1845 Oak Road
Traffic Impact Analysis

City of Simi Valley, California

June 9, 2023

Prepared by:

TJW ENGINEERING, INC.
9841 Irvine Center Drive, Suite 200
Irvine, CA 92618
949.878.3509 | www.tjwengineering.com

TJW ENGINEERING, INC.
TRAFFIC ENGINEERING &
TRANSPORTATION PLANNING
CONSULTANTS

June 9, 2023

Mr. Eric Miller
CITY VENTURES
3121 Michelson Drive, Suite 150
Irvine, CA 92612

Subject: Traffic Impact Analysis – 1845 Oak Road, City of Simi Valley

Dear Mr. Miller:

TJW ENGINEERING, INC. (TJW) is pleased to present you with this traffic impact analysis for the proposed 1845 Oak Road project located at 1845 Oak Road in the City of Simi Valley.

This traffic study has been prepared to meet the traffic study requirements for the City of Simi Valley and assesses the forecast traffic operations associated with the proposed project and its impact on the local street network. This report is being submitted to you for review and forwarding to the City of Simi Valley.

Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President

Registered Civil Engineer *#69467*
Registered Traffic Engineer *#2565*

David Chew, PTP
Transportation Planner

Daniel Flores, EIT
Project Engineer

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Table of Contents

List of Tables

List of Exhibits

Appendices

1.0 EXECUTIVE SUMMARY

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed 1845 Oak Road project located at 1845 Oak Road in the City of Simi Valley. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Simi Valley via a scoping agreement (See **Appendix A**) and is pursuant to applicable City of Simi Valley traffic impact analysis guidelines.

The proposed project consists of 70 multi-family residential dwelling units. Site access is planned via two full-access driveways on E Los Angeles Avenue. The site is currently zoned as CPD/RM and classified as CG/MD in the City of Simi Valley General Plan Land Use Plan. The project site is currently occupied by a preschool.

The proposed project is anticipated to be built and generating trips in 2024. Future Year (2030) volumes were provided in the Simi Valley General Plan EIR.

The proposed project is projected to generate 472 daily trips, 28 AM peak hour trips, and 36 PM peak hour trips.

The following three (3) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

1. Yosemite Avenue/E Los Angeles Avenue;
2. Oak Road/E Los Angeles Avenue; and
3. Shunk Road/E Los Angeles Avenue.

The study intersections are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Existing Traffic plus Projects Conditions (Existing + Project);
- Cumulative Traffic without Project Traffic Conditions (Existing + Model Data); and
- Cumulative Traffic plus Project Traffic Conditions (Existing + Model Data + Project).

1.1 SUMMARY OF LEVEL OF SERVICE ANALYSIS RESULTS

Table ES-1 summarizes the results of the intersection level of service analysis based on the City of Simi Valley thresholds of significance for analyzing transportation deficiencies.

Table ES-1

Summary of Transportation Deficiencies at Study Intersections

Intersection			Existing Plus Project	Future Year Plus Project
1	Yosemite Avenue	E Los Angeles Avenue	No Deficiencies	No Deficiencies
2	Oak Road	E Los Angeles Avenue	No Deficiencies	Deficient
3	Shunk Road	E Los Angeles Avenue	No Deficiencies	Deficient

Existing Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Existing* conditions.

Existing Plus Project (EP) Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Existing Plus Project* conditions.

Future Build-out Year Cumulative (2030) Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Future Build-out Year Cumulative* conditions with the exception of the following intersections:

- #2 – Oak Road/E Los Angeles Avenue (PM Peak Hour); and
- #3 – Shunk Road/E Los Angeles Avenue (PM Peak Hour).

Future Build-Out Year Cumulative Plus Project (2030) Conditions

The study intersections are projected to operate at an acceptable LOS during the AM and PM peak hours for *Future Build-Out Year Cumulative Plus Project* conditions with the exception of the following intersections:

- #2 – Oak Road/E Los Angeles Avenue (PM Peak Hour); and
- #3 – Shunk Road/E Los Angeles Avenue (AM and PM Peak Hour).

1.2 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS

Wherever necessary, roadways adjacent to the proposed project site and site access points will be constructed in compliance with recommended roadway classifications and respective cross-sections in the City of Simi Valley General Plan or as directed by the City Engineer.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City sight distance standards at the time of final grading, landscaping and street improvement plans.

Signing/striping should be implemented in conjunction with detailed construction plans for the project site.

2.0 INTRODUCTION

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed 1845 Oak Road project located at 1845 Oak Road in the City of Simi Valley. The purpose of this TIA is to evaluate potential circulation system deficiencies that may result from development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared in coordination with the City of Simi Valley via a scoping agreement (See **Appendix A**) and is pursuant to applicable City of Simi Valley traffic impact analysis guidelines.

2.1 PROJECT DESCRIPTION

The proposed project consists of 70 multi-family residential dwelling units. Site access is planned via two full-access driveways on E Los Angeles Avenue. The site is currently zoned as CPD/RM and classified as CG/MD in the City of Simi Valley General Plan Land Use Plan. The project site is currently occupied by a preschool.

The proposed project is anticipated to be built and generating trips in 2024. Future Year (2030) volumes were provided in the Simi Valley General Plan EIR.

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

2.2 STUDY AREA

The following three (3) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

1. Yosemite Avenue/E Los Angeles Avenue;
2. Oak Road/E Los Angeles Avenue; and
3. Shunk Road/E Los Angeles Avenue.

The study intersections are all located within the City of Simi Valley. This traffic analysis follows the *City of Simi Valley Guidelines for the Preparation of Traffic Impact Reports (October 2021)*.

Exhibit 3 shows the location of the study intersections and roadway segments which are analyzed for the following study scenarios:

- Existing Traffic Conditions (Existing);
- Existing Traffic plus Projects Conditions (Existing + Project);
- Cumulative Traffic without Project Traffic Conditions (Existing + Model Data); and
- Cumulative Traffic plus Project Traffic Conditions (Existing + Model Data + Project).

Traffic operations are evaluated for the following time periods:

- Weekday AM Peak Hour occurring within 7:00 AM to 9:00 AM; and
- Weekday PM Peak Hour occurring within 4:00 PM to 6:00 PM.

2.3 ANALYSIS METHODOLOGY

2.3.1 Intersection Analysis Methodology

The traffic analysis focuses on the project's off-site traffic-related impacts at the traffic study area intersections and on the study area roadways. In accordance with the City of Simi Valley, intersection operation for signalized intersections is evaluated using the Intersection Capacity Utilization (ICU) methodology, and intersection operation for unsignalized intersections is evaluated using the Highway Capacity Manual (HCM) methodology.

The ICU methodology provides a comparison of the theoretical hourly vehicular capacity of an intersection to the number of vehicles passing through that intersection during the peak hour. The results of the evaluation are reported in terms of a volume-to-capacity (v/c) ratio, which corresponds to a Level of Service (LOS). Level of Service is represented by letter grades A through F, with LOS A representing free-flow conditions, and LOS F representing congested, over-capacity conditions.

The procedure for stop-control analysis determines the average total delay, expressed in seconds of delay per vehicle, for left turns from the major street and from the stop-controlled minor street traffic stream. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable "gaps" in this stream through which conflicting traffic movements can be made.

Table 1 identifies each Level of Service category, and the corresponding intersection capacity utilization and delay values:

Table 1

ICU – Volume-to-Capacity Ratio – Signalized Intersection

Level of Service Ranges	
Level of Service (LOS)	Volume-to-Capacity Ratio (ICU Methodology)
A	< 0.600
B	0.601 – 0.700 >
C	0.701 – 0.800 >
D	0.801 – 0.900 >
E	0.901 – 1.000 >
F	>1.000

Source: Transportation Research Board Circular 212 – Interim Materials on Highway Capacity.
LOS = Level of Service, ICU = Intersection Capacity Utilization.

Collected peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. It is a common practice in LOS analysis to conservatively use a peak 15-minute flow rate applied to the entire hour to derive flow rates in vehicles per hour that are used in the LOS analysis. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume. PHF = [Hourly Volume]/ [4 * Peak 15-Minute Volume]. The use of a 15-minute PHF produces a more detailed and conservative analysis compared to analyzing vehicles per hour. Existing PHFs, obtained from the existing traffic counts have been used for all analysis scenarios in this study.

The City of Simi Valley traffic study guidelines also require unsignalized intersection operations be analyzed utilizing the HCM 6th Edition methodology. Intersection operation for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle.

At a two-way or side-street stop-controlled intersection, LOS is calculated for each stop-controlled minor street movement, for the left-turn movement(s) from the major street, and for the intersection as a whole. For approaches consisting of a single lane, the delay is calculated as the average of all movements in that lane. For all-way stop-controlled intersection, LOS is computed for the intersection as a whole.

Table 2 describes the general characteristics of traffic flow and accompanying delay ranges at unsignalized intersections.

Table 2

HCM – LOS & Delay Ranges – Unsignalized Intersections

Level of Service	Description	Delay (in seconds)
A	Little or no delays.	0 – 10.00
B	Short traffic delays.	10.01 – 15.00
C	Average traffic delays.	15.01 – 25.00
D	Long traffic delays. Multiple vehicles in queue.	25.01 – 35.00
E	Very long delays. Demand approaching capacity of intersection	35.01 – 50.00
F	Very constrained flow with extreme delays and intersection capacity exceeded.	> 50.01

Source: Transportation Research Board, *Highway Capacity Manual*, HCM6 Edition (Washington D.C., 2016).

This analysis utilizes *PTV Vistro 2022* analysis software for all signalized and unsignalized intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis specified in Chapter 16 of the HCM. The level of service and capacity analysis performed within Synchro takes the optimization and coordination of signalized intersections within a network into consideration.

2.4 PERFORMANCE CRITERIA

2.4.1 City of Simi Valley

The City of Simi Valley has established level of service "C" or better as acceptable LOS for all intersections along the designated street and highway system in the City's General Plan Circulation Element.

For the purposes of analyzing transportation deficiencies, the City of Simi Valley identifies deficiencies through a comparison of "without project" and "with project" traffic conditions. While the City of Simi Valley determines an intersection's level of service using the HCM 6 methodology, the determination of a deficiency at an intersection is based on a project's contribution to the intersection's volume-to-capacity (V/C) ratio as defined below in **Table 3**.

Table 3

City of Simi Valley Thresholds of Significance

Level of Service	Significant Impact Threshold
C	Increase in V/C > 0.0400
D	Increase in V/C > 0.0200
E/F	Increase in V/C > 0.0100

Note: V/C = Volume to capacity ratio

Source: City of Simi Valley Traffic Impact Analysis Guidelines (June 3, 2015)

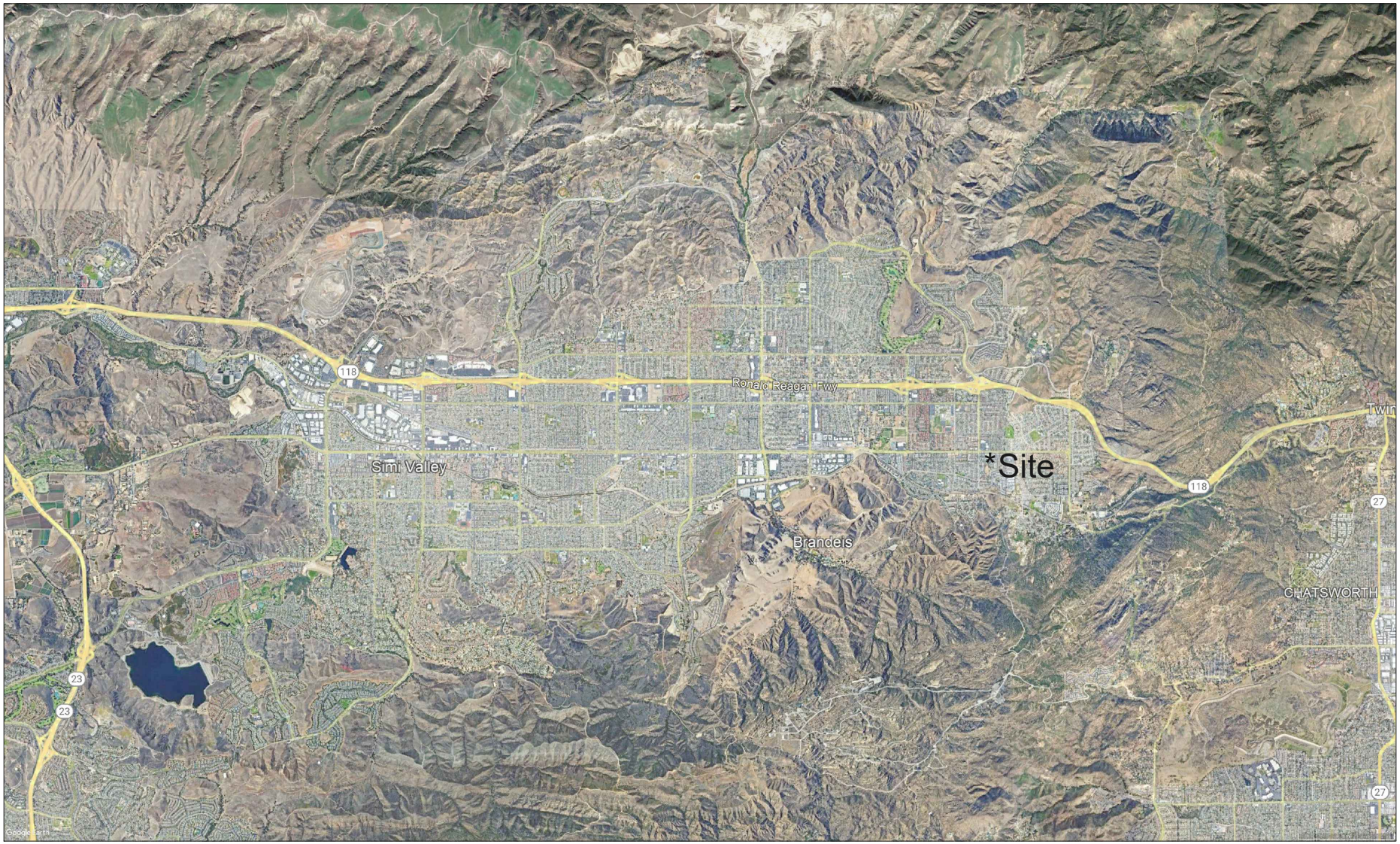
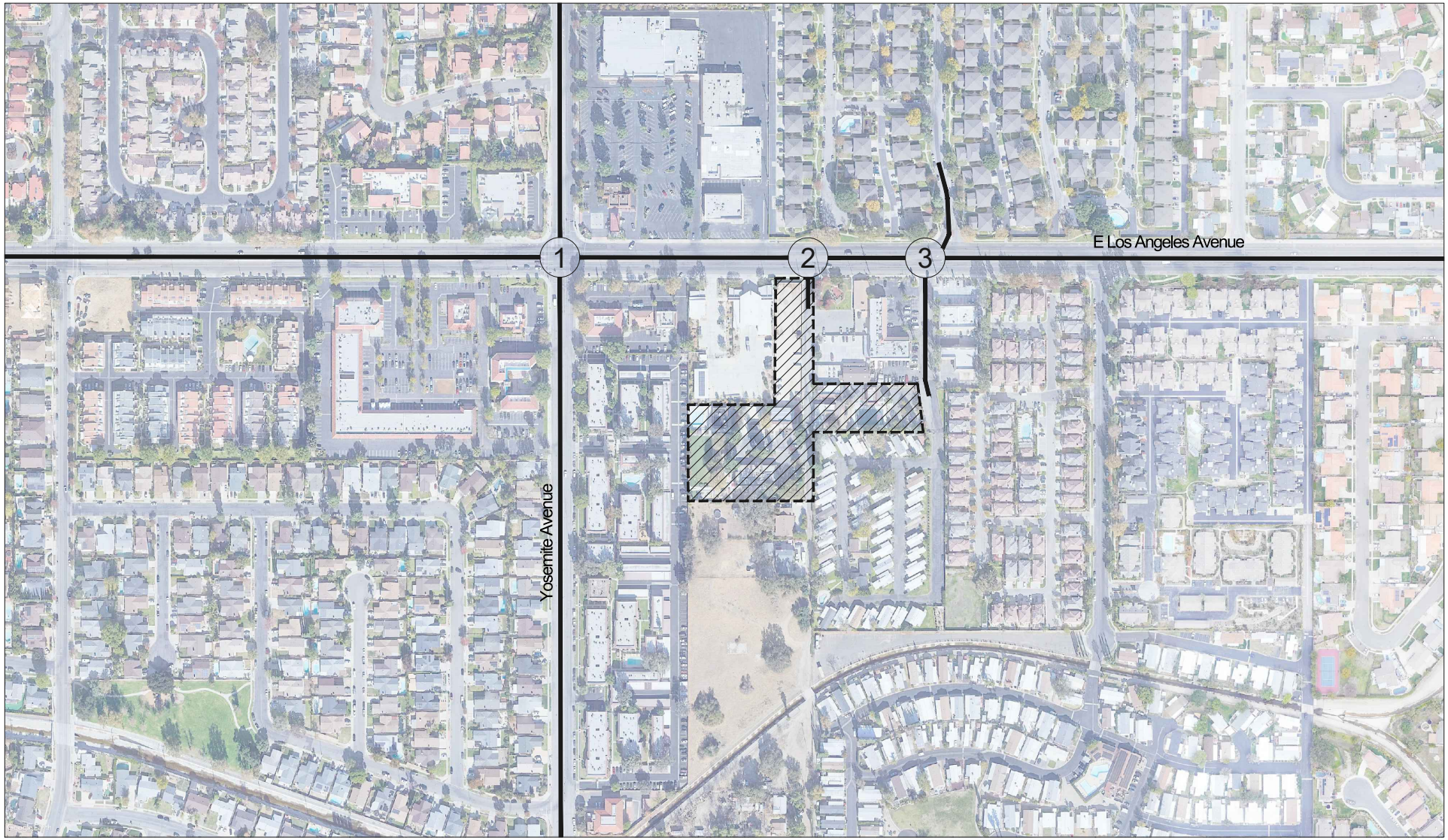


Exhibit 1: Project Location

Exhibit 2: Proposed Project Site Plan



Legend:

Project Site

(#) Study Intersection Location

Exhibit 3: Proposed TIA Study Area

3.0 EXISTING CONDITIONS

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS

The characteristics of the roadway system in the vicinity of the proposed project site are described in **Table 4.**

Table 4

Roadway Characteristics within Study Area

Roadway	Classification[1]	Jurisdiction	Direction	Existing Travel Lanes	Median Type[2]	Speed Limit (mph)	On-Street Parking
Yosemite Ave	Secondary Arterial	Simi Valley	North-South	4	NM-TWLTL	45	No
E Los Angeles Ave	Primary Arterial	Simi Valley	East-West	4	RM-TWLTL	45	No
Oak Rd	Local Residential Street	Simi Valley	North-South	2	NM	35	No
Shunk Rd	Local Residential Street	Simi Valley	North-South	2	NM	35	No

1: Sources: City of Simi Valley General Plan (July, 2011)

2: TWLTL = Two-Way Left-Turn Lane, RM= Raised Median, NM = No Median.

Exhibit 4 show existing conditions study area intersection and roadway geometry.

3.2 CITY OF SIMI VALLEY GENERAL PLAN CIRCULATION ELEMENT

The proposed project site is located within the City of Simi Valley. **Appendix A** contains the current *City of Simi Valley General Plan EIR* and an explanation of roadway cross sections.

3.3 EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Within the study area, Class II bike lanes exist on E Los Angeles Avenue. A Class II bike lane is proposed on Yosemite Avenue.

Appendix A contains the *City of Simi Valley General Plan Conceptual Trail System*.

3.4 EXISTING PUBLIC TRANSIT SERVICES

The City of Simi Valley is served by the Simi Valley Transit (SVT) which provides bus service throughout the city of Simi valley. **Appendix A** shows the SVT routes in the vicinity of the project site. The nearest transit service is SVT Route 10, and Route 20 with stops at the intersections of Yosemite Avenue/E Los Angeles

Avenue. Route 10 is approximately 450 feet away from the proposed project site and Route 20 is approximately 1,000 feet away from the proposed project site.

3.5 EXISTING TRAFFIC VOLUMES

To determine the existing operation of the study intersections, AM and PM peak period traffic volumes were estimated based on new traffic counts collected on Wednesday, August 17, 2022. Detailed traffic count data is provided in **Appendix B**. **Exhibit 5** shows existing AM and PM peak hour volumes at the study intersections.

3.6 EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

Existing conditions AM and PM peak hour intersection analysis is shown in **Table 5**. Calculations are based on the existing geometrics at the study area intersections as shown in **Exhibit 4.** HCM analysis sheets are provided in **Appendix C**.

Table 5

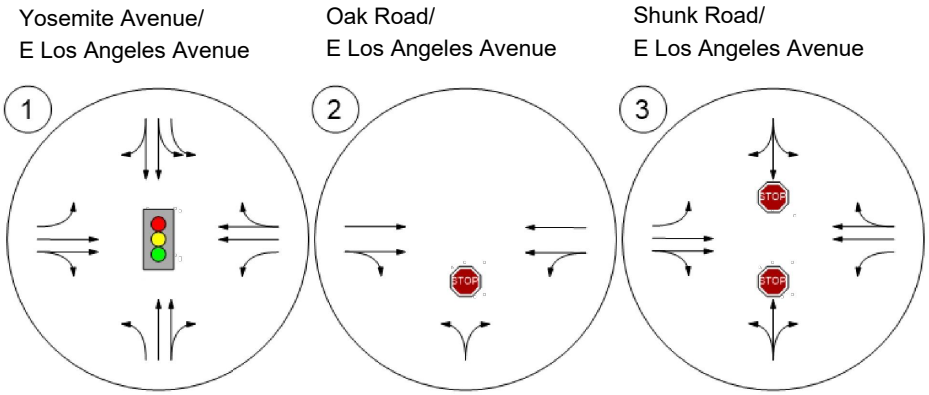
Intersection Analysis – Existing Conditions

Intersection			Control Type	Peak Hour	Existing Conditions	
					ICU/Delay[1]	LOS
1	Yosemite Avenue	E Los Angeles Avenue	Signal	AM	0.403	A
				PM	0.337	A
2	Oak Road	E Los Angeles Avenue	OWSC	AM	15.3	C
				PM	16.0	C
3	Shunk Road	E Los Angeles Avenue	TWSC	AM	21.2	C
				PM	22.0	C

Note: TWSC = Two-Way Stop-Control, OWSC = One-Way Stop-Control; Delay shown in seconds per vehicle.

1 = Per the Highway Capacity Manual 6th Edition, overall average delay and LOS are shown for intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 5**, the study intersections are currently operating at an acceptable LOS during the AM and PM peak hours for *existing* conditions.



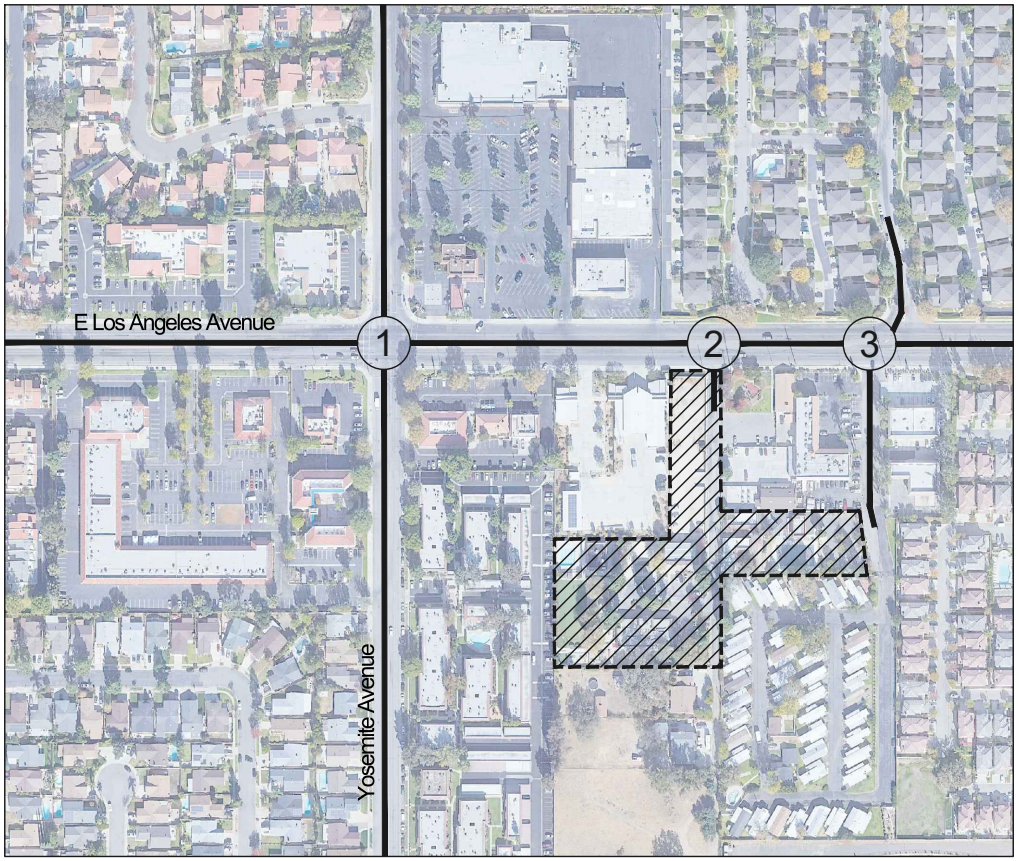
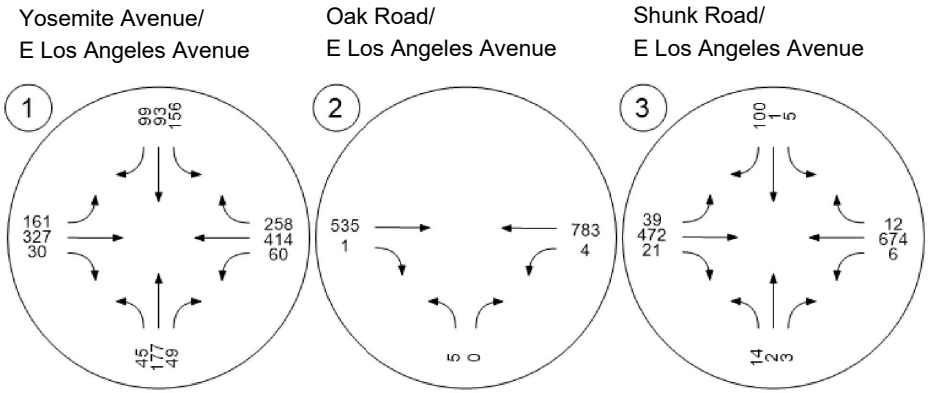


Exhibit 4: Lane Geometry and Intersection Controls

AM PEAK HOUR



PM PEAK HOUR

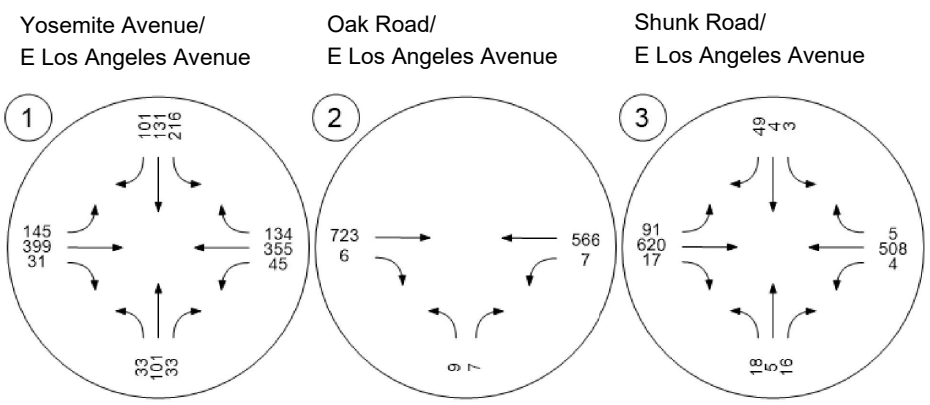


Exhibit 5: Existing AM and PM Peak Hour Volumes

4.0 PROPOSED PROJECT

4.1 PROJECT DESCRIPTION

The proposed project consists of 70 multi-family residential dwelling units. Site access is planned via two full-access driveways on E Los Angeles Avenue. The site is currently zoned as CPD/RM and classified as CG/MD in the City of Simi Valley General Plan Land Use Plan. The project site is currently occupied by a preschool.

The proposed project is anticipated to be built and generating trips in 2024. Future Year (2030) volumes were provided in the Simi Valley General Plan EIR.

Exhibit 2 previously showed the proposed project site plan.

4.2 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic, both inbound and outbound, produced by a development. Determining trip generation for a proposed project is based on projecting the amount of traffic that the specific land uses being proposed will produce. Industry standard *Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition, 2017)* trip generation rates were used to determine trip generation of for most of the proposed project land uses.

Table 6 summarizes the projected AM peak hour, PM peak hour and daily trip generation of the proposed project. The proposed project is projected to generate 472 daily trips, 28 AM peak hour trips, and 36 PM peak hour trips.

Table 6

Proposed Project Trip Generation

Proposed Land Use[1]	Qty	Unit[2]	Daily Trips (ADTs)		AM Peak Hour					PM Peak Hour				
			Rate	Volume	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
							In	Out	Total			In	Out	Total
Multifamily Housing (Low-Rise)	70	DU	6.74	472	0.40	24:76	7	21	28	0.51	63:37	22	14	36
Total				472			7	21	28			22	14	36

1: Rates from ITE Trip Generation 11th Edition, 2021(Land Use 220)
2: DU = Dwelling Units

4.3 PROJECT TRIP DISTRIBUTION

Projecting trip distribution involves the process of identifying probable destinations and traffic routes that will be utilized by the proposed project's traffic. The potential interaction between the proposed land use and surrounding regional access routes are considered to identify the probable routes onto which project

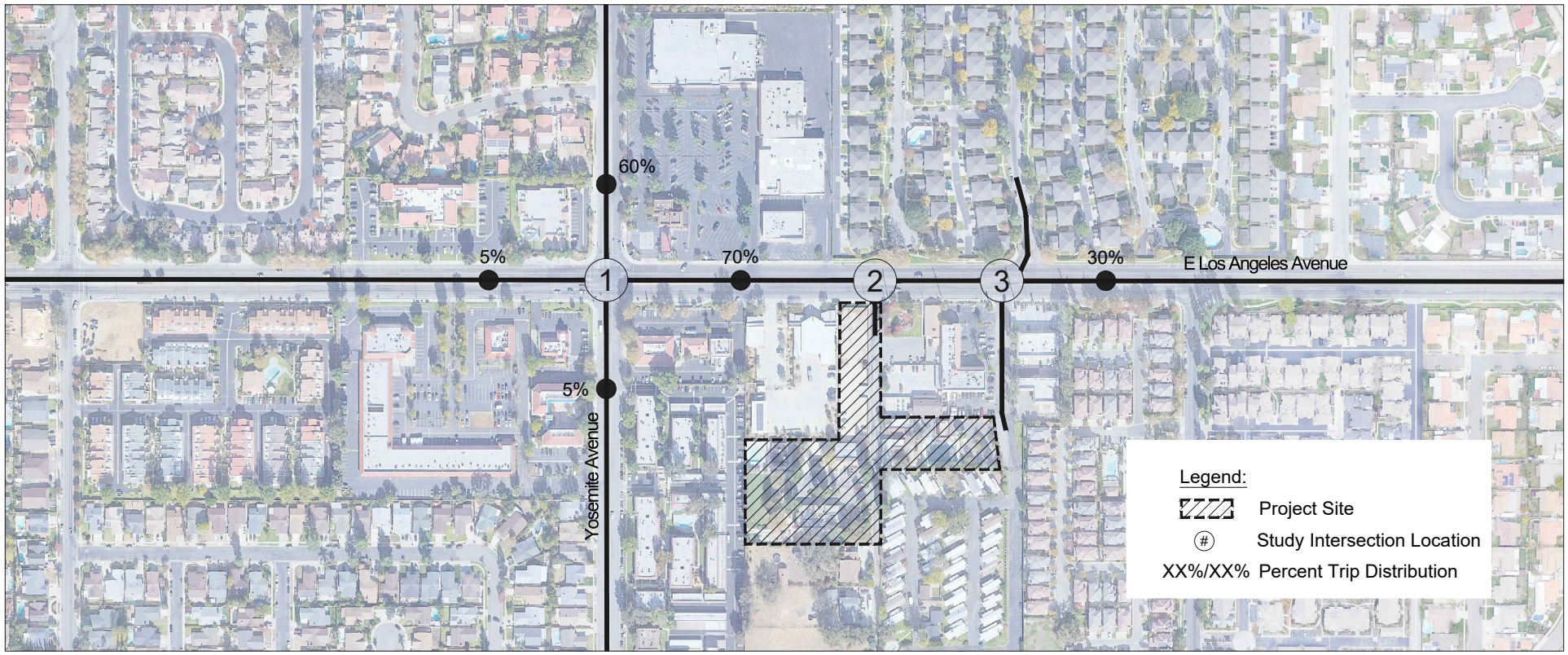
traffic would distribute. The projected trip distribution for the proposed project is based on anticipated travel patterns to and from the project site.

Exhibit 6 shows the projected trip distribution of proposed project trips.

4.4 SIGHT DISTANCE ANALYSIS

A sight distance analysis for the proposed driveway at East Los Angeles Avenue has been prepared based on the "stopping sight distance" requirements determined by Topic 201 and Table 201.1 of the *Caltrans Highway Design Manual (HDM),* last edition.

In this analysis, the movements being analyzed at the Project Driveways, intersection #2 and #3 are movements from the proposed project onto East Los Angeles Avenue. Based on the posted speed limit of 45 miles per hour on East Los Angeles Avenue. The results of this sight distance analysis are shown in **Exhibit 7**.



AM PEAK HOUR

PM PEAK HOUR

Yosemite Avenue/
E Los Angeles Avenue

Oak Road/
E Los Angeles Avenue

Shunk Road/
E Los Angeles Avenue

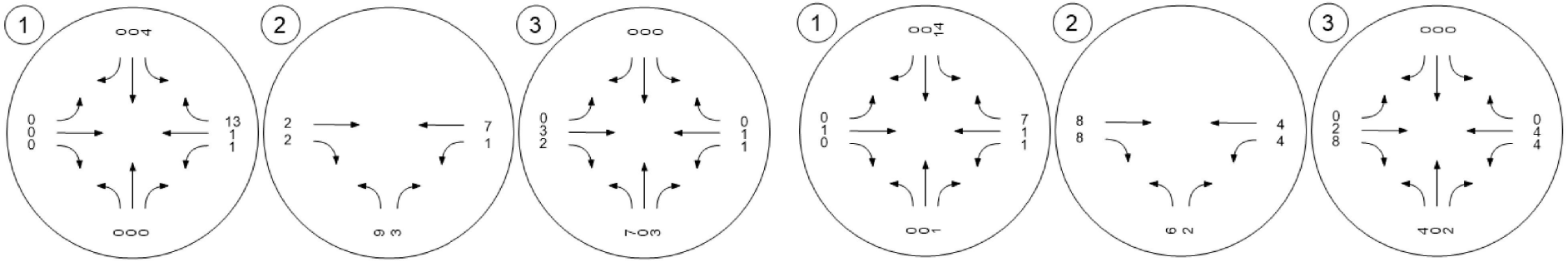


Exhibit 6: Trip Distribution and Trip Assignments at Study Intersections

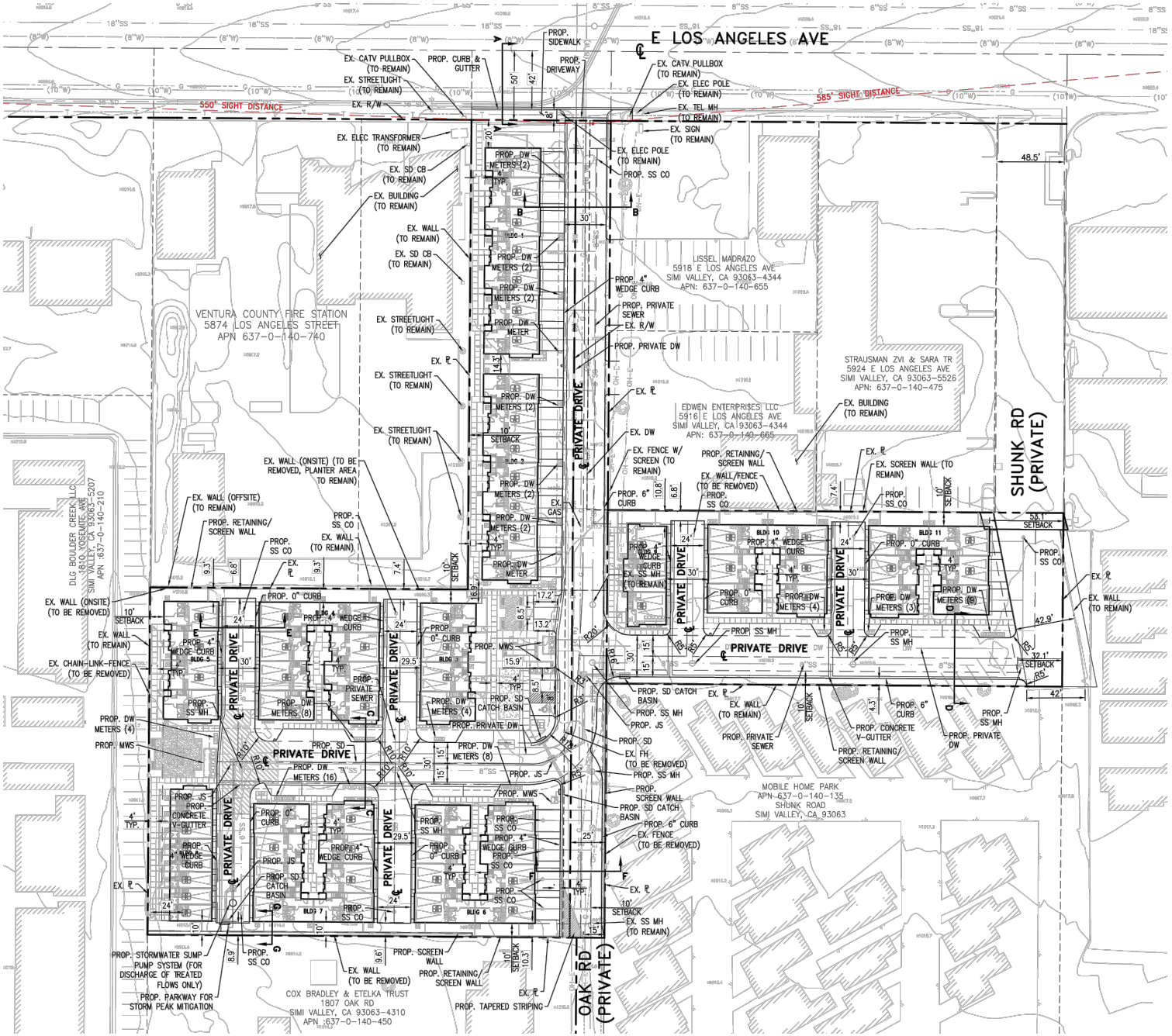


Exhibit 7: Sight Distance Analysis

5.0 EXISTING PLUS PROJECT CONDITIONS (EP)

Existing Plus Project traffic conditions (EP) analysis is intended to identify existing conditions with the proposed project.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *EP* scenario are consistent with those previously shown in **Exhibit 4**.

5.2 EXISTING PLUS PROJECT TRAFFIC VOLUMES

EP volumes includes existing traffic with the proposed project traffic volumes.

Existing Plus Project Volumes = (Existing (2022) Counts) + Project

Exhibit 8 shows *Existing Plus Project* AM and PM peak hour volumes at the study intersections.

5.3 EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Existing Plus Project AM and PM peak hour intersection analysis is shown in **Exhibit 8**. Calculations are based on the existing geometrics at the study area intersections as shown in **Exhibit 3.** HCM analysis sheets are provided in **Appendix C**.

Table 7

Intersection Analysis – Existing Plus Project (EP) Conditions

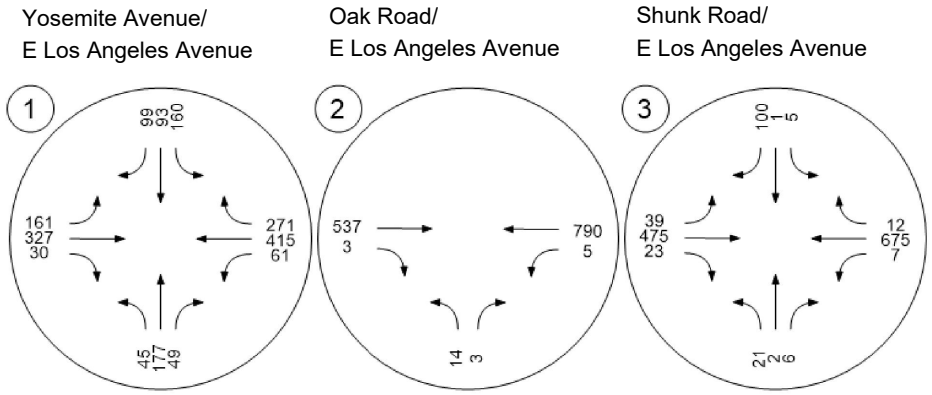
Intersection			Control Type	Peak Hour	EP Conditions	
					ICU/Delay[1]	LOS
1	Yosemite Avenue	E Los Angeles Avenue	Signal	AM	0.408	A
				PM	0.342	A
2	Oak Road	E Los Angeles Avenue	OWSC	AM	15.6	C
				PM	16.2	C
3	Shunk Road	E Los Angeles Avenue	TWSC	AM	21.4	C
				PM	21.9	C

Note: TWSC = Two-Way Stop-Control, OWSC = One-Way Stop-Control; Delay shown in seconds per vehicle.

1 = Per the Highway Capacity Manual 6th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 7** the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *existing plus project* conditions.

AM PEAK HOUR



PM PEAK HOUR

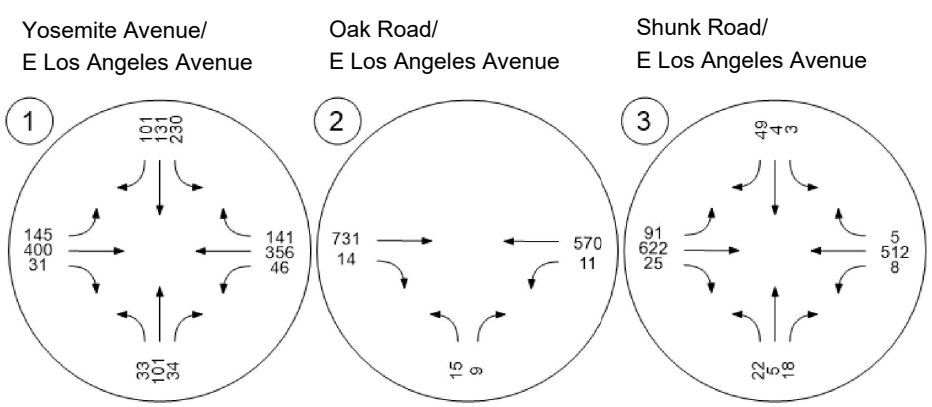


Exhibit 8: Existing Plus Project AM and PM Peak Hour Volumes

6.0 CUMULATIVE TRAFFIC WITHOUT PROJECT TRAFFIC CONDITIONS (CNP)

Cumulative Traffic without Project (CNP) traffic conditions analysis is intended identify baseline conditions in the near-term with cumulative projects and without the proposed project.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *cumulative traffic without project traffic* scenario are consistent with those previously shown in **Exhibit 4**, with the exception of:

- E Los Angeles Avenue: Consistent with the general plan improvements, an additional thru lane is added in the eastbound and westbound directions.

6.2 CUMULATIVE TRAFFIC WITHOUT PROJECT TRAFFIC VOLUMES

CNP conditions volumes were estimated based on yearly growth rates from base year (2006) to forecast year (2030) in the City of Simi Valley model. Model volumes are included in **Appendix B**.

Cumulative Traffic without Project Traffic Volumes = (*Existing* (2022) Counts + model data)

The model (2030) volumes were taken from intersection #1 Yosemite Avenue/E Los Angeles Avenue and were balanced throughout the rest of the intersections while keeping the same driveway volumes as they are private roads and there are not any planned developments that would utilize these driveways for access.

Exhibit 9 shows *cumulative traffic without project* AM and PM peak hour volumes at the study intersections.

6.3 CUMULATIVE TRAFFIC WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Cumulative traffic without project conditions AM and PM peak hour intersection analysis is shown in **Table 8**. HCM analysis sheets are provided in **Appendix C.**

Table 8

Intersection Analysis – Cumulative Traffic Without Project (CNP) Conditions

Intersection			Control Type	Peak Hour	CNP Conditions	
					ICU/Delay[1]	LOS
1	Yosemite Avenue	E Los Angeles Avenue	Signal	AM	0.457	A
				PM	0.644	B
2	Oak Road	E Los Angeles Avenue	OWSC	AM	18.1	C
				PM	34.3	D
3	Shunk Road	E Los Angeles Avenue	TWSC	AM	24.8	C
				PM	124.3	F

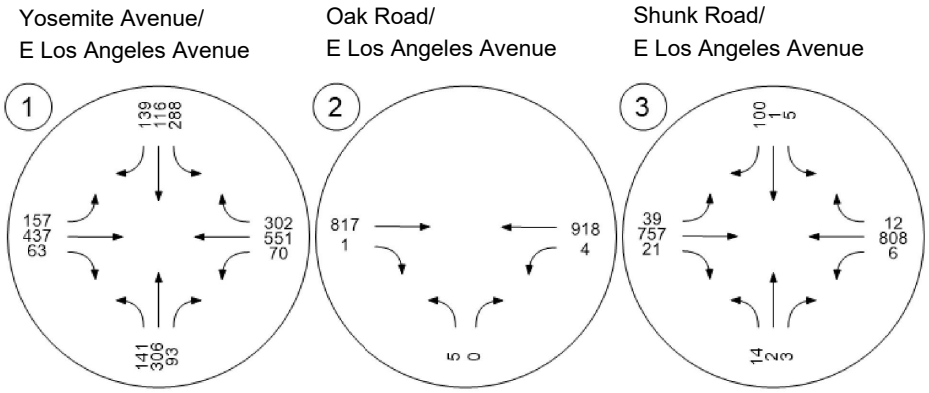
Note: AWSC = All- Way Stop-Control, OWSC = One-Way Stop Control, Delay shown in seconds per vehicle.

1 = Per the Highway Capacity Manual 6th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 8**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for cumulative traffic without project conditions with the exception of the following intersections. It should be noted, the deficiency occurs for the private driveway approaches and not along the primary roadway of E Los Angeles Avenue.

- #1 – Oak Road/E Los Angeles Avenue (PM Peak Hour); and
- #2 – Shunk Road/E Los Angeles Avenue (PM Peak Hour).

AM PEAK HOUR



PM PEAK HOUR

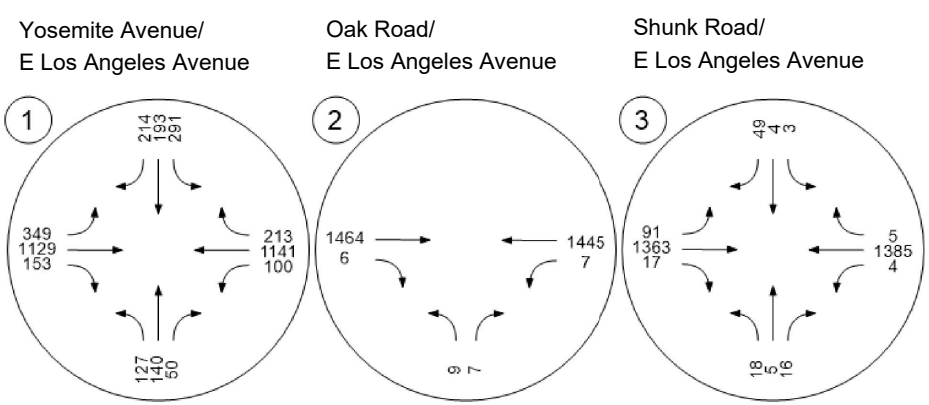


Exhibit 9: Cumulative Traffic Without Project AM and PM Peak Hour Volumes

7.0 CUMULATIVE TRAFFIC PLUS PROJECT TRAFFIC CONDITIONS (CWP)

Cumulative traffic plus project traffic (CWP) conditions analysis is intended to identify the project-related impacts on both the existing and planned near-term circulation system.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *cumulative traffic plus project traffic* scenario are consistent with those previously shown in **Exhibit 4**, with the exception of:

- E Los Angeles Avenue: Consistent with the general plan improvements, an additional thru lane is added in the eastbound and westbound directions.

7.2 CUMULATIVE TRAFFIC PLUS PROJECT TRAFFIC VOLUMES

CWP conditions volumes were estimated based on yearly growth rates from base year (2006) to forecast year (2030) in the City of Simi Valley model. Model volumes are included in **Appendix B**.

Cumulative Traffic Plus Project Traffic Volumes = (*Existing* (2022) Counts + model data + Project)

The model (2030) volumes were taken from intersection #1 Yosemite Avenue/E Los Angeles Avenue and were balanced throughout the rest of the intersections while keeping the same driveway volumes as they are private roads and there are not any planned developments that would utilize these driveways for access.

Exhibit 10 shows *cumulative traffic plus project traffic* AM and PM peak hour volumes at the study intersections.

7.3 CUMULATIVE TRAFFIC PLUS PROJECT TRAFFIC INTERSECTION LEVEL OF SERVICE ANALYSIS

Cumulative traffic plus project traffic conditions AM and PM peak hour intersection analysis is shown in **Table 9** *H*CM analysis sheets are provided in ***Appendix C***.

Table 9

Intersection Analysis – Cumulative Traffic Plus Project Traffic (CWP) Conditions

Intersection			Control Type	Peak Hour	CNP Conditions		CWP Conditions		Change	Impact?
					ICU/Delay[1]	LOS	ICU/Delay[1]	LOS		
1	Yosemite Avenue	E Los Angeles Avenue	Signal	AM	0.457	A	0.460	A	0.003	No
				PM	0.644	B	0.649	B	0.005	No
2	Oak Road	E Los Angeles Avenue	OWSC	AM	18.1	C	18.7	C	0.6	No
				PM	34.3	D	35.2	E	0.9	No
3	Shunk Road	E Los Angeles Avenue	TWSC	AM	24.8	C	25.6	D	0.8	No
				PM	124.3	F	142.5	F	18.2	No

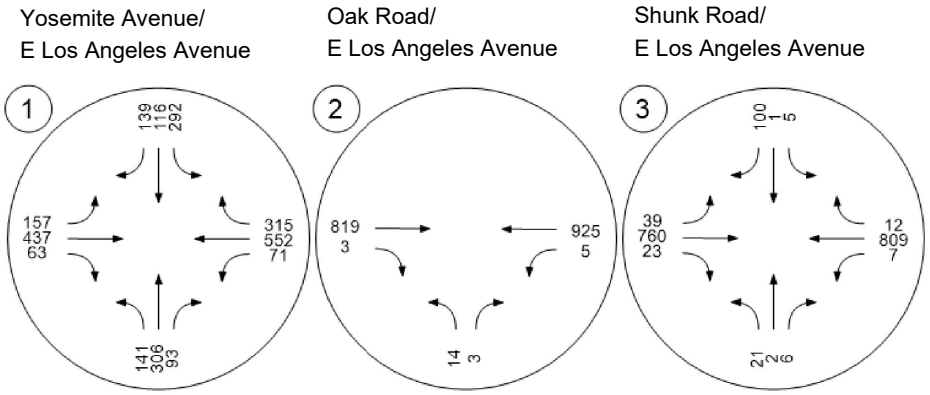
Note: AWSC = All- Way Stop-Control, OWSC = One-Way Stop Control, Delay shown in seconds per vehicle.

1 = Per the Highway Capacity Manual 6th Edition, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 9**, the study intersections are projected to continue to operate at an acceptable LOS during the AM and PM peak hours for *cumulative traffic plus project traffic* conditions with the exception of the following intersections. It should be noted, the deficiency occurs for the private driveway approaches and not along the primary roadway of E Los Angeles Avenue.

- #1 – Oak Road/E Los Angeles Avenue (PM Peak Hour); and
- #2 – Shunk Road/E Los Angeles Avenue (PM Peak Hour).

AM PEAK HOUR



PM PEAK HOUR

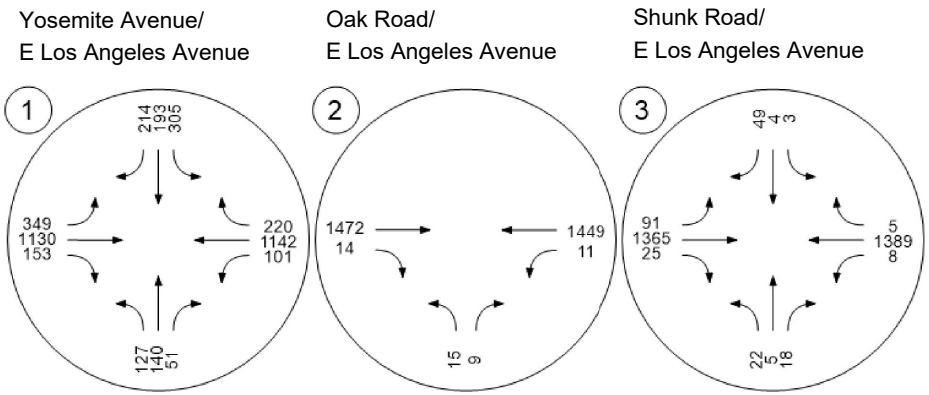


Exhibit 10: Cumulative Traffic Plus Project Traffic Project AM and PM Peak Hour Volumes

APPENDIX