	19	80	493	206	90	50	19	181	25	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	487	19	80	493	206	90	50	19	181	25	59
Peak Hour Factor	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740	0.9740
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	125	5	21	127	53	23	13	5	46	6	15
Total Analysis Volume [veh/h]	6	500	20	82	506	211	92	51	20	186	26	61
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing (Basic)

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Flashing Yellow Arrow												
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Maximum Green [s]	0	31	0	0	31	0	0	21	0	0	21	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Walk [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Advanced Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Phasing & Timing: Pattern 1

Split [s]	0.0	38.0	0.0	0.0	38.0	0.0	0.0	22.0	0.0	0.0	22.0	0.0
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	7	0	0	7	0	0	7	0	0	7	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Minimum Recall		No			No			No			No	
Maximum Recall		No			No			No			No	
Pedestrian Recall		No			No			No			No	

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	C	C
C, Calculated Cycle Length [s]	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38.0	38.0	14.0	14.0
g / C, Green / Cycle	0.63	0.63	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.32	0.53	0.12	0.21
s, saturation flow rate [veh/h]	1665	1508	1391	1322
c, Capacity [veh/h]	1118	1024	416	407
d1, Uniform Delay [s]	5.82	8.04	19.89	22.19
k, delay calibration	0.50	0.50	0.11	0.20
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.42	5.88	0.60	3.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.78	0.39	0.67
d, Delay for Lane Group [s/veh]	7.24	13.92	20.50	25.76
Lane Group LOS	A	B	C	C
Critical Lane Group	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	2.39	5.70	1.76	3.56
50th-Percentile Queue Length [ft/ln]	59.69	142.50	44.01	88.98
95th-Percentile Queue Length [veh/ln]	4.30	9.62	3.17	6.41
95th-Percentile Queue Length [ft/ln]	107.43	240.38	79.22	160.16

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	7.24	7.24	7.24	13.92	13.92	13.92	20.50	20.50	20.50	25.76	25.76	25.76
Movement LOS	A	A	A	B	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	7.24			13.92			20.50			25.76		
Approach LOS	A			B			C			C		
d_I, Intersection Delay [s/veh]	14.37											
Intersection LOS	B											
Intersection V/C	0.850											

Emissions

Vehicle Miles Traveled [mph]	14.10	23.24	5.59	8.86
Stops [stops/h]	143.24	341.99	105.63	213.54
Fuel consumption [US gal/h]	3.04	7.31	2.18	4.39
CO [g/h]	212.47	511.09	152.73	306.85
NOx [g/h]	41.34	99.44	29.72	59.70
VOC [g/h]	49.24	118.45	35.40	71.11

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersectio	0.000	0.000	0.000	0.000
Crosswalk LOS	F	F	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1133	1133	600	600
d_b, Bicycle Delay [s]	5.63	5.63	14.70	14.70
I_b,int, Bicycle LOS Score for Intersection	2.428	2.878	1.829	2.010
Bicycle LOS	B	C	A	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-





Appendix G

Detailed MUTCD Peak Hour Traffic Signal Warrant Worksheets

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Existing Conditions – AM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y

N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

N

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

N

N

Part B

Part B Satisfied?

N

Approach Lanes	Volume
Both Approaches - Major Street	339
Higher Approach - Minor Street	54

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

**California MUTCD 2014 Edition
Traffic Signal Warrant Worksheets**

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Existing Conditions – AM Peak Hour**

Rural

Volume Level Criteria:

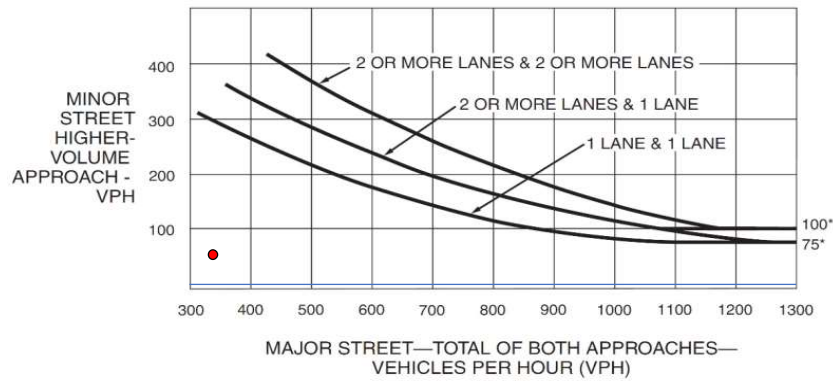
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
3. Have adequate trials of other remedial measures been performed?

Y

N

Y

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

N

**California MUTCD 2014 Edition
Traffic Signal Warrant Worksheets**

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Existing Conditions – PM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Warrant 3 - Peak Hour

Warrant Satisfied?

N

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

N

N

Part B

Part B Satisfied?

N

Approach Lanes	Volume
Both Approaches - Major Street	489
Higher Approach - Minor Street	72

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

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Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

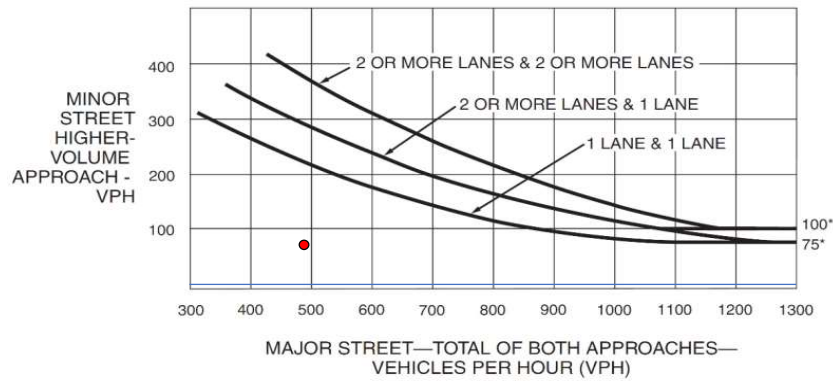
Classification

Traffic Condition: **Existing Conditions – PM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

N

**California MUTCD 2014 Edition
Traffic Signal Warrant Worksheets**

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Existing Conditions – Saturday Midday
Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Warrant 3 - Peak Hour

Warrant Satisfied? Y

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied? N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

Y

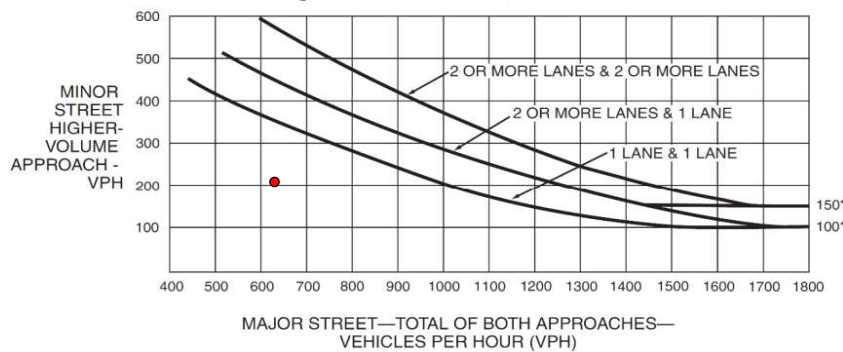
Y

Part B

Part B Satisfied? Y

Approach Lanes	Volume
Both Approaches - Major Street	631
Higher Approach - Minor Street	210

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

**California MUTCD 2014 Edition
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Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

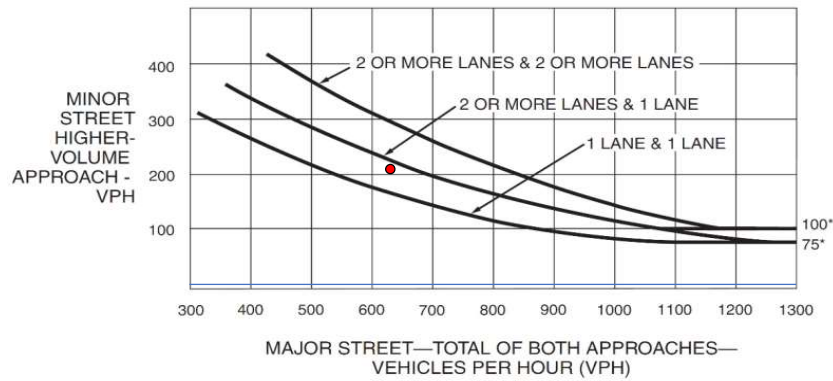
Classification

Traffic Condition: **Existing Conditions – Saturday Midday Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

Y

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
With Project Conditions – AM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y
N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

N

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

N

N

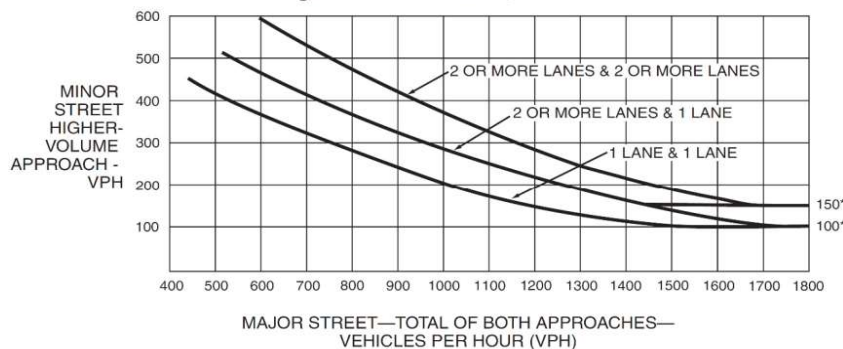
Part B

Part B Satisfied?

N

Approach Lanes	Volume
Both Approaches - Major Street	359
Higher Approach - Minor Street	57

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

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Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

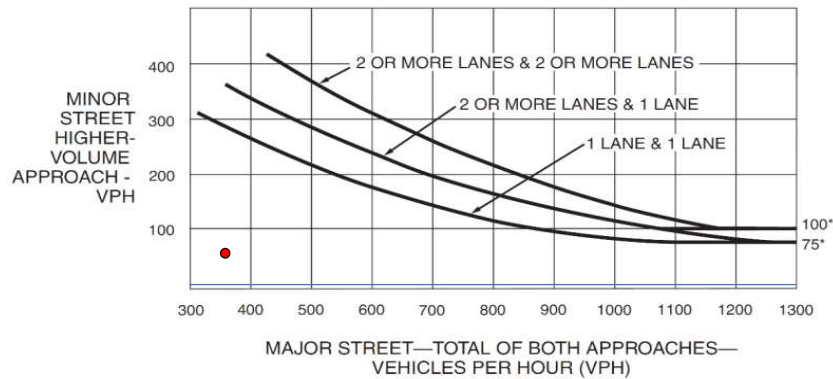
Classification

Traffic Condition: **Project Opening Year With Ambient Growth
With Project Conditions – AM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

N

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

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Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
With Project Conditions – PM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y
N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

N

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

N

N

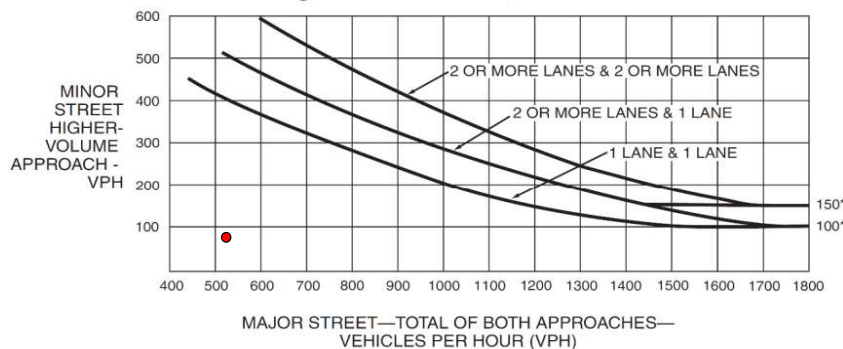
Part B

Part B Satisfied?

N

Approach Lanes	Volume
Both Approaches - Major Street	525
Higher Approach - Minor Street	76

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

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Prepared by: **SA**

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Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

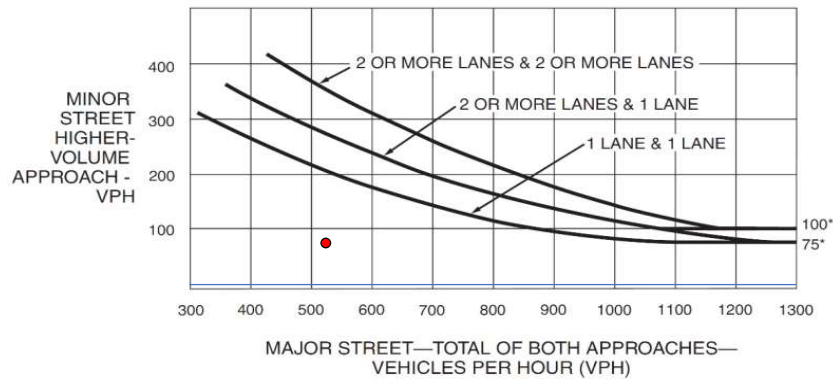
Classification

Traffic Condition: **Project Opening Year With Ambient Growth
With Project Conditions – PM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

N

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
With Project Conditions – Saturday Midday
Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y
N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

Y

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

Y

Y

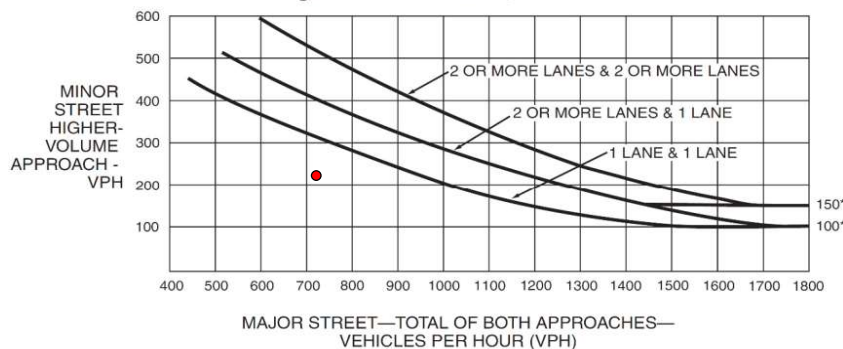
Part B

Part B Satisfied?

Y

Approach Lanes	Volume
Both Approaches - Major Street	722
Higher Approach - Minor Street	223

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

**California MUTCD 2014 Edition
Traffic Signal Warrant Worksheets**

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Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

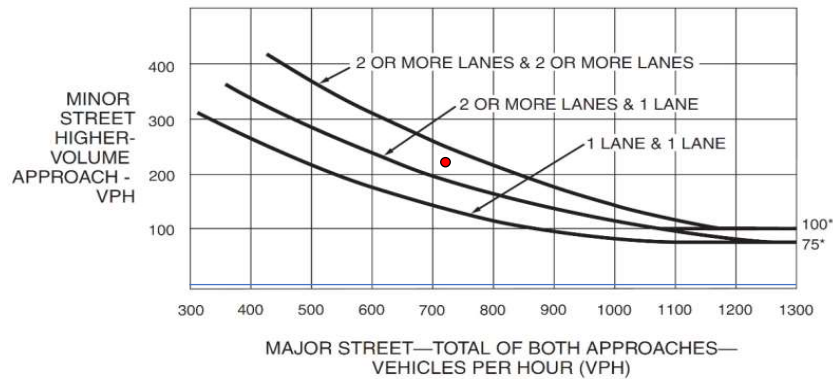
Classification

Traffic Condition: **Project Opening Year With Ambient Growth
With Project Conditions – Saturday Midday
Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

Y

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

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Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
& Cumulative Projects With Project
Conditions – AM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y
N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

N

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

**(All parts 1, 2, and 3 below must be satisfied the same
one hour, for any four consecutive 15-minute periods)**

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

N

N

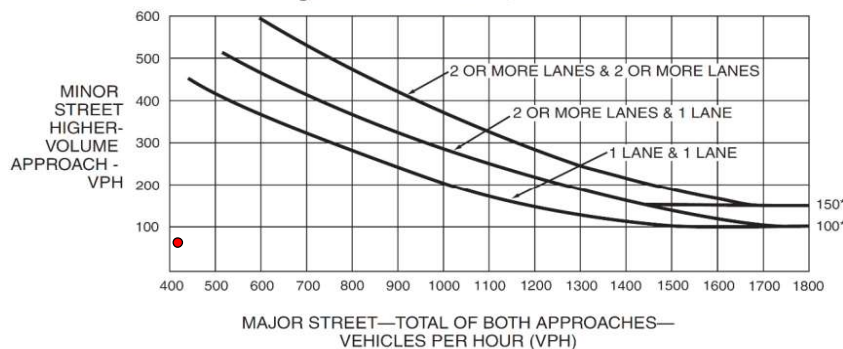
Part B

Part B Satisfied?

N

Approach Lanes	Volume
Both Approaches - Major Street	419
Higher Approach - Minor Street	64

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

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Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

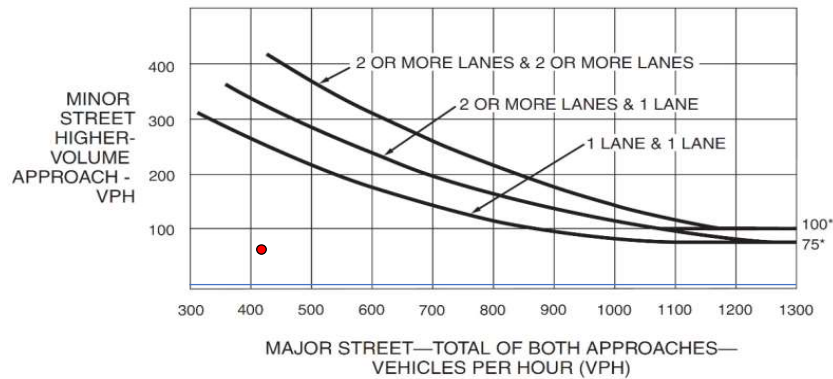
Classification

Traffic Condition: **Project Opening Year With Ambient Growth
& Cumulative Projects With Project
Conditions – AM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

N

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

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Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
& Cumulative Projects With Project
Conditions – PM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y
N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

N

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

**(All parts 1, 2, and 3 below must be satisfied the same
one hour, for any four consecutive 15-minute periods)**

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

N

Y

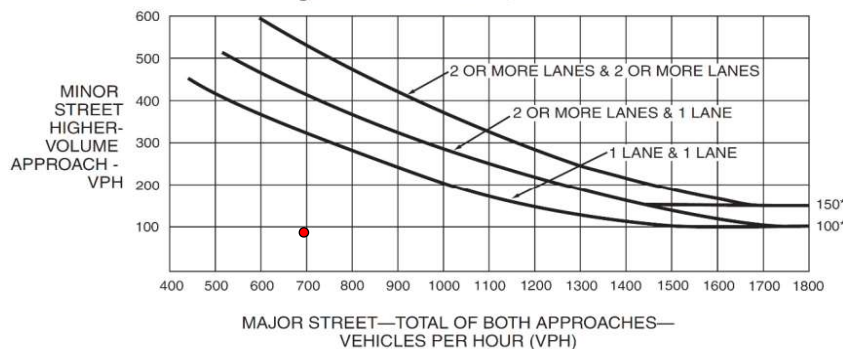
Part B

Part B Satisfied?

N

Approach Lanes	Volume
Both Approaches - Major Street	695
Higher Approach - Minor Street	88

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

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Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

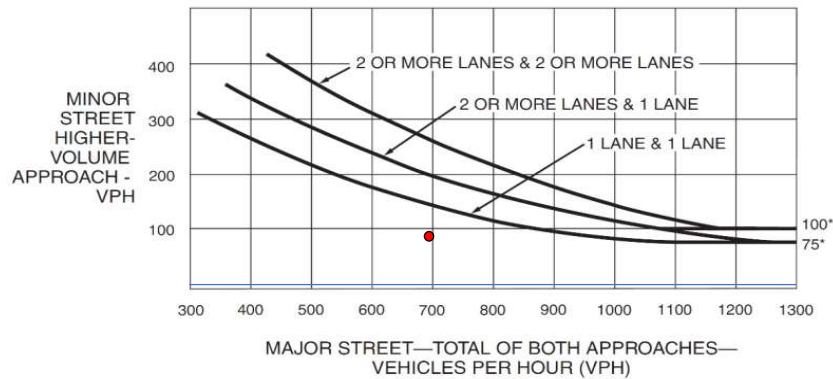
Classification

Traffic Condition: **Project Opening Year With Ambient Growth
& Cumulative Projects With Project
Conditions – PM Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph? **Y**
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000? **N**
 3. Have adequate trials of other remedial measures been performed? **Y**

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

N

California MUTCD 2014 Edition Traffic Signal Warrant Worksheets

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Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
& Cumulative Projects With Project
Conditions – Saturday Midday Peak Hour**

Rural

- Volume Level Criteria:
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
 2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
 3. Have adequate trials of other remedial measures been performed?

Y
N

Y

Warrant 3 - Peak Hour

Warrant Satisfied?

Y

(Part A or Part B must be Satisfied)

Part A

Part A Satisfied?

N

(All parts 1, 2, and 3 below must be satisfied the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street-approach (one-direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two lane approach; AND
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane or traffic of 150 vph for two moving lanes; AND
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.

N

Y

Y

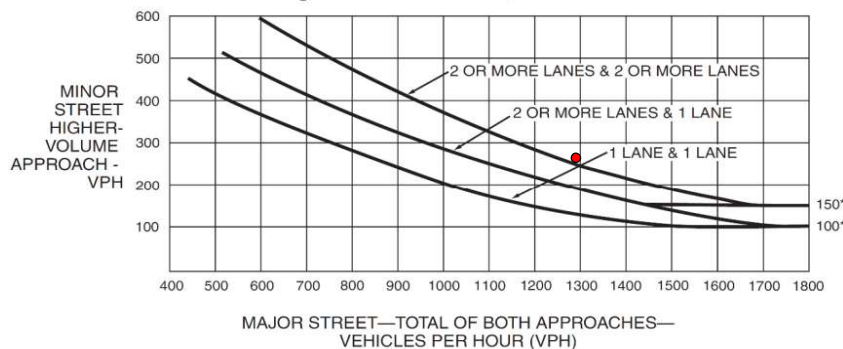
Part B

Part B Satisfied?

Y

Approach Lanes	Volume
Both Approaches - Major Street	1,291
Higher Approach - Minor Street	265

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-3 (Urban Areas)?

N

**California MUTCD 2014 Edition
Traffic Signal Warrant Worksheets**

Jurisdiction: **County of Riverside**

Prepared by: **SA**

Date: 6/16/2025

Checked by: **JT**

Date: 6/16/2025

Major Street: **De Portola Road**

Number of Lanes: **1**

Roadway

Minor Street: **Pauba Road**

Number of Lanes: **1**

Classification

Traffic Condition: **Project Opening Year With Ambient Growth
& Cumulative Projects With Project
Conditions – Saturday Midday Peak Hour**

Rural

Volume Level Criteria:

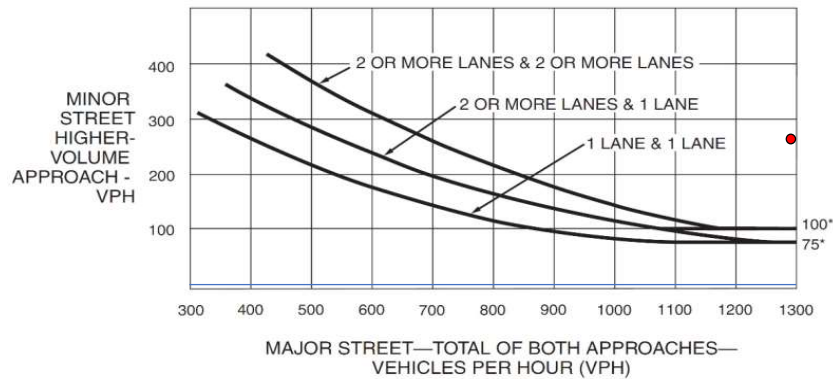
1. Is the posted speed limit of 85th percentile speed on major road exceeds 40 mph?
2. Does the intersection lie within the built-area of an isolated community having a population of less than 10,000?
3. Have adequate trials of other remedial measures been performed?

Y

N

Y

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

The plotted point falls above the applicable curve in Figure 4C-4 (Rural Areas)?

Y