

TRANSPORTATION IMPACT ANALYSIS  
**DALEY RANCH RESORT PROJECT**  
Escondido, California  
September 21, 2017

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TRANSPORTATION IMPACT ANALYSIS  
DALEY RANCH RESORT PROJECT  
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## 1.0 INTRODUCTION

A residential and resort development is proposed northeast of the City of Escondido within its sphere of influence. Currently in an unincorporated area planned for annexation into the City of Escondido, the project includes 189 single-family residential units, 14 multi-family units and a 225-room resort. Access to the proposed project will be from Valley Center Road via a new driveway, 1.5 miles south of Woods Valley Road. Various intersections, segments, freeway mainline segments and ramp meters within the study area have been analyzed to determine project-related impacts, as set forth in the following sections.

- Project Description
- Project Study Area
- Existing Conditions
- Study Area, Analysis Scenarios and Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Project Trip Generation / Distribution / Assignment
- Cumulative Projects
- Analysis of Near-Term Scenarios
- Analysis of Long-Term Scenarios
- Access and Internal Circulation
- Significance of Impacts and Mitigation Measures

**Figure 1-1** depicts the Project vicinity and **Figure 1-2** shows a more detailed Project area map.

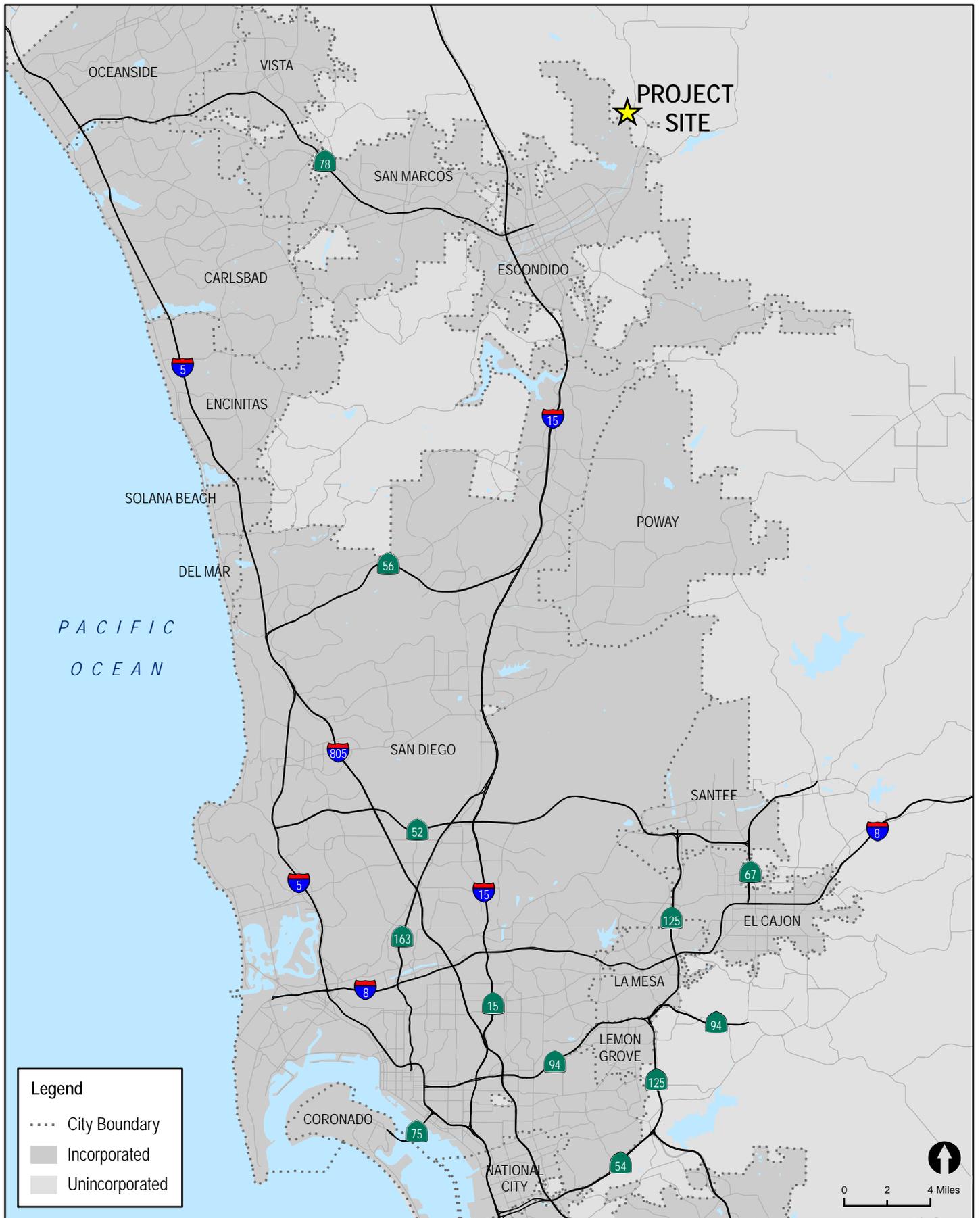


Figure 1-1

## Vicinity Map

DALEY RANCH RESORT PROJECT

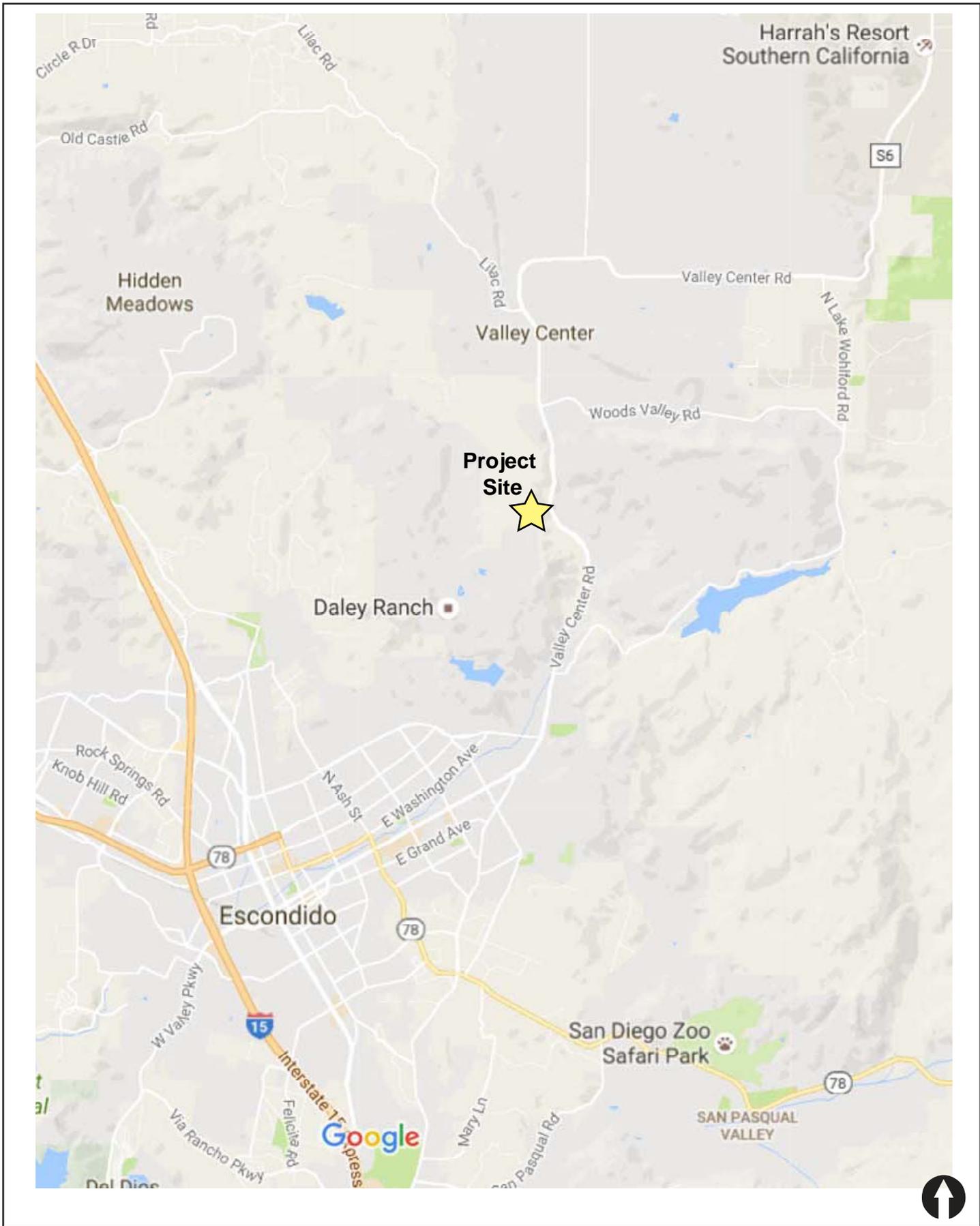


Figure 1-2

**Project Area Map**

## 2.0 PROJECT DESCRIPTION

The proposed Daley Ranch Resort Specific Plan (DRRSP) is located on 207.7 acres of vacant land west of Valley Center Road, between Lake Wohlford Road to the south and Woods Valley Road to the north in unincorporated San Diego County and will be annexed into the City of Escondido. The project site is currently part of the City of Escondido's General Plan Specific Planning Area # 2. The proposed project consists of the following:

189 single-family residences will be contained in three distinct residential types: custom home sites; detached single-family residences; and courtyard-style single-family homes. The large custom home lots range in size from 20,004 square feet to 32,505 square feet. The smaller residential lots range in size from 4,000 square feet to 10,484 square feet with homes ranging from 1,876 to 2,494 square feet. Courtyard-style single-family homes will be located on three commonly-owned lots ranging in size from 1.63 to 2.80 acres, with homes ranging in size from 1,752 to 2,268 square feet. Resulting density is 0.91 dwelling units per acre across the entire site. In addition, 14 condominium units are also planned.

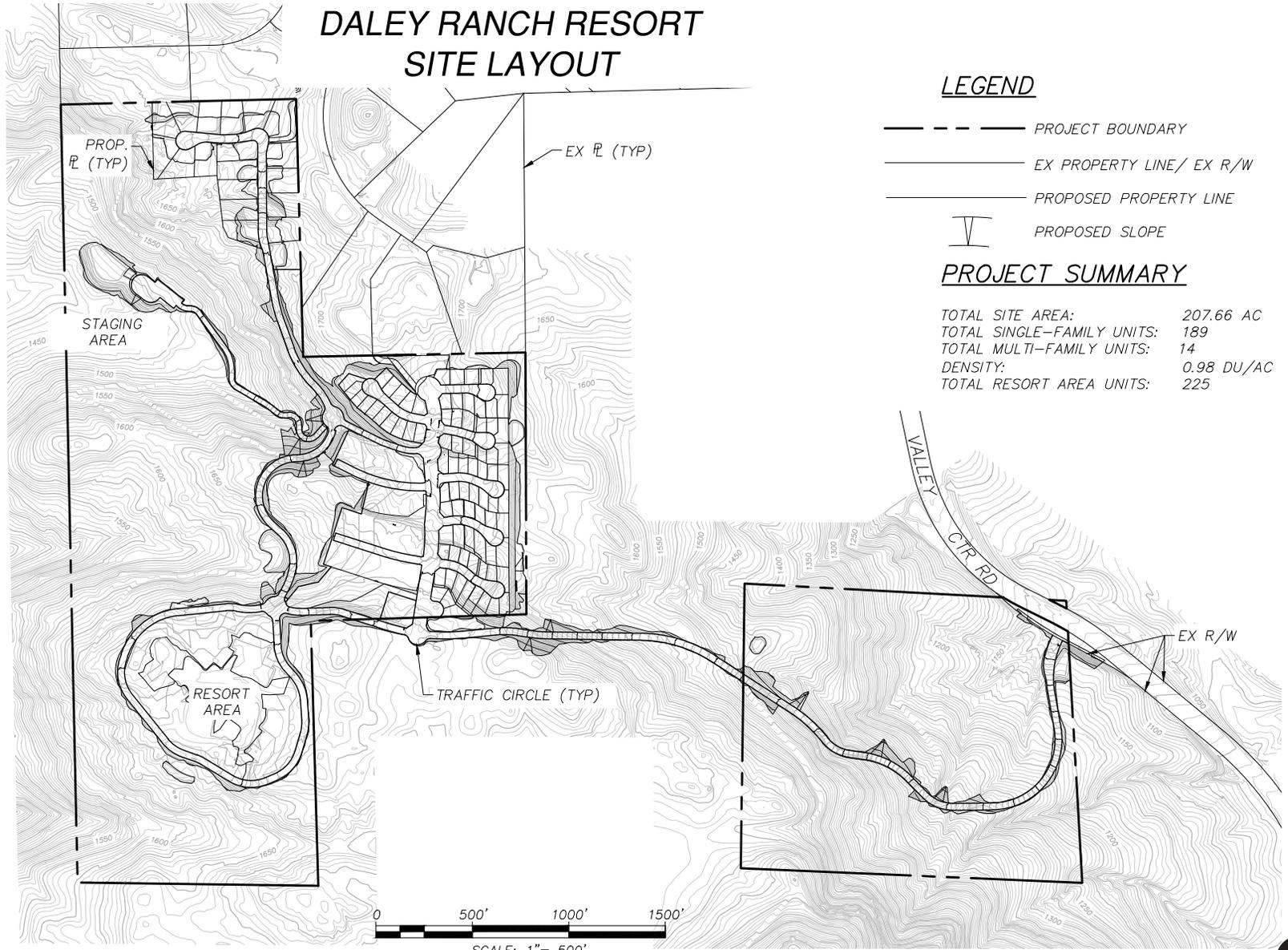
- A resort with amenities located on approximately 14 acres in the southwest corner of the subject site. The resort site is proposed to allow up to 225 rooms, and access is provided via the internal private road system. The resort is intended to cater to outdoor recreationalists in addition to tourists. The building height will vary between two and three stories tall. Parking spaces for the resort will be at-grade and arrayed around the buildings. The resort will have enough parking spaces to comply with Escondido Municipal Code section 33-765.
- Community amenities include a community garden, dog park, passive open space, and outdoor community recreation area with shade structure and play area located on six lots totaling 8.4 acres.
- A new primary access road intersecting at Valley Center Road between Lake Wohlford Road and Woods Valley Road, including a three-way traffic signal on Valley Center Road at the intersection.
- A secondary access point at the northern end of the subject site will be provided for emergency access, both to and from the north.
- An internal private road system with street rights of way varying from 24 – 44 feet wide with travel lanes, parking and walkways up to 72 feet wide with a median, travel lanes, parking, walkways and planted parkway. Roundabouts will be installed at some intersections.
- A total of 148.9 acres of open space contained in four lots that range in size from 6.9 to 82.1 acres.
- Approximately two miles of public trails that will connect to Daley Ranch, Stanley Peak, and other areas in public open space.
- A privately-maintained, but open-to-the public parking and staging area containing 25 marked parking spaces, 6 parking spaces for horse trailers, and environmentally-friendly bathrooms. From this area, hikers and bikers will be able to access Daley Ranch via a marked 20-foot-wide public trail easement.

- A multi-modal transportation system that provides direct and safe connections for pedestrians, bicyclists, and drivers throughout the Specific Plan area. This includes pedestrian pathways and wayfinding signage that will facilitate internal circulation.
- Various off-site improvements including the following:
  - Median break in Valley Center Road.
  - Installation of three-way traffic signal at Valley Center Road and project entrance.
  - Widening and re-striping of Valley Center Road to allow for acceleration and deceleration lanes.
  - Installation of emergency access gate at northern end of proposed project site.

This project is a multiple-phase subdivision. Public facilities and services and phase development would be coordinated so that services are available and ready to serve the residents and resort visitors as the need arises.

*Figure 2-1* depicts the Project conceptual site plan.

# DALEY RANCH RESORT SITE LAYOUT



## LEGEND

- PROJECT BOUNDARY
- EX PROPERTY LINE/ EX R/W
- PROPOSED PROPERTY LINE
- PROPOSED SLOPE

## PROJECT SUMMARY

TOTAL SITE AREA:	207.66 AC
TOTAL SINGLE-FAMILY UNITS:	189
TOTAL MULTI-FAMILY UNITS:	14
DENSITY:	0.98 DU/AC
TOTAL RESORT AREA UNITS:	225



Figure 2-1  
Site Plan

## 3.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed *Daley Ranch Resort Project* requires an understanding of the existing transportation system within the project area. **Figure 3-1** shows an existing conditions diagram, including signalized intersections and lane configurations.

### 3.1 Existing Street Network

The project study area includes streets within the City of Escondido and San Diego County. The existing street network in the study area is described by jurisdiction.

#### 3.1.1 *San Diego County Street Network*

Following is a description of the street network in the Study Area within San Diego County:

The classification of **Valley Center Road** varies along its length. Following is the classification of various sections of Valley Center within San Diego County:

- Between Escondido City Limits and North County Metro Subregion Boundary, Valley Center Road is classified on the San Diego County Mobility Element as a 4.1A Major Road. Going north, initially, it is built as a four-lane road with a center-two-way-left-turn lane. Curb, gutter and sidewalks are not provided. Parking is prohibited.
- Between North County Metro Subregion Boundary and Woods Valley Road, Valley Center Road is classified on the San Diego County Mobility Element as a 4.1A Major Road with a raised median. Curb, gutter and sidewalks are not provided. Parking is prohibited.
- Between Woods Valley Road and Lilac Road, Valley Center Road is classified on the San Diego County Mobility Element as a 4.2A Boulevard with a raised median. Currently, raised median is provided intermittently. Bike lanes, Curb, gutter and sidewalks are provided. The posted speed limit is 45 mph. Parking is prohibited.
- Between Lilac Road and Miller Road, Valley Center Road is classified on the San Diego County Mobility Element as a 4.1A Major Road with a raised median. Bike lanes, Curb, gutter and sidewalks are provided. The posted speed limit is 45 mph.
- Between Miller Road and New Roads 14/15, Valley Center Road is classified on the San Diego County Mobility Element as a 4.2B Boulevard with a raised median. Currently, it is built as a 4.2B Boulevard with a raised median between Miller Road and Cole Grade Road with bike lanes, curb, gutter and sidewalks. The posted speed limit is 45 mph. Parking is prohibited. The remaining portion of this segment is a two-lane road with one lane in each direction with no bike lanes, curb, gutter or sidewalks.
- Between New Roads 14/15 and Pala / Pauma Subregion Boundary, Valley Center Road is classified on the San Diego County Mobility Element as a 2.1D Community Collector with passing lanes. Between New Roads 14/15 and Lake Wohlford Road N. only two lanes are provided, one in each direction with no median. Parking is prohibited. Bike lanes, curb, gutter and sidewalks are provided. The posted speed limit is 45 mph. Parking is prohibited.

### 3.1.2 City of Escondido Street Network

Following is a description of the street network in the Study Area within the City of Escondido:

**Valley Parkway** is classified as a Super Prime Arterial in the City of Escondido General Plan, between the City Boundary and El Norte Parkway (Hidden Trails Drive) and a Prime Arterial between El Norte Parkway (Hidden Trails Drive) and Midway Drive. Currently, Valley Parkway is built as follows:

- Between the City Boundary and just south of Lake Wohlford Road (S), it is built as a three-lane road, with two lanes northbound and one lane southbound. The posted speed limit is 45 mph.
- Between just south of Lake Wohlford Road (S) and Beven Drive, it is built as a two-lane road with a center two-way-turn lane.
- Between Beven Drive and El Norte Parkway (Hidden Trails Drive), it is built as a five-lane road with a raised median, curb, gutter and sidewalk. Two lanes are provided northbound and three lanes are provided southbound. The posted speed limit is 45 mph.
- Between El Norte Parkway (Hidden Trails Drive) and Falcon Road, it is built as a five-lane road with a raised median, curb, gutter and sidewalk. Two lanes are provided northbound and three lanes are provided southbound. The posted speed limit is 45 mph.
- Between Falcon Road and Bear Valley Parkway and further south, it is built as a six-lane Prime Arterial with a raised median, curb, gutter and sidewalk. The posted speed limit is 45 mph.

A project for widening the portion of Valley Center Road between Beven Drive and the end of County improvements, north of Lake Wohlford Road South is being implemented. Based on the current schedule, construction is likely to begin in mid-2017 with an 18 to 24-month construction period. The project will provide for improvement to a four-lane Major Road with two through lanes and a bike lane in each direction and a center median. The intersections of Beven Drive and Lake Wohlford Road will be completed with appropriate signal modifications.

**El Norte Parkway** is east/west facility, mainly within City of Escondido jurisdiction and is classified as a Major Road on the City of Escondido Mobility Element. It is currently constructed as a four-lane divided roadway from Woodland Parkway to Rees Road. From Rees Road to Nutmeg Street / Nordahl Road it is within County of San Diego jurisdiction, where it is classified as a 4.1A Major Road and built as a four-lane undivided roadway with two-way left-turn lane (TWLTL) median. East of Nutmeg Street / Nordahl Road, El Norte Parkway returns to Escondido jurisdiction and is built as a four-lane divided roadway to Morning View Drive. Between Morning View Drive and Centre City Parkway, it is a seven-lane divided roadway with three eastbound lanes and four westbound lanes. East of Centre City Parkway, the roadway returns to four lanes. Bike lanes are provided along both sides of the street. The posted speed limit is 45 mph.

The photos in the following page depict the study area intersections.

VALLEY CENTER ROAD @ COLE GRADE ROAD



VALLEY CENTER ROAD @ LAKE WOHLFORD ROAD SOUTH



VALLEY CENTER ROAD @ COLE GRADE ROAD



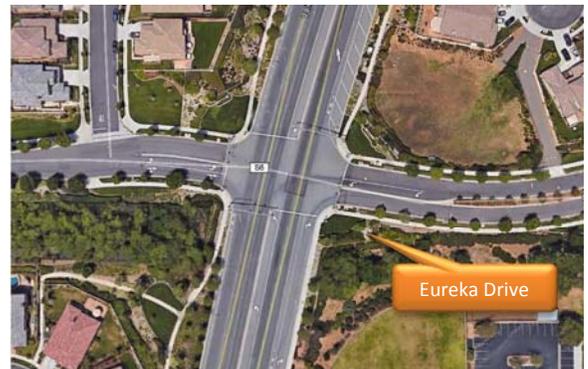
VALLEY CENTER ROAD @ BEVEN DRIVE



VALLEY CENTER ROAD @ LILAC ROAD



VALLEY CENTER ROAD @ EUREKA DRIVE



VALLEY CENTER ROAD @ WOODS VALLEY ROAD



VALLEY CENTER ROAD @ EL NORTE PARKWAY



VALLEY PARKWAY @ BEAR VALLEY PARKWAY



EL NORTE PARKWAY @ WASHINGTON AVENUE



VALLEY PARKWAY @ CITRUS AVENUE



## 3.2 Existing Traffic Volumes

### 3.2.1 Peak Hour Intersection Volumes

Manual hand counts at the study area intersections, including bicycle and pedestrian counts, were conducted in May 2016, when area schools were in session.

### 3.2.2 Daily Segment Volumes

**Table 3-1** is a summary of the most recent average daily traffic (ADT) volumes from LLG counts conducted by Pacific Technical Data in May 2016, when area schools were in session.

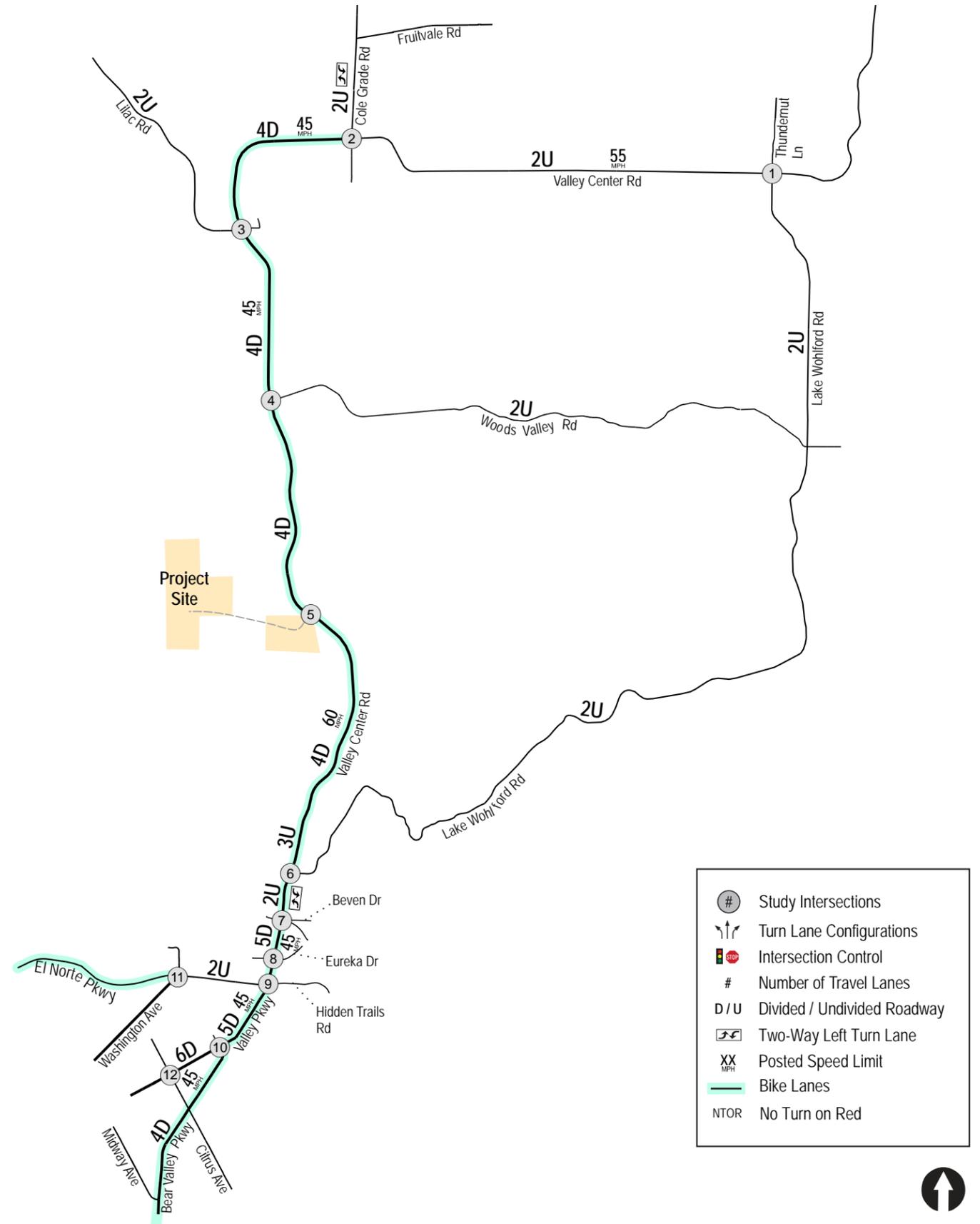
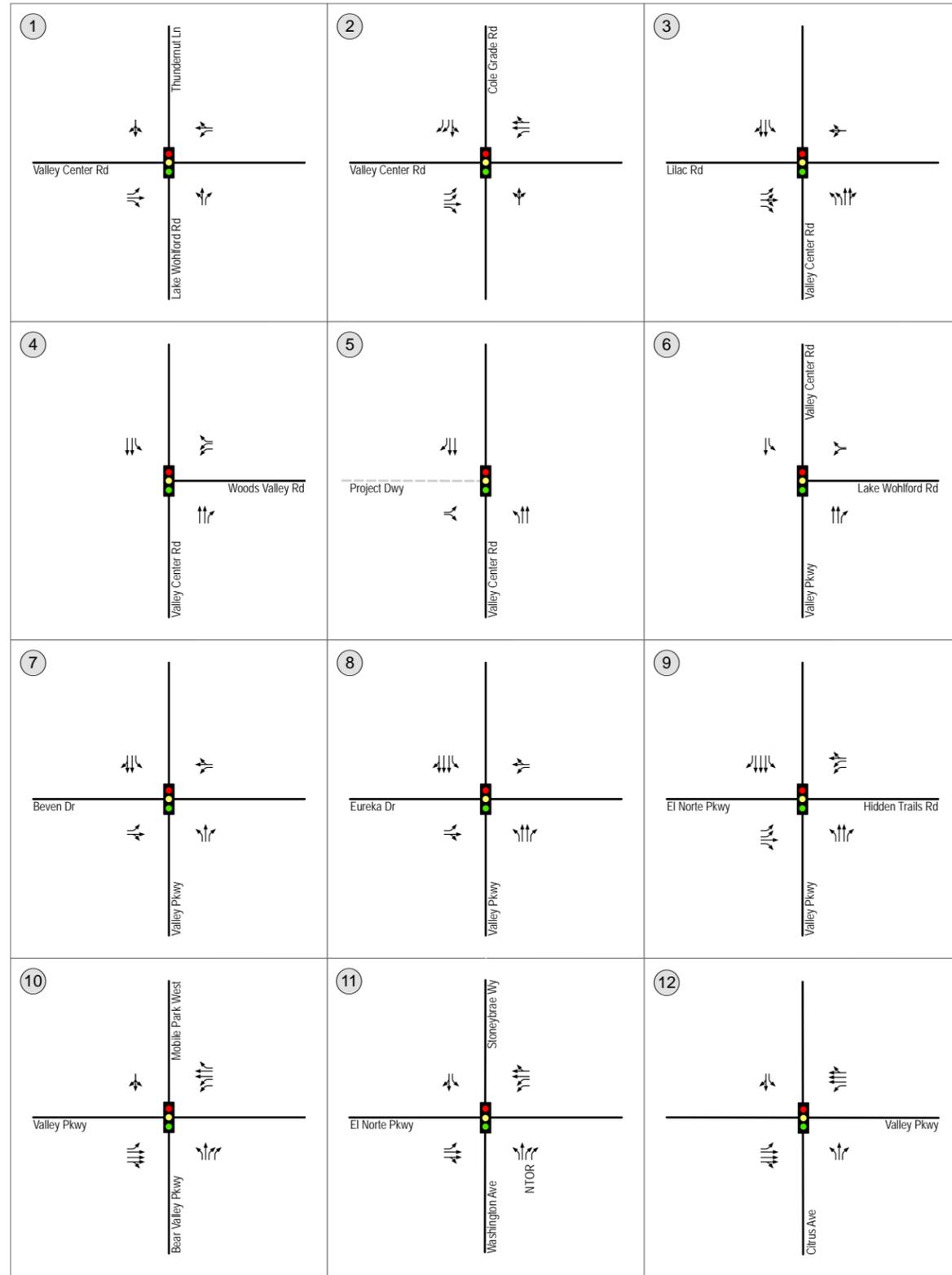
**Figure 3-2** shows the Existing Traffic Volumes. **Appendix A** contains the manual count sheets.

TABLE 3-1  
EXISTING TRAFFIC VOLUMES

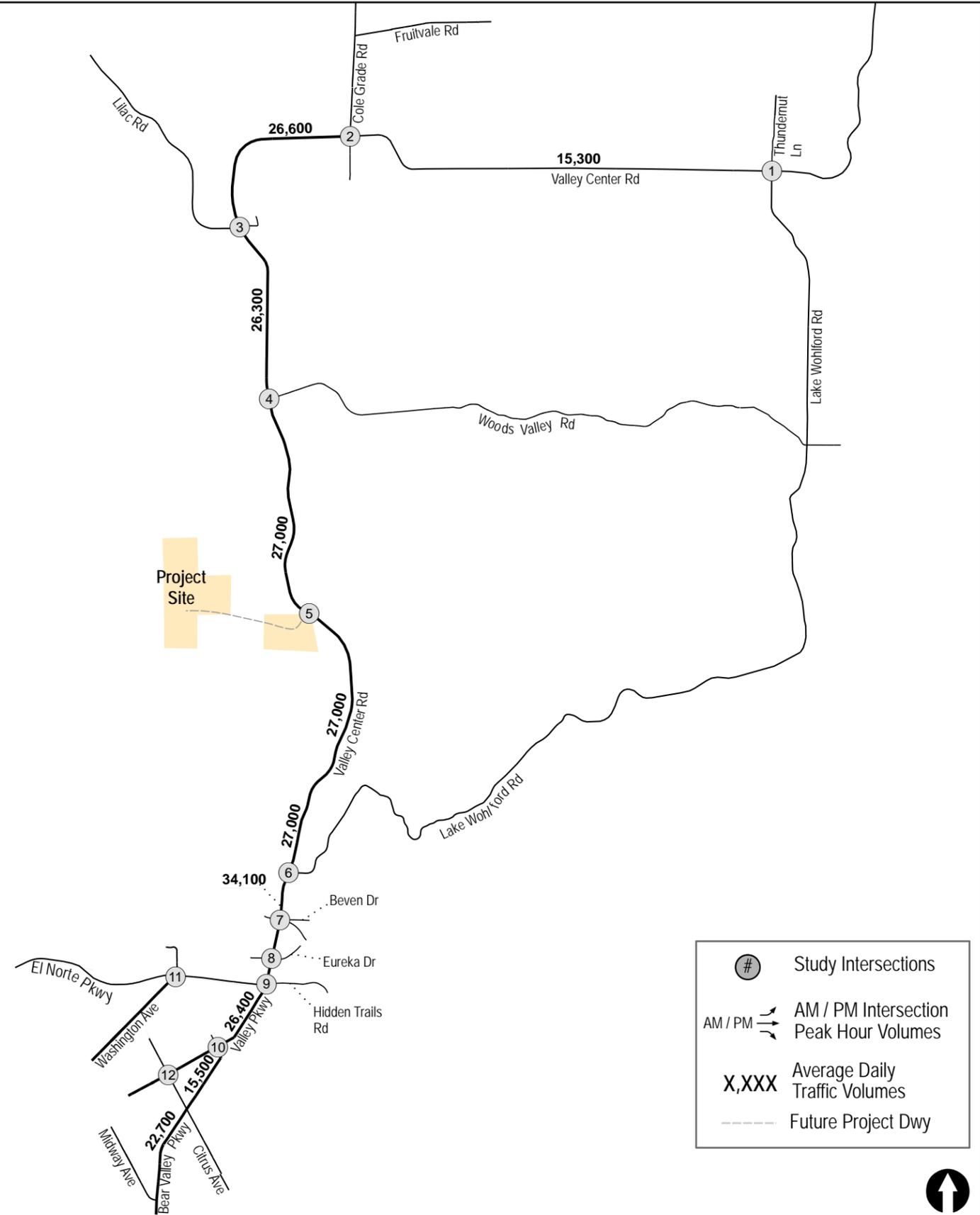
Street Segment	Average Daily Traffic Volumes <sup>a</sup>
<b>Valley Center Road</b>	
East of Cole Grade Rd	15,300
Cole Grade Rd to Lilac Rd	26,600
Lilac Rd to Woods Valley Rd	26,300
Woods Valley Rd to Project Dwy	27,000
Project Dwy to City of Escondido Limits	27,000
Escondido City Limits to Lake Wohlford Rd	27,000
<b>Valley Parkway</b>	
Lake Wohlford Rd to Beven Dr	34,100
El Norte Pkwy to Bear Valley Pkwy	26,400
Bear Valley Pkwy to Citrus Ave	17,800 <sup>b</sup>
<b>El Norte Parkway</b>	
Lincoln Ave to Washington Ave	18,700
Washington Ave to Valley Pkwy	18,300
<b>Bear Valley Parkway</b>	
Valley Pkwy to Citrus Ave	15,500
Citrus Ave to Midway Dr	22,700

**General Note:**

- a. Counts were conducted during the last week of May 2016, when area schools were in session.
- b. Counts conducted on April 27, 2017.



<p>①</p>	<p>②</p>	<p>③</p>
<p>④</p>	<p>⑤</p>	<p>⑥</p>
<p>⑦</p>	<p>⑧</p>	<p>⑨</p>
<p>⑩</p>	<p>⑪</p>	<p>⑫</p>



## 4.0 STUDY AREA, ANALYSIS SCENARIOS AND METHODOLOGY

### 4.1 Project Study Area

The project study area was determined using the criteria by which analysis of transportation facilities that would receive 50 or more peak-hour trips from the proposed project into the City of Escondido should be analyzed. The 50 peak-hour trip threshold is based one-way peak hour traffic volume of the roadway segment for either the AM or PM peak period. Based on these criteria, the following intersections and segments are included for analysis:

#### Intersections:

1. Valley Center Road / Lake Wohlford Road N. (Thudernut Lane)
2. Valley Center Road / Cole Grade Road
3. Valley Center Road / Lilac Road
4. Valley Center Road / Woods Valley Road
5. Valley Center Road / Project Driveway
6. Valley Center Road (Valley Pkwy) / Lake Wohlford Road S.
7. Valley Parkway / Beven Drive
8. Valley Parkway / Eureka Drive
9. Valley Parkway / El Norte Parkway (Hidden Trails Drive)
10. Valley Parkway / Bear Valley Parkway
11. El Norte Parkway / E. Washington Street
12. Valley Parkway / N. Citrus Avenue

#### Segments:

- Valley Center Road: East of Cole Grade Road
- Valley Center Road: Cole Grade Road to Lilac Road
- Valley Center Road: Lilac Road to Woods Valley Road
- Valley Center Road: Woods Valley Road to Project Driveway
- Valley Center Road: Project Driveway to City of Escondido Limits
- Valley Center Road: Escondido City Limits to Lake Wohlford Road
- Valley Parkway: Lake Wohlford Road to Beven Drive
- Valley Parkway: El Norte Parkway to Bear Valley Parkway
- Valley Parkway: Bear Valley Parkway to N. Citrus Avenue
- El Norte Parkway: Lincoln Avenue to Washington Avenue
- El Norte Parkway: Washington Avenue to Valley Parkway
- Bear Valley Parkway: Valley Parkway to Citrus Avenue
- Bear Valley Parkway: Citrus Avenue to Midway Drive

## 4.2 Analysis Scenarios

The following scenarios are analyzed in this report:

- Existing
- Existing + Project
- Existing + Cumulative Projects
- Existing + Project + Cumulative Projects
- Year 2030 + Project

## 4.3 Analysis Methodology

There are various methodologies used to analyze signalized intersections, unsignalized intersections, and street segments. The measure of effectiveness for intersection and segment operations is level of service (LOS), which denotes the operating conditions which occur at a given intersection or on a given roadway segment under various traffic volume loads.

LOS is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Levels of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments. In the 2010 Highway Capacity Manual (HCM), Level of Service for signalized intersections is defined in terms of delay. The level of service analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time.

**Table 4-1** summarizes the signalized intersections levels of service descriptions. **Table 4-2** depicts the intersection LOS and corresponding delay ranges, which are based on overall intersection delay (signalized intersections) and the average control delay for any particular minor movement (unsignalized intersections), respectively. LOS relative to signalized and unsignalized intersection is further described below.

### 4.3.1 Signalized Intersections

For signalized intersections, LOS criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Level of service A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

Level of service B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

**TABLE 4-1  
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS**

Level of Service	Description
A	Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Occurs generally with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Results generally when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Results generally in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with oversaturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels

**TABLE 4-2  
INTERSECTION LOS & DELAY RANGES**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	$\leq 10.0$	$\leq 10.0$
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	$\geq 80.1$	$\geq 50.1$

*Source:* 2000 Highway Capacity Manual

Level of service C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. Signal cycle failure (or overflow) is an interrupted traffic condition in which a number of queued vehicles are unable to depart due to insufficient capacity during a signal cycle. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

Level of service D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher volume (demand) / capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are frequent.

Level of service E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

Level of service F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

#### 4.3.2 *Unsignalized Intersections*

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement: LOS is not defined for the intersection as a whole. Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

### 4.4 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Escondido's *Roadway Classification, Level of Service, and ADT Table (Table 4-3)* and the San Diego County Average Daily Vehicle Trips table (*Table 4-4*). This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

**TABLE 4-3  
CITY OF ESCONDIDO PROPOSED LOS STANDARDS  
STREET SEGMENT ADT THRESHOLDS**

Street Classification	Lanes	Cross Sections	Level of Service				
			A	B	C	D	E
Prime Arterial	(8 lanes)	116/136 (NP)	23,800	37,800	51,800	56,700	70,000
	(6 lanes)	106/126 (NP)	20,400	32,400	44,400	48,600	60,000
Major Road	(6 lanes)	90/110 (NP)	17,000	27,000	37,000	40,500	50,000
	(4 lanes)	82/102 (NP)	12,600	20,000	27,400	30,000	37,000
Collector	(4 lanes)	64/84 (NP)	11,600	18,500	25,300	27,700	34,200
	(4 lanes)	(WP)	6,800	10,800	14,800	16,200	20,000
Local Collector	(2 lanes)	42/66 (NP)	5,100	8,100	11,100	12,200	15,000
Rural Collector	(2 lanes)	(WP)	3,400	5,400	7,400	8,100	10,000

(NP) - No Parking

(WP) - With Parking

- 1) Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.
- 2) This table is not applicable for street networks where two intersecting streets both operate at or below LOS C or where one street operates at or below LOS D. In those cases detailed peak hour capacity analyses are necessary.

**TABLE 4-4  
AVERAGE DAILY VEHICLE TRIPS – COUNTY OF SAN DIEGO**

CIRCULATION ELEMENT ROADS		LEVELS OF SERVICE					
Roadway Classification		#of Travel Lanes	A	B	C	D	E
<b>Expressway (6.1)</b>		6	<36,000	<54,000	<70,000	<86,000	<108,000
<b>Prime Arterial (6.2)</b>		6	<22,200	<37,000	<44,600	<50,000	<57,000
<b>Major Road</b>	(4.1A)	4	<14,800	<24,700	<29,600	<33,400	<37,000
	W/ Intermittent Turn Lanes (4.1B)	4	<13,700	<22,800	<27,400	<30,800	<34,200
<b>Collector</b>		4	<13,700	<22,800	<27,400	<30,800	<34,200
<b>Boulevard</b>	W/ Raised Median (4.2A)	4	<18,000	<21,000	<24,000	<27,000	<30,000
	W/ Intermittent Turn Lanes (4.2B)	4	<16,800	<19,600	<22,500	<25,000	<28,000
<b>Town Collector</b>		2	<3,000	<6,000	<9,500	<13,500	<19,000
<b>Community Collector</b>	W/ Raised Median (2.1)	2	<10,000	<11,700	<13,400	<15,000	<19,000
	W/ Continuous Left-Turn Lane (2.1B)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	W/ Intermittent Turn Lanes (2.1C)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	W/ Passing Lane (2.1D)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	No Median (2.1E)	2	<1,900	<4,100	<7,100	<10,900	<16,200
<b>Light Collector</b>	W/ Raised Median (2.2A)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	W/ Continuous Left-Turn Lane (2.2B)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	W/ Intermittent Turn Lanes (2.2C)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	W/ Passing Lane (2.2D)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	No Median (2.2E)	2	<1,900	<4,100	<7,100	<10,900	<16,200
	W/ Reduced Shoulder	2	<1,900	<4,100	<7,100	<10,900	<16,200
<b>Rural Collector</b>		2	<1,900	<4,100	<7,100	<10,900	<16,200
<b>Rural Light Collector</b>		2	<1,900	<4,100	<7,100	<10,900	<16,200
<b>Rural Mountain</b>		2	<1,900	<4,100	<7,100	<10,900	<16,200
<b>Recreational Parkway</b>		2	<1,900	<4,100	<7,100	<10,900	<16,200
<b>Minor Collector</b>	W/ Raised Median (2.3A)	2	<3,000	<6,000	<7,000	<8,000	<9,000
	W/ Intermittent (Turn Lane (2.3B)	2	<3,000	<6,000	<7,000	<8,000	<9,000
	No Median (2.3CE)	2	<1,900	<4,100	<6,000	<7,000	<8,000
<b>NON-CIRCULATION ELEMENT ROADS **</b>			<b>LEVELS OF SERVICE</b>				
Residential Collector		2	-	-	<4,500	-	-
Rural Residential Collector ***		2	-	-	<4,500	-	-
Residential Road		2	-	-	<1,500	-	-
Rural Residential Road ***		2	-	-	<1,500	-	-
Residential Cul-de-Sac or Loop Road		2	-	-	<200	-	-

The values shown are subject to adjustment based on the geometry of the roadway side frictions, and other relevant factors as determined by the Director, Department of Public Works.

\*\*Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

\*\*\*Rural Residential Collectors and Rural Residential Roads are intended to serve areas with lot sizes of 2 acres or more which do not have a demand for on-street parking. On-street parking is not assured for these cross sections. Additional right-of-way is needed if on-street parking is in paved area.

\*\*\*\*See Tables 2A and 28 for roadway surfacing and right-of-way widths.

## 5.0 SIGNIFICANCE CRITERIA

The project study area includes transportation facilities primarily within the jurisdiction of the City of Escondido. However, some facilities analyzed in this study area are located within San Diego County. Thus, the significance criteria of the jurisdiction within which a transportation facility is located were used to determine significance. The significance criteria for the following jurisdictions are included in this section.

- City of Escondido
- County of San Diego

### 5.1 City of Escondido Criteria

The following is a summary of the City of Escondido’s published significance criteria.

In accordance with the San Diego Traffic Engineers’ Council/Institute of Transportation Engineers (SANTEC/ITE) Guidelines for Traffic Impact Studies in the San Diego Region, the following thresholds shall be used to identify if a project is of significant traffic impact under any scenario. Based on SANTEC/ITE guidelines, if now or in the future, the project’s traffic impact causes the values in *Table 5–1* to be exceeded in a roadway segment or intersection that is operating at LOS D or worse, it is determined to be a significant impact and the project shall identify mitigation measures.

TABLE 5–1  
PROPOSED THRESHOLDS TO IDENTIFY A PROJECT’S SIGNIFICANT TRAFFIC IMPACT  
CITY OF ESCONDIDO

Level of Service with Project	Allowable Change due to Project Impact		
	Roadway Segments		Intersections Delay (sec.)
	V/C	Speed (mph)	
D, E, or F	0.02	1	2

Source: City of Escondido

\*No Significant Impact occurs at areas in GP Downtown Specific Area that operates at LOS “D” or better.

\*Mitigation measures should also be considered for any segment or intersection operating at LOS “F” subject to less than significant impact.

\*V: Volume

\*C: Capacity (use LOS “E”)

Furthermore, according to the City’s General Plan, Mobility Element streets and intersections shall be planned and developed to achieve a minimum LOS “C” defined by the Highway Capacity Manual as amended or updated, or such other national standard deemed appropriate by the city. Level of Service “C” may not be feasible in all areas at all times and LOS “D” shall be considered the threshold for determining significant impacts and appropriate mitigation. Per the certified General Plan EIR, a significant impact would result from a General Plan (Year 2035) analysis when a project would “cause the LOS of a General Plan Mobility and Infrastructure Element roadway to fall below LOS D and/or add more than 200 ADT to a Mobility and Infrastructure Element roadway with an LOS E or F.”

## 5.2 San Diego County Criteria

The following criteria were utilized to evaluate potential significant impacts, based on the County's document: "*Guidelines for Determining Significance*" updated on August 24, 2011.

### 5.2.1 Road Segments

Pursuant to the County's General Plan Mobility Element Policy M2.1, new development must provide improvements or other measures to mitigate traffic impacts to avoid:

- a. Reduction in Level of Service (LOS) below "C" for on-site Mobility Element roads;
- b. Reduction in LOS below "D" for off-site and on-site abutting Mobility Element roads; and
- c. "Significantly impacting congestion" on roads that operate at LOS "E" or "F". If impacts cannot be mitigated, the project cannot be approved unless a statement of overriding considerations is made pursuant to the State CEQA Guidelines. However, the General Plan Mobility Element does not include specific guidelines for determining the amount of additional traffic that would "significantly impact congestion" on such roads.

The County has created the following guidelines to evaluate likely traffic impacts of a proposed project for road segments and intersections serving that project site, for purposes of determining whether the development would "significantly impact congestion" on the referenced LOS E and F roads. The guidelines are summarized in **Table 5-2**. The thresholds in **Table 5-2** are based upon average operating conditions on County roadways. It should be noted that these thresholds only establish general guidelines, and that the specific project location must be taken into account in conducting an analysis of traffic impact from new development.

**On-site Mobility Element Roads**—The Mobility Element states that “new development shall provide needed roadway expansion and improvements on-site to meet demand created by the development, and to maintain a Level of Service C on Mobility Element Roads during peak traffic hours”. Pursuant to this policy, a significant traffic impact would result if:

The additional or redistributed ADT generated by the proposed land development project will cause on-site Mobility Element Roads to operate below LOS C during peak traffic hours.

**Off-Site Mobility Element Roads**— The Mobility Element also addresses offsite Mobility Element roads. It states that “new development shall provide off-site improvements designed to contribute to the overall achievement of a LOS D on Mobility Element Roads.” Implementation Measure 1.1.3 addresses projects that would significantly impact congestion on roads operating at LOS E or F. It states: “new development that would significantly impact congestion on roads operating at LOS E or F, either currently or as a result of the project, will be denied unless improvements are scheduled to attain a LOS to D or better or appropriate mitigation is provided.” The following significance guidelines define a method for evaluating whether or not increased traffic volumes generated or redistributed from a proposed project will “significantly impact congestion” on County roads, operating at LOS E or F, either currently or as a result of the project.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service impact on a road segment:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Mobility Element Road or State Highway currently operating at LOS E or LOS F, or will cause a Mobility Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project as identified in Table 6–1, or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.

**TABLE 5–2**  
**MEASURES OF SIGNIFICANT PROJECT IMPACTS TO MOBILITY ELEMENT ROAD SEGMENTS**  
**ALLOWABLE INCREASES ON CONGESTED ROAD SEGMENTS**

Level of Service	Two-Lane Road	Four-Lane Road	Six-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

*General Notes:*

1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.
2. The County may also determine impacts have occurred on roads even when a project’s traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

### 5.2.2 Intersections

This section provides guidance for evaluating adverse effects a project may have on signalized and unsignalized intersections. **Table 5–3** was obtained from the County guidelines and summarizes the allowable increases in delay or traffic volumes at signalized and unsignalized intersections. Exceeding the thresholds in **Table 5–3** would result in a significant impact.

**Signalized Intersections**—Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a signalized intersection:

The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in **Table 5–3**.

Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection.

**TABLE 5-3**  
**MEASURES OF SIGNIFICANT PROJECT IMPACTS TO INTERSECTIONS**  
**ALLOWABLE INCREASES ON CONGESTED ROAD SEGMENTS**

Level of service	Signalized	Unsignalized
LOS E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement
LOS F	Either a Delay of 1 second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement

**General Notes:**

1. A critical movement is an intersection movement (right-turn, left-turn and through-movement) that experiences excessive queues, which typically operate at LOS F.
2. By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project is responsible for mitigating its share of the cumulative impact.
3. The County may also determine impacts have occurred on roads even when a project’s traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.
4. For determining significance at signalized intersections with LOS F conditions, the analysis must evaluate both the delay *and* the number of trips on a critical movement, exceedance of either criteria results in a significant impact.

**Unsignalized Intersections**—The operating parameters and conditions for unsignalized intersections differ dramatically from those of signalized intersections. Very small volume increases on one leg or turn and/or through movement of an unsignalized intersection can substantially affect the calculated delay for the entire intersection. Significance criteria for unsignalized intersections are based upon a minimum number of trips added to a critical movement at an unsignalized intersection.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic impact on an unsignalized intersection as listed in *Table 5-3* and described below:

- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D; or
- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E; or
- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F; or
- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F; or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection.

## 6.0 ANALYSIS OF EXISTING CONDITIONS

### 6.1 Peak Hour Intersection Levels of Service

**Table 6-1** summarizes the existing intersection levels of service. As seen in *Table 6-1*, all signalized intersections are calculated to operate at LOS D or better except the following:

- Valley Parkway / Beven Drive (LOS E during the PM peak hour)

Existing peak hour intersection analysis worksheets are included in *Appendix B*.

### 6.2 Daily Street Segment Levels of Service

**Table 6-2** summarizes the existing segment levels of service. As seen in *Table 6-2*, the following segments are calculated to currently operate at worse than LOS D:

- **Valley Center Road:** East of Cole Grade Road (LOS E)
- **Valley Center Road:** Escondido City Limits to Lake Wohlford Road S. (LOS E)
- **Valley Parkway:** Lake Wohlford Road to Beven Drive (LOS F)
- **El Norte Parkway:** Washington Avenue to Valley Parkway (LOS F)

TABLE 6-1  
EXISTING INTERSECTION OPERATIONS

Intersection	Traffic Control	Jurisdiction	Peak Hour	Delay <sup>a</sup>	LOS <sup>b</sup>
1. Valley Center Rd / Lake Wohlford Rd N. (Thundernut Ln)	Signal	San Diego County	AM	21.2	C
			PM	18.4	B
2. Valley Center Rd / Cole Grade Rd	Signal	San Diego County	AM	27.6	C
			PM	30.4	C
3. Valley Center Rd / Lilac Rd	Signal	San Diego County	AM	21.5	C
			PM	22.6	C
4. Valley Center Rd / Woods Valley Rd	Signal	San Diego County	AM	10.7	B
			PM	12.1	B
5. Valley Center Rd / Project Dwy	DNE	San Diego County	AM	DNE	DNE
			PM	DNE	DNE

CONTINUED ON THE NEXT PAGE

TABLE 6-1 (CONTINUED)  
EXISTING INTERSECTION OPERATIONS

Intersection		Jurisdiction	Peak Hour	Delay <sup>a</sup>	LOS <sup>b</sup>
6. Valley Center Rd (Valley Pkwy) / Lake Wohlford Rd S.	Signal	Escondido	AM	17.3	B
			PM	12.5	B
7. Valley Pkwy / Beven Dr	Signal	Escondido	AM	8.8	A
			PM	<b>58.9</b>	<b>E</b>
8. Valley Pkwy / Eureka Dr	Signal	Escondido	AM	6.5	A
			PM	6.0	A
9. Valley Pkwy / El Norte Pkwy (Hidden Trails Dr)	Signal	Escondido	AM	22.0	C
			PM	23.6	C
10. Valley Pkwy / Bear Valley Pkwy	Signal	Escondido	AM	20.5	C
			PM	18.6	B
11. El Norte Pkwy / Washington Ave	Signal	Escondido	AM	12.9	B
			PM	15.9	B
12. Valley Pkwy / N. Citrus Ave	Signal	Escondido	AM	38.9	D
			PM	29.8	C

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.

**General Notes:**

**Bold** indicates LOS E or worse operations.

**SIGNALIZED**

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

**TABLE 6-2  
EXISTING SEGMENT OPERATIONS**

<b>Street Segment</b>	<b>Jurisdiction</b>	<b>Functional Classification<sup>a</sup></b>	<b>LOS E Capacity<sup>b</sup></b>	<b>Volume<sup>c</sup></b>	<b>LOS<sup>d</sup></b>	<b>V/C<sup>e</sup></b>
<b>Valley Center Road</b>						
East of Cole Grade Rd	SD County	2.2E Lt Collector	16,200	<b>15,300</b>	<b>E</b>	<b>0.944</b>
Cole Grade Rd to Lilac Rd	SD County	4.1A Major Rd	37,000	26,600	C	0.719
Lilac Rd to Woods Valley Rd	SD County	4.1A Major Rd	37,000	26,300	C	0.711
Woods Valley Rd to Project Dwy	SD County	4.1A Major Rd	37,000	27,000	C	0.730
Project Dwy to City of Escondido Limits	SD County	4.1A Major Rd	37,000	27,000	C	0.730
Escondido City Limits to Lake Wohlford Rd	Escondido	3 Ln Major Rd <sup>f</sup>	27,750	<b>27,000</b>	<b>E</b>	<b>0.973</b>
<b>Valley Parkway</b>						
Lake Wohlford Rd to Beven Dr	Escondido	4 Ln Major Rd <sup>g</sup>	18,500	<b>34,100</b>	<b>F</b>	<b>1.843</b>
El Norte Pkwy to Bear Valley Pkwy	Escondido	4 Ln Major Rd	37,000	26,400	C	0.714
Bear Valley Pkwy to Citrus Ave	Escondido	4 Ln Major Rd <sup>h</sup>	37,000	17,800	B	0.481
<b>El Norte Parkway</b>						
Lincoln Ave to Washington Ave	Escondido	4 Ln Major Rd	37,000	18,700	B	0.505
Washington Ave to Valley Pkwy	Escondido	2 Ln Collector	15,000	<b>18,300</b>	<b>F</b>	<b>1.220</b>
<b>Bear Valley Parkway</b>						
Valley Pkwy to Citrus Ave	Escondido	4 Ln Major Rd	37,000	15,500	B	0.419
Midway Dr to Citrus Ave	Escondido	4 Ln Major Rd	37,000	22,700	C	0.614

**Footnote:**

- a. The existing roadway class.
- b. Capacity of the existing roadway per the County *Table 1, Average Daily Vehicle Trips*.
- c. Existing Average Daily Traffic (ADT) volumes.
- d. Level of Service.
- e. Volume / Capacity ratio.
- f. Only three lanes are provided and hence 75% the capacity of a 4-Lane Major Road is assumed.
- g. Only two lanes are provided and hence 50% of the capacity of a 4-Lane Major Road is assumed.
- h. This segment is partially a 4-lane facility and the remaining portion is a six-lane facility. For a conservative analysis, the lower of the two capacities is assumed.

**General Notes:**

**Bold** indicates LOS E or worse operations.

## 7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

### 7.1 Trip Generation

The project trip generation was calculated using the trip rates published by the San Diego Association of Governments (SANDAG) in the *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

The trip generation rates for estate residential, single-family and condominiums were obtained from the SANDAG guide. There are no standard rates for Horse Trails, Pedestrian / Bike Trails parking. It is unlikely that these parking spaces would be utilized during the commuter peak hours. Also, most of the traffic utilizing the pedestrian / bike parking spaces would be the residents of the subject site. However, for a conservative analysis, it was assumed that each space would generate 2 trips during the day.

**Table 7-1** tabulates the total project traffic generation. The total project is calculated to generate approximately 3,900 ADT with 261 AM peak hour trips (106 inbound / 155 outbound) and 338 PM peak hour trips (197 inbound / 141 outbound).

### 7.2 Trip Distribution/Assignment

Trip distribution was developed based on a Select Zone Assignment (SZA) plot obtained from SANDAG for this project. Project traffic was assigned based on this trip distribution. The SZA plot is included in **Appendix C**.

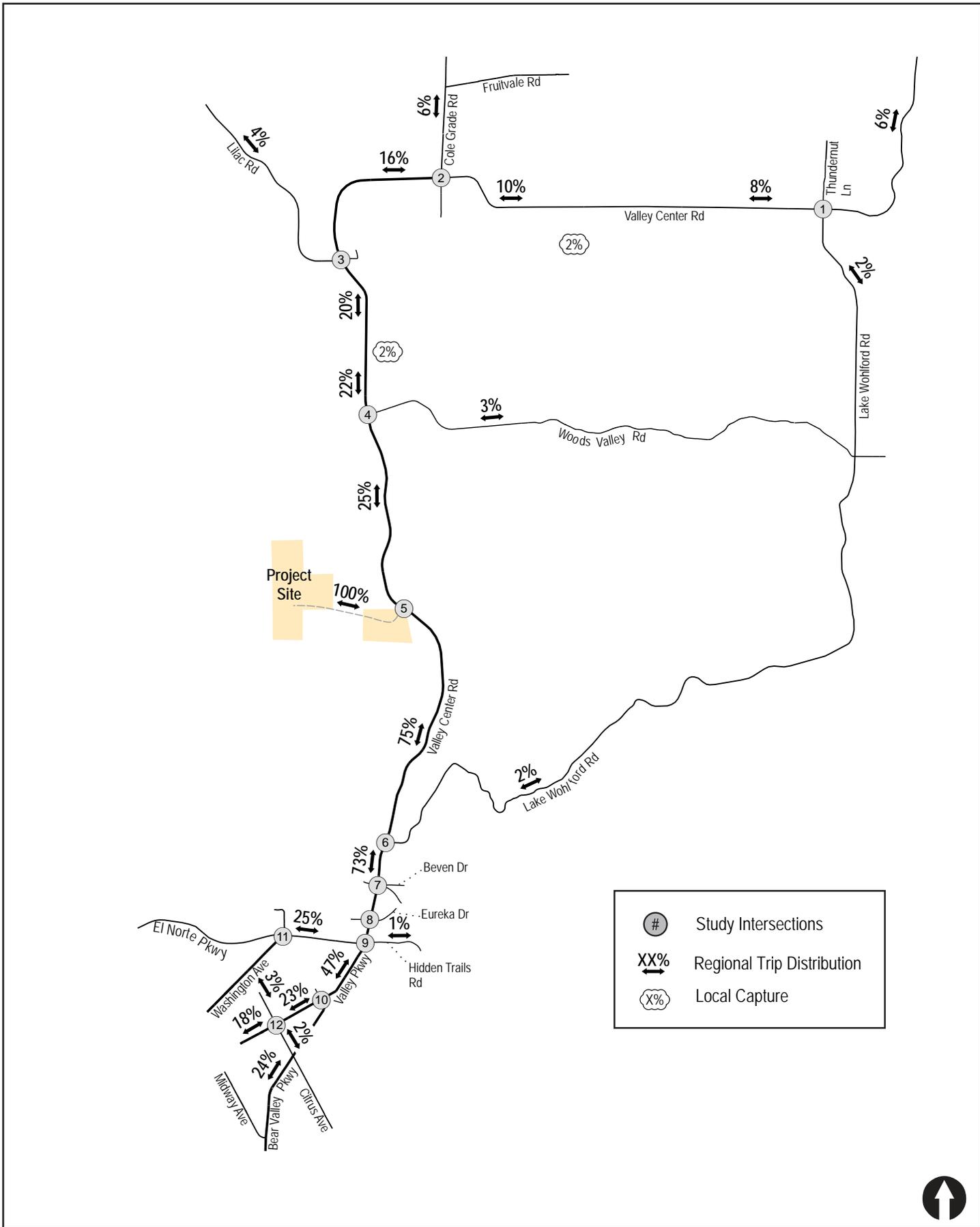
**Figure 7-1** depicts the project trip distribution and **Figure 7-2** depicts the daily and AM / PM peak hour Project traffic assignment. **Figure 7-3** depicts the daily and AM / PM peak hour Existing + Project traffic volumes.

**TABLE 7-1  
TRIP GENERATION**

Land Use	Quantity	Rate <sup>a</sup>	ADT	AM Peak Hour					PM Peak Hour				
				% of ADT	In: Out Split	Volume			% of ADT	In: Out Split	Volume		
						In	Out	Total			In	Out	Total
Estate Residential	18 DU <sup>b</sup>	12 / DU <sup>b</sup>	216	8%	3:7	5	12	17	10%	7:3	15	7	22
Single Family Residential	171 DU	10 / DU	1,710	8%	3:7	41	96	137	10%	7:3	120	51	171
Condominiums	14 DU	8 / DU	112	8%	2:8	2	7	9	10%	7:3	8	3	11
Luxury Resort	225 Rooms	8 / Room	1,800	5%	6:4	54	36	90	7%	4:6	50	76	126
Horse Trails <sup>c</sup>	6 Spaces	2 / Space	12			1	1	2			1	1	2
Ped/bike trails <sup>c</sup>	25 Spaces	2 / Space	50			3	3	6			3	3	6
<b>Total Project</b>			<b>3,900</b>			<b>106</b>	<b>155</b>	<b>261</b>			<b>197</b>	<b>141</b>	<b>338</b>

**Footnotes:**

- a. Rates obtained from *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002, published by SANDAG.
- b. DU – Dwelling Units
- c. No trip rates are available for horse and pedestrian / bike trails. It is unlikely that these will generate much traffic during weekday peak hours. However, to be conservative, a nominal amount of traffic is assumed.



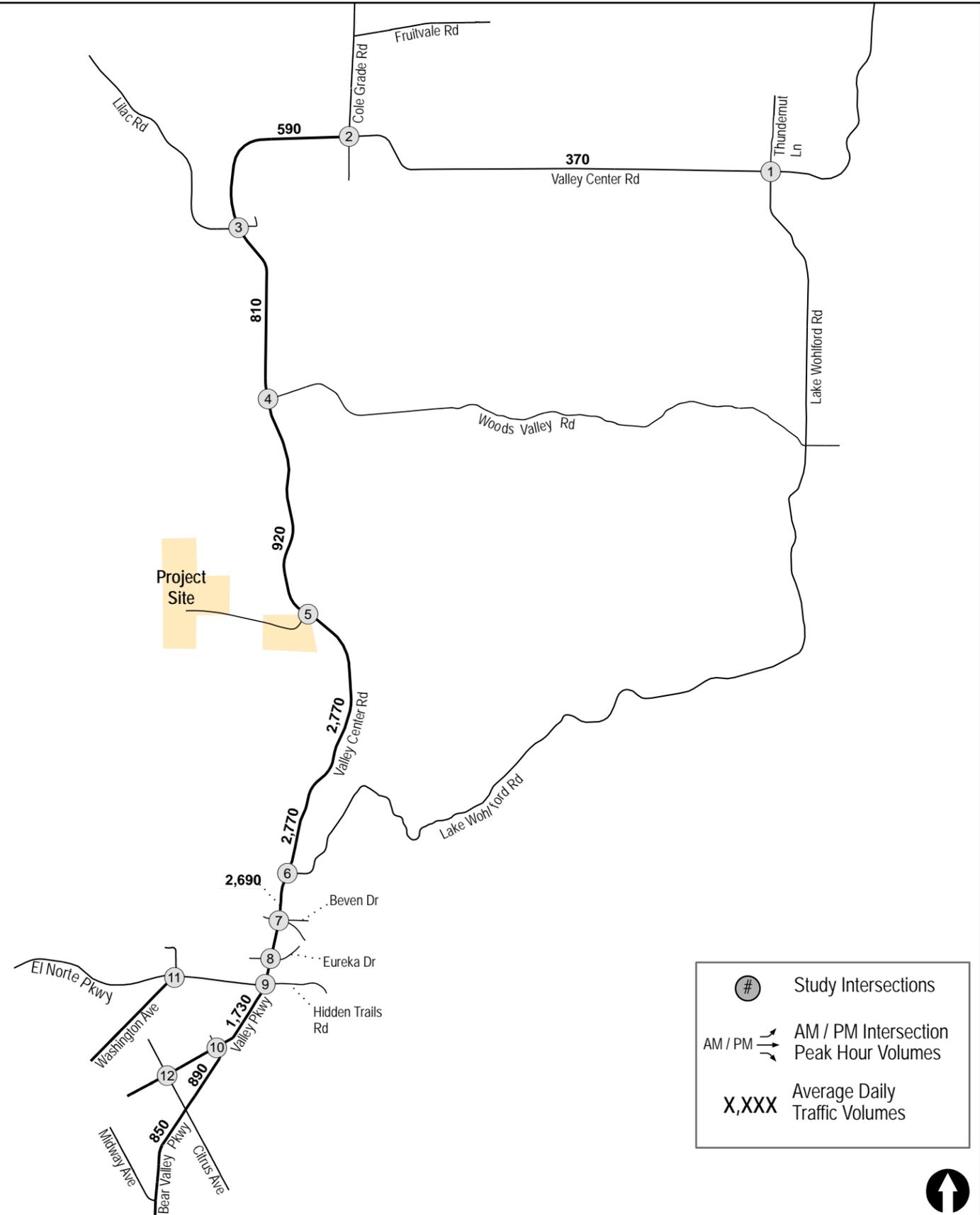
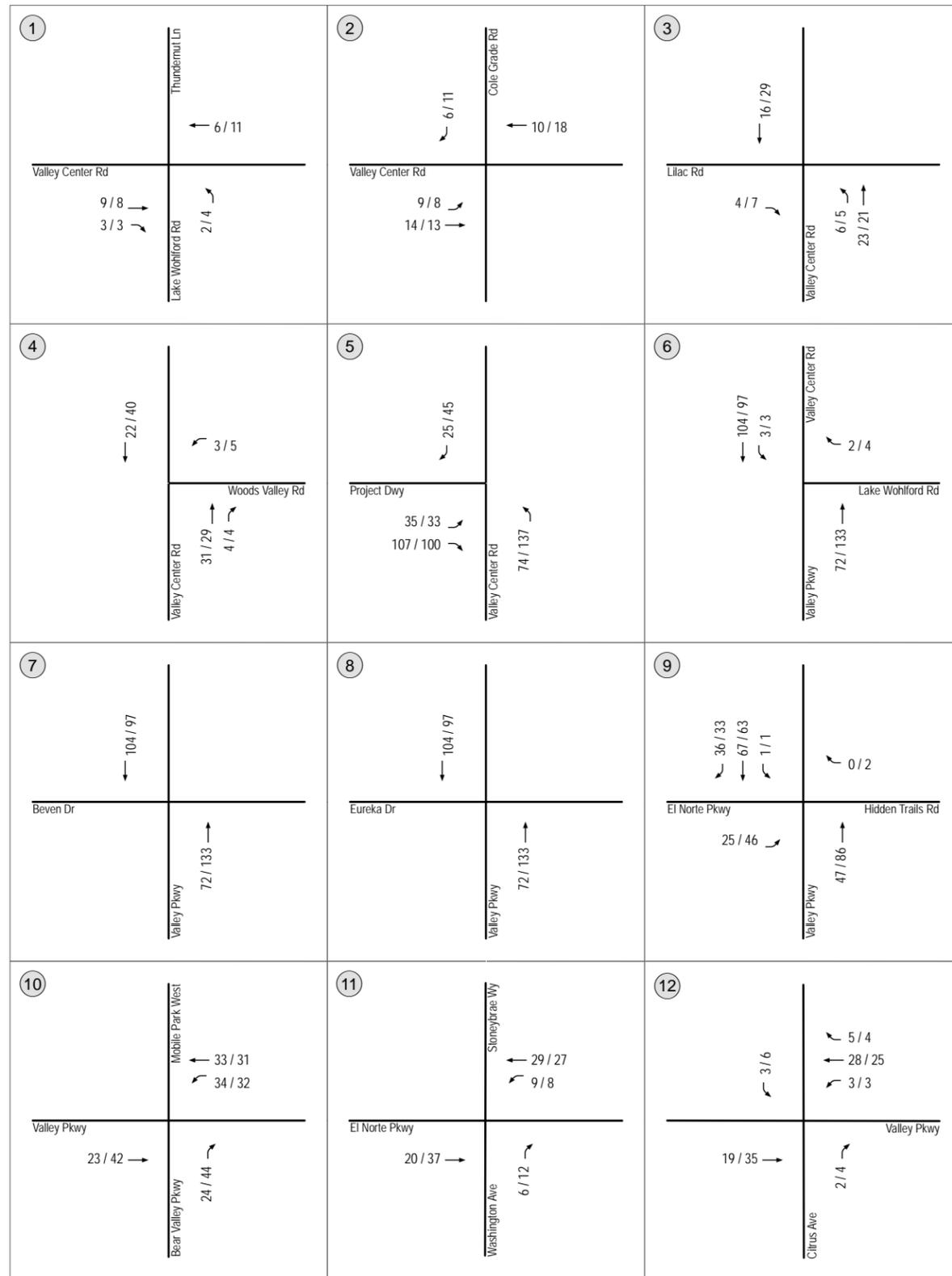
#	Study Intersections
XX%	Regional Trip Distribution
X%	Local Capture



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Date: 06/27/17

Figure 7-1

# Project Trip Distribution



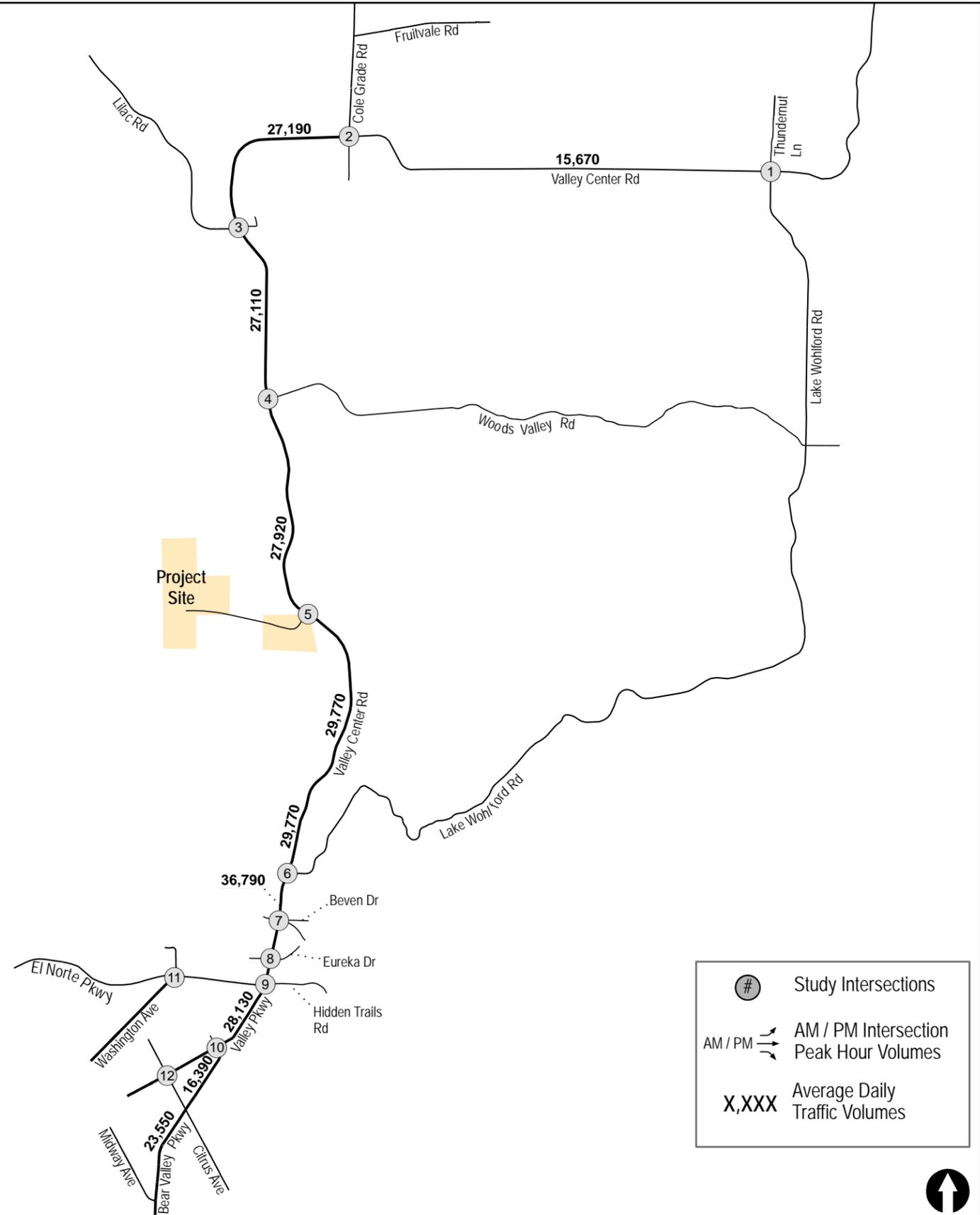
- # Study Intersections
- AM / PM Intersection Peak Hour Volumes
- X,XXX Average Daily Traffic Volumes



Figure 7-2

Project Traffic Volumes

<p>①</p> <p>Valley Center Rd</p> <p>Lake Wohlford Rd</p>	<p>②</p> <p>Valley Center Rd</p> <p>Cole Grade Rd</p>	<p>③</p> <p>Lilac Rd</p> <p>Valley Center Rd</p>
<p>④</p> <p>Valley Center Rd</p> <p>Woods Valley Rd</p>	<p>⑤</p> <p>Project Dwy</p> <p>Valley Center Rd</p>	<p>⑥</p> <p>Valley Center Rd</p> <p>Lake Wohlford Rd</p>
<p>⑦</p> <p>Beven Dr</p> <p>Valley Pkwy</p>	<p>⑧</p> <p>Eureka Dr</p> <p>Valley Pkwy</p>	<p>⑨</p> <p>El Norte Pkwy</p> <p>Hidden Trails Rd</p>
<p>⑩</p> <p>Valley Pkwy</p> <p>Bear Valley Pkwy</p>	<p>⑪</p> <p>El Norte Pkwy</p> <p>Washington Ave</p>	<p>⑫</p> <p>Citrus Ave</p> <p>Valley Pkwy</p>



## 8.0 CUMULATIVE PROJECTS

Cumulative projects are other projects in the study area that are expected to be constructed and occupied between the date of existing data collection and the time of the Project's expected opening day, thus adding traffic to the local circulation system. Based on discussions with County Staff, the following cumulative projects were identified in the project study area.

### 8.1 Description of Projects

Each cumulative project is briefly described below:

#### 1. Lilac Hills Ranch

Lilac Hills Ranch is a proposed mixed-use community located on 608 acres in the Valley Center area, south of SR-76 and east of I-15, which would eventually include 903 single-family homes, 468 age-restricted senior homes, 164 condominiums and 211 mixed-use units. Because the project is planned to be built over 10 years, only traffic through "Phase C" of development was added to the near-term cumulative condition. Phase C will generate 11,333 daily trips with 778 AM peak hour trips (285 in/493 out) and 1,077 PM peak hour trips (671 in/406 out). This is approximately 70% of the total traffic the project would generate upon full buildout.

#### 2. Valley Center – VC51

Valley Center – VC51 is a residential project with 15 single-family dwelling units (DU) located at the intersection of Courser Canyon Road and Lilac Road. This project is calculated to generate a total of 150 daily trips with 12 AM peak hour (4 in / 8 out) and 15 PM peak hour trips (11 in / 4 out).

#### 3. Valley Center – VC57, 63, 64

Valley Center – VC57, 63, 64 is a residential project with 238 single-family DU located at the intersection of Valley Center Road and Mactan Road. This project is calculated to generate a total of 2,380 daily trips with 190 AM peak hour (57 in / 133 out) and 238 PM peak hour trips (167 in / 71 out).

#### 4. Mountain Gate

Mountain Gate is a residential project with 147 single-family DU located along Mountain Meadow Road. This project is calculated to generate a total of 1,470 daily trips with 118 AM peak hour (35 in / 83 out) and 147 PM peak hour trips (103 in / 44 out).

#### 5. Tyler Road Residential

Tyler Road Residential is a residential project with 16 single-family DU located at 14357 Tyler Road. This project is calculated to generate a total of 192 daily trips with 15 AM peak hour (5 in / 10 out) and 19 PM peak hour trips (13 in / 6 out).

## 6. Dabbs TM

Dabbs TM is an 8 DU estate residential project located at 32006 Aquaduct Road. This project is calculated to generate a total of 96 daily trips with 8 AM peak hour (2 in / 6 out) and 10 PM peak hour trips (7 in / 3 out).

## 7. McIntyre Subdivision

McIntyre Subdivision (TM 5014) is a 22 DU estate residential project located at 11278 Lilac Vista Drive. This project is calculated to generate a total of 264 daily trips with 21 AM peak hour (6 in / 15 out) and 26 PM peak hour trips (18 in / 8 out).

## 8. Oak Glen

Oak Glen is a 9 DU estate residential project located at 14099 West Oak Glen Road. This project is calculated to generate a total of 108 daily trips with 9 AM peak hour (3 in / 6 out) and 11 PM peak hour trips (8 in / 3 out).

## 9. Goodnight Ranchos (TPM)

Goodnight Ranchos (TPM) is a 2 DU estate residential project located at 30359 Circle R Lane. This project is calculated to generate a total of 24 daily trips with 2 AM peak hour (1 in / 1 out) and 2 PM peak hour trips (1 in / 1 out).

## 10. Rimsa (TPM)

Rimsa (TPM) is a 2 DU estate residential project located at 235 W. Camino Calafia. This project is calculated to generate a total of 24 daily trips with 2 AM peak hour (1 in / 1 out) and 2 PM peak hour trips (1 in / 1 out).

## 11. Sanders (TPM)

Sanders (TPM) is a 4 DU estate residential project located at 6993 W. Lilac Road. This project is calculated to generate a total of 48 daily trips with 4 AM peak hour (1 in / 3 out) and 5 PM peak hour trips (4 in / 1 out).

## 12. The Villages

The Villages is a residential project located at the site of the Escondido Country Club, which is no longer in operation, west of I-15 along Country Club Lane in the city of Escondido. This project proposes 392 single-family residential DU with a small amount of neighborhood-oriented restaurant, retail, and HOA amenities. This project is calculated to generate 4,280 daily trips with 319 AM peak hour (97 in / 222 out) and 420 PM peak hour trips (293 in / 127 out).

## 13. Safari Highlands Ranch

Safari Highlands Ranch proposes to construct 550 luxury residential units, along with additional facilities including a fire station and public trail system. This project is located in the unincorporated area immediately east of Escondido, east of the Rancho Vistamonte and Rancho San Pasqual

residential neighborhoods, north of the San Diego Safari Park. This project is calculated to generate 5,907 daily trips with 500 AM peak hour (159 in / 341 out) and 589 PM peak hour trips (409 in / 180 out).

**Figure 8-1** depicts the locations of the above listed cumulative projects.

## 8.2 Summary

The cumulative projects above are estimated to generate a total of 25,878 daily trips with 1,978 AM peak hour (656 in / 1,322 out) and 2,561 PM peak hour trips (1,706 in / 855 out). The traffic generated by each cumulative project were individually distributed and assigned to the study area intersections and segments.

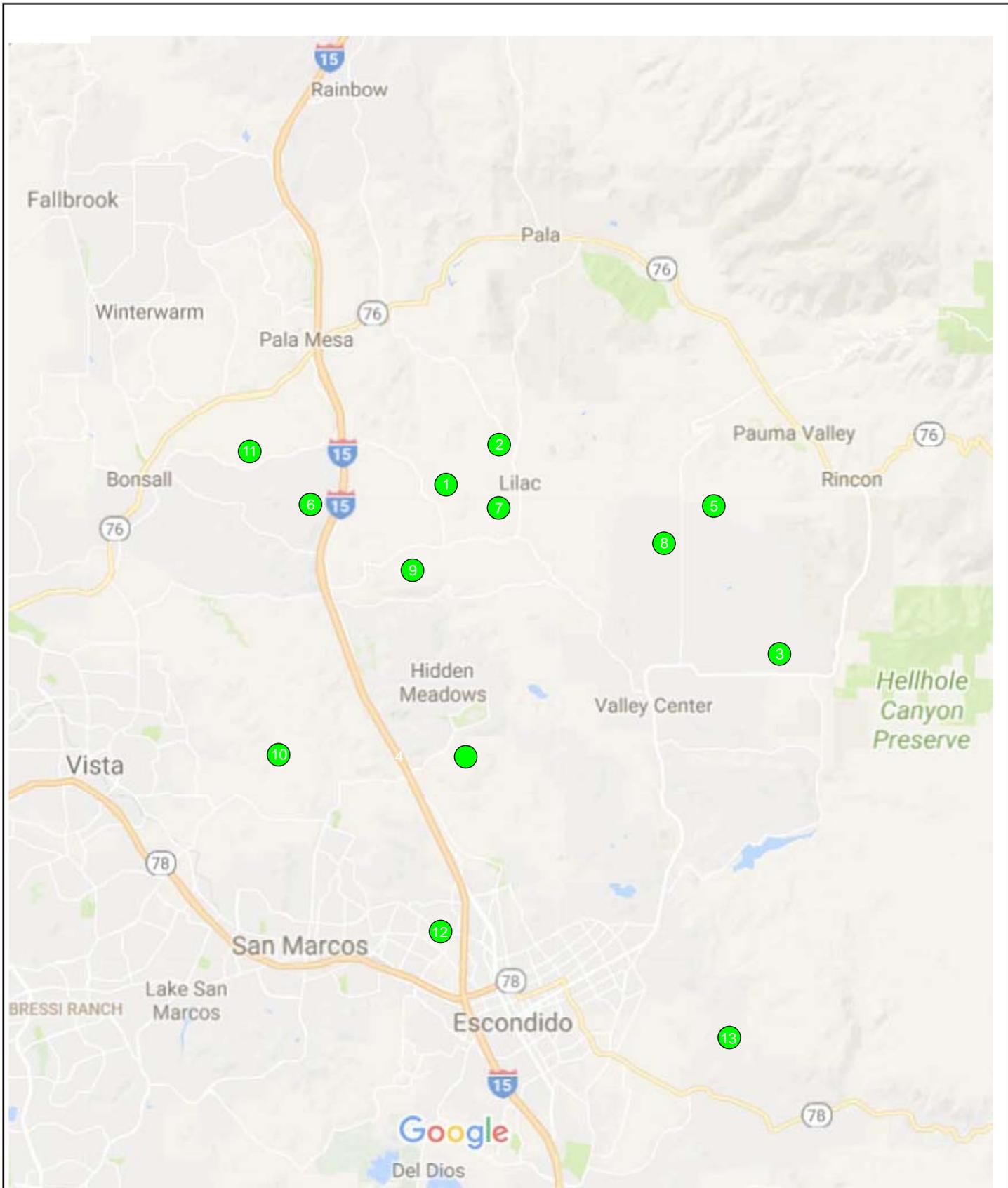
**Figure 8-2** depicts the total cumulative projects traffic assignment and **Figure 8-3** depicts the Existing + Cumulative projects traffic assignment. **Figure 8-4** depicts the Existing + Cumulative projects + Project traffic assignment.

**TABLE 8-1  
CUMULATIVE PROJECTS TRIP GENERATION**

Land Use	Quantity	Rate <sup>a</sup>	ADT	AM Peak Hour					PM Peak Hour				
				% of ADT	In: Out Split	Volume			% of ADT	In: Out Split	Volume		
						In	Out	Total			In	Out	Total
1. Lilac Hills Ranch	<sup>b</sup>	—	11,333	—	—	285	493	778	—	—	671	406	1,077
2. Valley Center VC51	15 DU <sup>c</sup>	10 /DU	150	8%	3:7	4	8	12	10%	7:3	11	4	15
3. Valley Center VC 57, 63, 64	238 DU	10 /DU	2,380	8%	3:7	57	133	190	10%	7:3	167	71	238
4. Mountain Gate	147 DU	10 /DU	1,470	8%	3:7	35	83	118	10%	7:3	103	44	147
5. Tentative Map	16 DU	12 /DU	192	8%	3:7	5	10	15	10%	7:3	13	6	19
6. Dabbs TM	8 DU	12 /DU	96	8%	3:7	2	6	8	10%	7:3	7	3	10
7. McIntyre Subdivision TM5014	22 DU	12 /DU	264	8%	3:7	6	15	21	10%	7:3	18	8	26
8. Oak Glen	9 DU	12 /DU	108	8%	3:7	3	6	9	10%	7:3	8	3	11
9. Goodnight Ranchos TPM	2 DU	12 /DU	24	8%	3:7	1	1	2	10%	7:3	1	1	2
10. Rimsa TPM	2 DU	12 /DU	24	8%	3:7	1	1	2	10%	7:3	1	1	2
11. Sanders TPM	4 DU	12 /DU	48	8%	3:7	1	3	4	10%	7:3	4	1	5
12. The Villages	See text		4,280			97	222	319			293	127	420
13. Safari Highlands	See text		5,509			159	341	500			409	180	589
<b>Total Cumulative Projects</b>			<b>25,878</b>			<b>656</b>	<b>1,322</b>	<b>1,978</b>			<b>1,706</b>	<b>855</b>	<b>2,561</b>

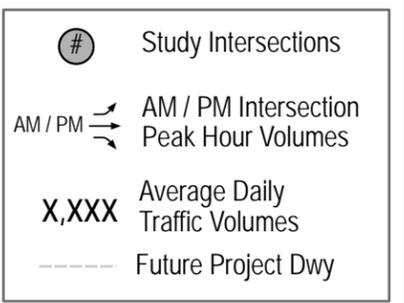
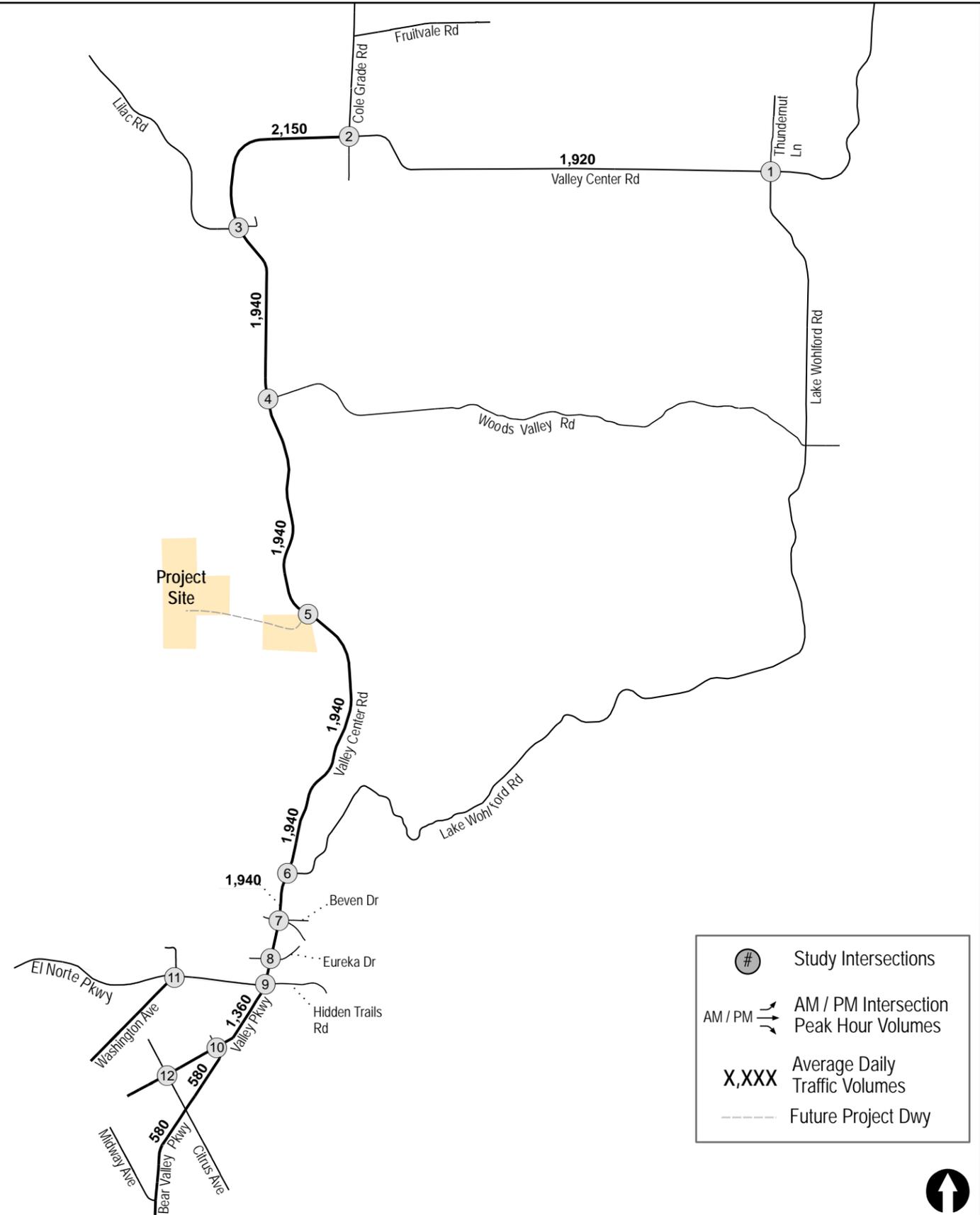
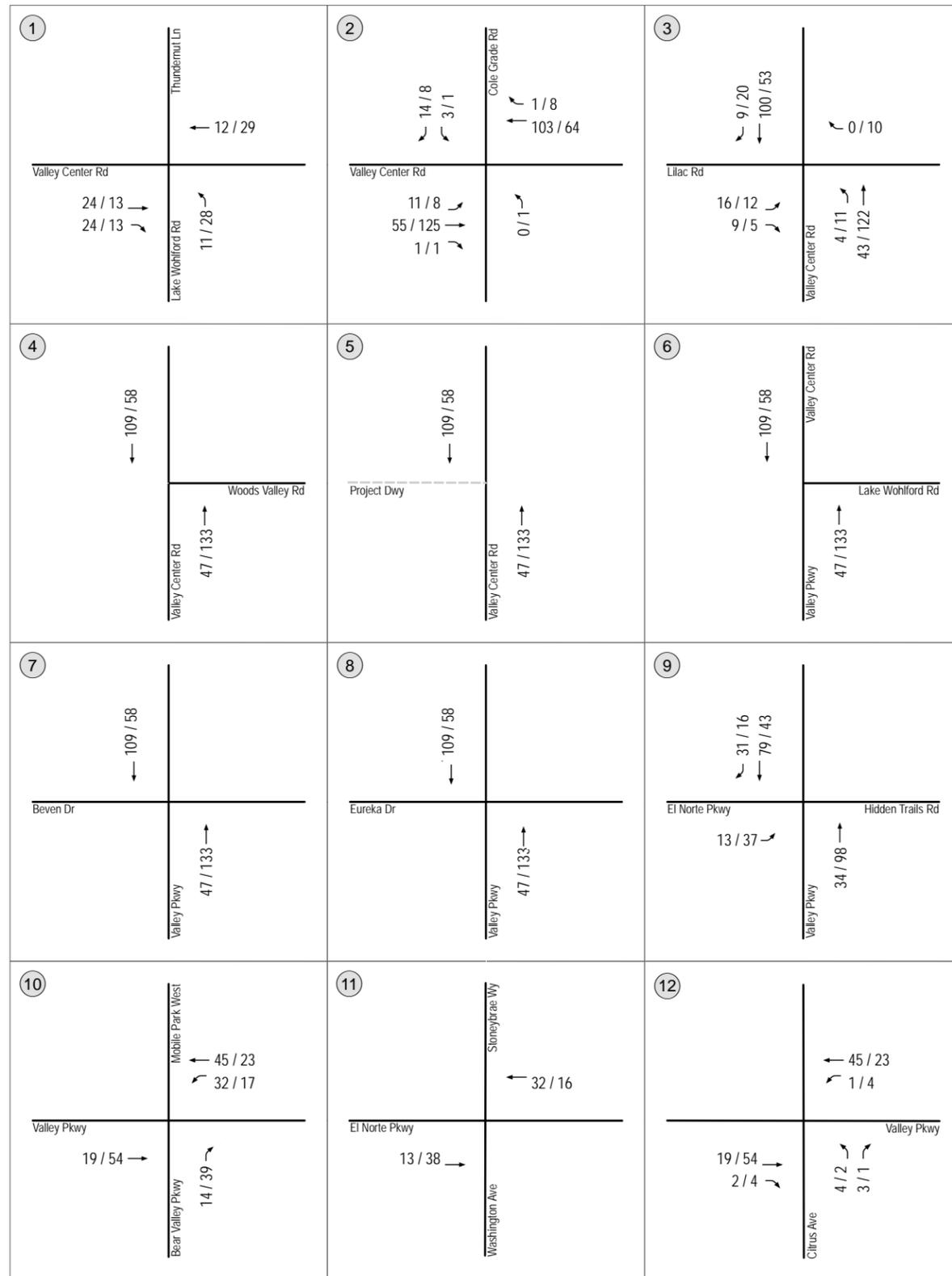
**Footnotes:**

- a. Rates obtained from a Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, published by SANDAG.
- b. Assumes "Phase C" development of proposed mixed-use community. See description in Section 8.1.
- c. DU – Dwelling Units

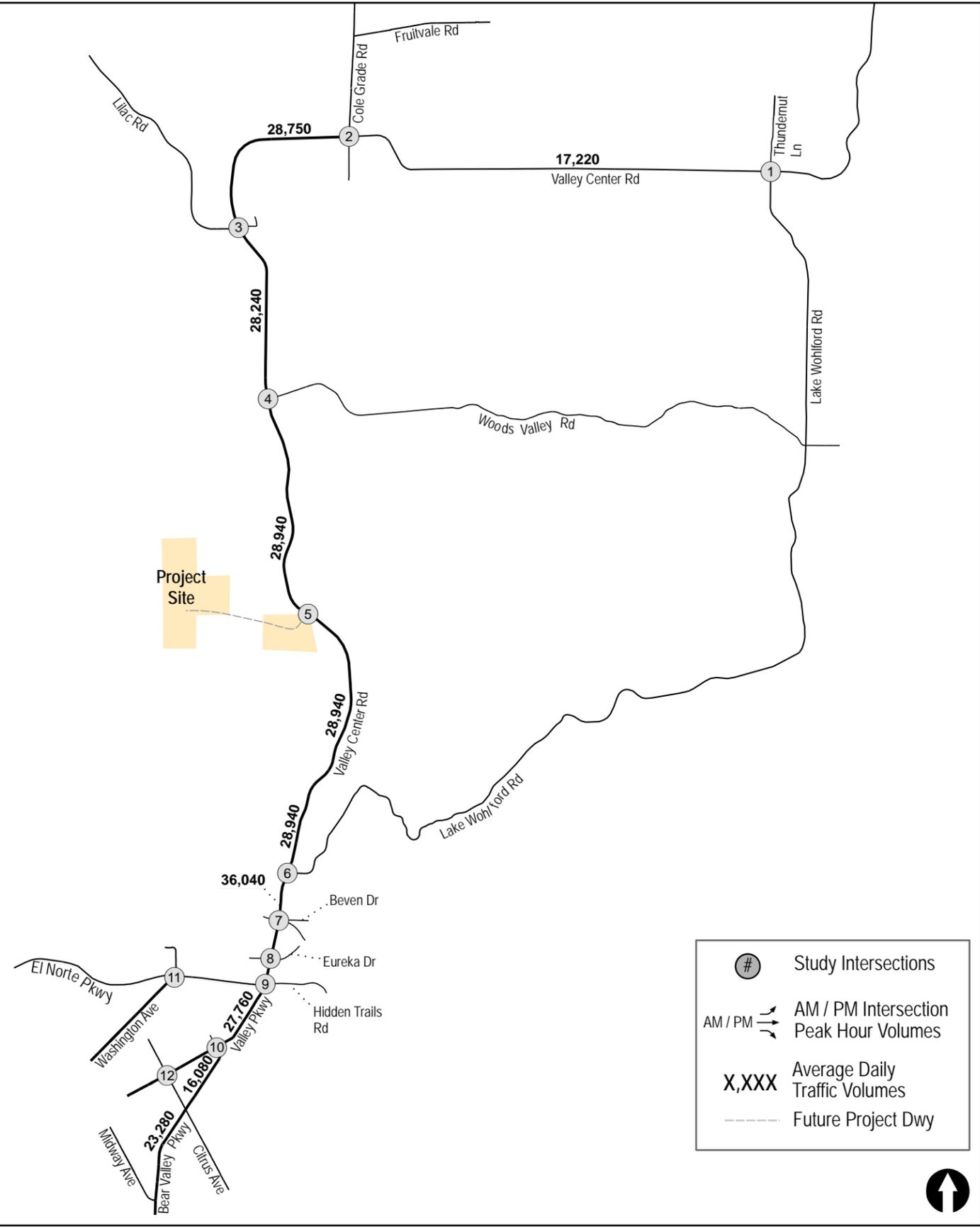


Note: Please see Section 8.0 for a detailed list of each cumulative project.

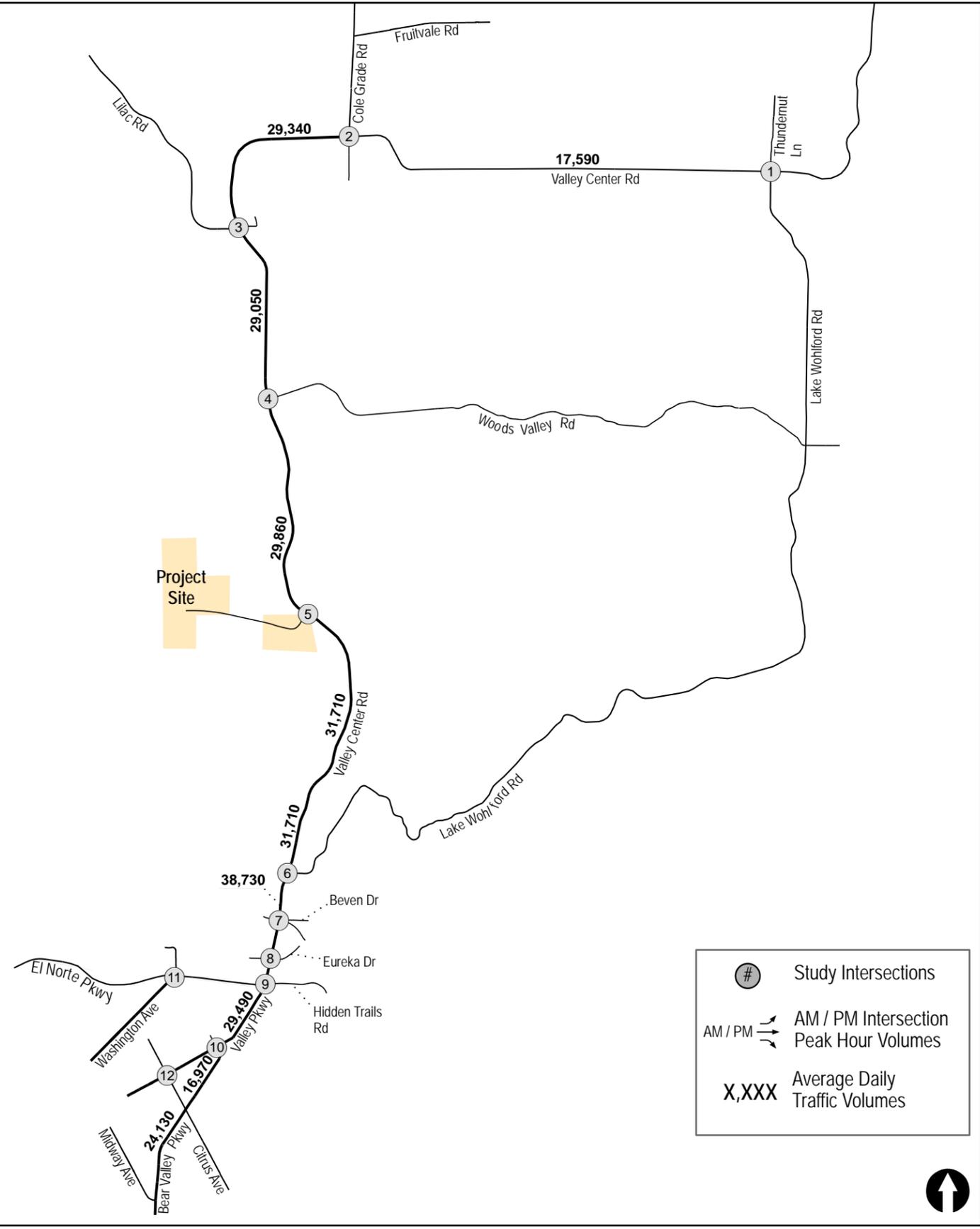




<p><b>1</b></p> <p>Valley Center Rd</p> <p>Thundernut Ln</p> <p>6/5 1/0 5/4</p> <p>0/0 171/389 96/106</p> <p>Lake Wohlford Rd</p> <p>6/5 258/271 379/235</p> <p>326/202 1/1 94/122</p>	<p><b>2</b></p> <p>Valley Center Rd</p> <p>Cole Grade Rd</p> <p>595/401 30/36 196/126</p> <p>160/93 432/577 22/31</p> <p>491/643 409/623 48/63</p> <p>38/58 13/48 6/1</p>	<p><b>3</b></p> <p>Lilac Rd</p> <p>Valley Center Rd</p> <p>289/311 846/788 2/2</p> <p>0/11 0/0 1/0</p> <p>334/314 0/0 218/212</p> <p>131/279 582/1,056 0/0</p>
<p><b>4</b></p> <p>Valley Center Rd</p> <p>Woods Valley Rd</p> <p>1,064/824 71/122</p> <p>113/108 144/97</p> <p>528/1,219 59/146</p>	<p><b>5</b></p> <p>Project Dwy</p> <p>Valley Center Rd</p> <p>1,208/921</p> <p>587/1,365</p>	<p><b>6</b></p> <p>Valley Center Rd</p> <p>Lake Wohlford Rd</p> <p>1,136/932 1/8</p> <p>7/16 236/200</p> <p>598/1,326 109/279</p>
<p><b>7</b></p> <p>Beven Dr</p> <p>Valley Pkwy</p> <p>6/7 1,455/1,140 0/1</p> <p>1/6 2/0 9/5</p> <p>7/50 0/0 20/30</p> <p>13/26 714/1,599 5/11</p>	<p><b>8</b></p> <p>Eureka Dr</p> <p>Valley Pkwy</p> <p>0/0 1,469/1,144 0/0</p> <p>1/1 0/0 57/22</p> <p>0/0 0/0 10/32</p> <p>9/25 767/1,655 16/57</p>	<p><b>9</b></p> <p>El Norte Pkwy</p> <p>Hidden Trails Rd</p> <p>564/438 978/738 5/5</p> <p>2/6 52/27 93/36</p> <p>334/607 45/30 169/80</p> <p>96/103 422/1,132 63/67</p>
<p><b>10</b></p> <p>Valley Pkwy</p> <p>Bear Valley Pkwy</p> <p>60/47 49/18 28/17</p> <p>35/21 820/498 755/361</p> <p>22/62 348/781 64/47</p> <p>71/40 15/45 584/738</p>	<p><b>11</b></p> <p>El Norte Pkwy</p> <p>Washington Ave</p> <p>10/6 24/11 2/5</p> <p>0/2 665/463 183/133</p> <p>3/17 459/633 11/17</p> <p>12/17 5/19 110/254</p>	<p><b>12</b></p> <p>Valley Pkwy</p> <p>Citrus Ave</p> <p>177/84 349/276 76/104</p> <p>89/67 928/656 49/57</p> <p>99/149 369/814 134/145</p> <p>173/148 290/317 29/59</p>



<p><b>1</b></p> <p>Thundernut Ln 0/0 ← 177 / 400 ↘ 96 / 106</p> <p>Valley Center Rd 6/5 ↘ 267 / 279 → 382 / 238 ↘</p> <p>Lake Wohlford Rd 328 / 206 ↗ 1/1 ↗ 94 / 122 ↗</p>	<p><b>2</b></p> <p>Cole Grade Rd ↘ 160 / 93 ← 442 / 595 ↗ 22 / 31</p> <p>Valley Center Rd 500 / 651 ↘ 423 / 636 → 48 / 63 ↘</p> <p>Valley Center Rd 38 / 58 ↘ 13 / 48 ↗ 6 / 1 ↗</p>	<p><b>3</b></p> <p>Lilac Rd ↘ 289 / 311 ↘ 862 / 817 ↘ 2 / 2</p> <p>Valley Center Rd 334 / 314 ↘ 0 / 0 → 222 / 219 ↘</p> <p>Valley Center Rd 137 / 284 ↘ 605 / 1077 ↗ 0 / 0 ↗</p>
<p><b>4</b></p> <p>↘ 1,086 / 864 ↘ 71 / 122</p> <p>Woods Valley Rd ↘ 113 / 108 ↘ 147 / 102</p> <p>Valley Center Rd 559 / 1,248 ↗ 63 / 150 ↗</p>	<p><b>5</b></p> <p>↘ 25 / 45 ↘ 1,208 / 921</p> <p>Project Dwy 35 / 33 ↘ 107 / 100 ↘</p> <p>Valley Center Rd 74 / 137 ↗ 587 / 1,365 ↗</p>	<p><b>6</b></p> <p>↘ 1,240 / 1,029 ↘ 4 / 11</p> <p>Valley Center Rd ↘ 9 / 20 ↘ 236 / 200</p> <p>Valley Pkwy 670 / 1,459 ↗ 109 / 279 ↗</p>
<p><b>7</b></p> <p>↘ 6 / 7 ↘ 1,559 / 1,237 ↘ 0 / 1</p> <p>Beven Dr 7 / 50 ↘ 0 / 0 → 20 / 30 ↘</p> <p>Valley Pkwy 13 / 26 ↗ 786 / 1,732 ↗ 5 / 11 ↗</p>	<p><b>8</b></p> <p>↘ 0 / 0 ↘ 1,573 / 1,241 ↘ 0 / 0</p> <p>Eureka Dr 0 / 0 ↘ 0 / 0 → 10 / 32 ↘</p> <p>Valley Pkwy 9 / 25 ↗ 839 / 1,788 ↗ 16 / 57 ↗</p>	<p><b>9</b></p> <p>↘ 600 / 471 ↘ 1045 / 801 ↘ 6 / 6</p> <p>El Norte Pkwy 359 / 653 ↘ 45 / 30 → 169 / 80 ↘</p> <p>Hidden Trails Rd ↘ 2 / 8 ↘ 52 / 27 ↘ 93 / 36</p>
<p><b>10</b></p> <p>↘ 60 / 47 ↘ 49 / 18 ↘ 28 / 17</p> <p>Mobile Park West ↘ 35 / 21 ← 853 / 529 ↘ 789 / 393</p> <p>Valley Pkwy 22 / 62 ↘ 371 / 823 → 64 / 47 ↘</p> <p>Bear Valley Pkwy 71 / 40 ↗ 15 / 45 ↗ 608 / 782 ↗</p>	<p><b>11</b></p> <p>↘ 10 / 6 ↘ 24 / 11 ↘ 2 / 5</p> <p>Stoneybrae Wy ↘ 0 / 2 ← 694 / 490 ↘ 192 / 141</p> <p>El Norte Pkwy 3 / 17 ↘ 479 / 670 → 11 / 17 ↘</p> <p>Washington Ave 12 / 17 ↗ 5 / 19 ↗ 116 / 266 ↗</p>	<p><b>12</b></p> <p>↘ 177 / 84 ↘ 349 / 276 ↘ 79 / 110</p> <p>Valley Pkwy ↘ 94 / 71 ← 956 / 681 ↘ 52 / 60</p> <p>Citrus Ave 99 / 149 ↘ 388 / 849 → 134 / 145 ↘</p> <p>Citrus Ave 173 / 148 ↘ 290 / 317 ↗ 31 / 63 ↗</p>



## 9.0 ANALYSIS OF NEAR-TERM SCENARIOS

### 9.1 Existing + Project

#### 9.1.1 *Intersection Analysis*

**Table 9-1** summarizes the Existing + Project intersection levels of service. As seen in **Table 9-1**, with the addition of Project traffic, all intersections are calculated to operate at LOS D or better except the following:

- Valley Parkway / Beven Drive (LOS E during the PM peak hour)

The Project has a significant direct impact at the Valley Parkway / Beven Drive intersection.

The Existing + Project peak hour intersection analysis worksheets are included in **Appendix D**.

#### 9.1.2 *Daily Street Segment Levels of Service*

**Table 9-2** summarizes the existing segment levels of service. As seen in **Table 9-2**, with the addition of Project traffic, the following segments are calculated to continue to operate at worse than LOS D:

- **Valley Center Road:** East of Cole Grade Road (LOS E)
- **Valley Center Road:** Escondido City Limits to Lake Wohlford Road (LOS F)
- **Valley Parkway:** Lake Wohlford Road to Beven Drive (LOS F)
- **El Norte Parkway:** Washington Avenue to Valley Parkway (LOS F)

The Project has significant direct impacts on the above four segments.

**TABLE 9-1  
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Existing + Project		$\Delta^c$ Delay	Existing + Cumulative Projects		Existing + Cumulative Projects + Project		$\Delta$ Delay
			Delay <sup>a</sup>	LOS <sup>b</sup>	Delay	LOS		Delay	LOS	Delay	LOS	
1. Valley Center Rd / Lake Wohlford Rd N. (Thundernut Ln)	Signal	AM	21.2	C	21.3	C	0.1	21.2	C	21.3	C	0.1
		PM	18.4	B	18.5	B	0.1	19.3	B	19.4	B	0.1
2. Valley Center Rd / Cole Grade Rd	Signal	AM	27.6	C	27.9	C	0.3	29.1	C	29.4	C	0.3
		PM	30.4	C	32.0	C	1.6	33.0	C	33.5	C	0.5
3. Valley Center Rd / Lilac Rd	Signal	AM	21.5	C	21.7	C	0.2	22.3	C	22.4	C	0.1
		PM	22.6	C	23.0	C	0.4	24.0	C	24.4	C	0.4
4. Valley Center Rd / Woods Valley Rd	Signal	AM	10.7	B	10.7	B	0.0	10.4	B	10.5	B	0.1
		PM	12.1	B	12.1	B	0.0	12.3	B	12.3	B	0.0
5. Valley Center Rd / Project Dwy	Signal	AM	DNE	DNE	10.6	B	NA	DNE	DNE	10.6	B	NA
		PM	DNE	DNE	10.0	B	NA	DNE	DNE	9.9	A	NA
6. Valley Center Rd (Valley Pkwy)/ Lake Wohlford Rd S.	Signal	AM	17.3	B	20.1	B	2.8	20.0	C	27.2	C	7.2
		PM	12.5	B	13.8	B	1.3	12.9	B	14.5	B	1.6
7. Valley Pkwy / Beven Dr	Signal	AM	8.8	A	9.2	A	0.4	9.2	A	9.3	A	0.1
		PM	<b>58.9</b>	<b>E</b>	<b>68.8</b>	<b>E</b>	<b>9.9</b>	<b>78.0</b>	<b>E</b>	<b>94.1</b>	<b>F</b>	<b>16.1</b>
8. Valley Pkwy / Eureka Dr	Signal	AM	6.5	A	6.6	A	0.1	6.6	A	6.7	A	0.1
		PM	6.0	A	6.2	A	0.2	6.2	A	6.5	A	0.3

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**TABLE 9-1 (CONTINUED)**  
**NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing		Existing + Project		$\Delta^c$ Delay	Existing + Cumulative Projects		Existing + Cumulative Projects + Project		$\Delta$ Delay
			Delay <sup>a</sup>	LOS <sup>b</sup>	Delay	LOS		Delay	LOS	Delay	LOS	
9. Valley Pkwy / El Norte Pkwy (Hidden Trails Dr)	Signal	AM	22.0	C	22.3	C	0.3	22.0	C	22.4	C	0.4
		PM	23.6	C	24.8	C	1.2	24.6	C	26.0	C	1.4
10. Valley Pkwy / Bear Valley Pkwy	Signal	AM	20.5	C	20.8	C	0.3	20.8	C	21.1	C	0.3
		PM	18.6	B	19.1	B	0.5	19.1	B	19.6	B	0.5
11. El Norte Pkwy / Washington Ave	Signal	AM	12.9	B	12.9	B	0.0	12.8	B	12.8	B	0.0
		PM	15.9	B	16.4	B	0.5	15.8	B	16.3	B	0.5
12. Valley Pkwy / N. Citrus Ave	Signal	AM	38.9	D	39.3	D	0.4	39.6	D	40.1	D	0.5
		PM	29.8	C	30.2	C	0.4	29.9	C	30.4	C	0.5

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c.  $\Delta$  denotes an increase in delay due to project.

**General Note:**

**BOLD** indicates potential significant impact.

**SIGNALIZED**

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

**TABLE 9-2  
EXISTING + PROJECT STREET SEGMENT OPERATIONS**

Street Segment	Jurisdiction	Functional Classification	LOS E Capacity <sup>a</sup>	Existing			Existing + Project			Δ V/C (Project Traffic) <sup>e</sup>	Impact Type
				ADT <sup>b</sup>	LOS <sup>c</sup>	V/C <sup>d</sup>	ADT	LOS	V/C		
<b>Valley Center Road</b>											
East of Cole Grade Rd	SD County	2.2E Lt Collector	16,200	<b>15,300</b>	<b>E</b>	<b>0.944</b>	<b>15,690</b>	<b>E</b>	<b>0.969</b>	<b>390</b>	<b>Direct</b>
Cole Grade Rd to Lilac Rd	SD County	4.1A Major Rd	37,000	26,600	C	0.719	27,220	C	0.736	620	None
Lilac Rd to Woods Valley Rd	SD County	4.1A Major Rd	37,000	26,300	C	0.711	27,160	C	0.734	860	None
Woods Valley Rd to Project Dwy	SD County	4.1A Major Rd	37,000	27,000	C	0.730	27,980	C	0.756	980	None
Project Dwy to City of Escondido Limits	SD County	4.1A Major Rd	37,000	27,000	C	0.730	29,930	D	0.809	2,930	None
Escondido City Limits to Lake Wohlford Rd	Escondido	3 Ln Major Rd <sup>f</sup>	27,750	<b>27,000</b>	<b>E</b>	<b>0.973</b>	<b>29,930</b>	<b>F</b>	<b>1.079</b>	<b>0.106</b>	<b>Direct</b>
<b>Valley Parkway</b>											
Lake Wohlford Rd to Beven Dr	Escondido	4 Ln Major Rd <sup>g</sup>	18,500	<b>34,100</b>	<b>F</b>	<b>1.843</b>	<b>36,950</b>	<b>F</b>	<b>1.997</b>	<b>0.154</b>	<b>Direct</b>
El Norte Pkwy to Bear Valley Pkwy	Escondido	4 Ln Major Rd	37,000	26,400	C	0.714	28,230	D	0.763	0.049	None
Bear Valley Pkwy to Citrus Ave	Escondido	4 Ln Major Rd <sup>h</sup>	37,000	17,800	B	0.481	18,700	B	0.505	0.024	None
<b>El Norte Parkway</b>											
Lincoln Ave to Washington Ave	Escondido	4 Ln Major Rd	37,000	18,700	B	0.505	19,440	B	0.525	0.020	None
Washington Ave to Valley Pkwy	Escondido	2 Ln Collector	15,000	<b>18,300</b>	<b>F</b>	<b>1.220</b>	<b>19,280</b>	<b>F</b>	<b>1.285</b>	<b>0.065</b>	<b>Direct</b>

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**TABLE 9-2 (CONTINUED)**  
**EXISTING + PROJECT STREET SEGMENT OPERATIONS**

Street Segment	Jurisdiction	Functional Classification	LOS E Capacity <sup>a</sup>	Existing			Existing + Project			Δ V/C (Project Traffic) <sup>e</sup>	Impact Type
				ADT <sup>b</sup>	LOS <sup>c</sup>	V/C <sup>d</sup>	ADT	LOS	V/C		
<b>Bear Valley Parkway</b>											
Valley Pkwy to Citrus Ave	Escondido	4 Ln Major Rd	37,000	15,500	B	0.419	16,440	B	0.444	0.025	None
Midway Dr to Citrus Ave	Escondido	4 Ln Major Rd	37,000	22,700	C	0.614	23,600	C	0.638	0.024	None

**Footnotes:**

- a. Capacities based on City of Escondido and San Diego County Roadway Classification & LOS table (Tables 4-3 and 4-4)
- b. Average Daily Traffic
- c. Level of Service
- d. Volume to Capacity ratio
- e. Δ denotes a project-induced increase in the Volume to Capacity ratio in the City of Escondido and increase in traffic due to the project in San Diego County.
- f. Only three lanes are provided and hence 75% of the capacity of a 4-Lane Major Road is assumed.
- g. Only two lanes are provided and hence 50% of the capacity is assumed.
- h. This segment is partially a 4-lane facility and the remaining portion is a six-lane facility. For a conservative analysis, the lower of the two capacities is assumed.

**General Notes:**

**BOLD** typeface indicates a potentially significant impact.

## 9.2 Existing + Cumulative Projects

### 9.2.1 Intersection Analysis

*Table 9-1* summarizes the Existing + Cumulative projects intersection levels of service. As seen in *Table 9-1*, with the addition of Cumulative projects traffic, all intersections are still calculated to operate at LOS D or better except the following:

- Valley Parkway / Beven Drive (LOS E during the PM peak hour)

In the Existing + Cumulative Projects scenario, The Valley Parkway / Beven Drive intersection is calculated to operate at the same level of service as in the Existing + Project Scenario. The Existing + Cumulative projects peak hour intersection analysis worksheets are included in *Appendix E*.

### 9.2.2 Daily Street Segment Levels of Service

*Table 9-3* summarizes the Existing + Cumulative projects segment levels of service. As seen in *Table 9-3*, with the addition of Cumulative projects traffic, the following segments are calculated to continue to operate at worse than LOS D:

- **Valley Center Road:** East of Cole Grade Road (LOS F)
- **Valley Center Road:** Escondido City Limits to Lake Wohlford Road (LOS F)
- **Valley Parkway:** Lake Wohlford Road to Beven Drive (LOS F)
- **El Norte Parkway:** Washington Avenue to Valley Parkway (LOS F)

**TABLE 9-3  
NEAR-TERM STREET SEGMENT OPERATIONS**

Street Segment	Jurisdiction	Roadway Classification	Existing Capacity (LOS E) <sup>a</sup>	Existing + Cumulative Projects			Existing + Cumulative Projects + Project			Δ V/C / Project Traffic <sup>e</sup>	Impact Type
				ADT <sup>b</sup>	LOS <sup>c</sup>	V/C <sup>d</sup>	ADT	LOS	V/C		
<b>Valley Center Road</b>											
East of Cole Grade Rd	SD County	2.2E Lt Collector	16,200	<b>17,220</b>	<b>F</b>	<b>1.063</b>	<b>17,610</b>	<b>F</b>	<b>1.087</b>	<b>390</b>	<b>Direct</b>
Cole Grade Rd to Lilac Rd	SD County	4.1A Major Rd	37,000	28,750	C	0.777	29,370	C	0.794	620	None
Lilac Rd to Woods Valley Rd	SD County	4.1A Major Rd	37,000	28,240	C	0.763	29,100	C	0.786	860	None
Woods Valley Rd to Project Dwy	SD County	4.1A Major Rd	37,000	28,940	C	0.782	29,920	D	0.809	980	None
Project Dwy to City of Escondido Limits	SD County	4.1A Major Rd	37,000	28,940	C	0.782	31,870	D	0.861	2,930	None
Escondido City Limits to Lake Wohlford Rd	Escondido	3 Ln Major Rd <sup>f</sup>	25,650	<b>28,940</b>	<b>F</b>	<b>1.043</b>	<b>31,870</b>	<b>F</b>	<b>1.148</b>	<b>0.106</b>	<b>Direct</b>
<b>Valley Parkway</b>											
Lake Wohlford Rd to Beven Dr	Escondido	4 Ln Major Rd <sup>g</sup>	13,850	<b>36,120</b>	<b>F</b>	<b>1.952</b>	<b>38,970</b>	<b>F</b>	<b>2.106</b>	<b>0.154</b>	<b>Direct</b>
El Norte Pkwy to Bear Valley Pkwy	Escondido	4 Ln Major Rd	37,000	27,880	D	0.754	29,710	D	0.803	0.049	None
El Norte Pkwy to Bear Valley Pkwy	Escondido	4 Ln Major Rd <sup>h</sup>	37,000	18,580	B	0.502	19,480	B	0.526	0.024	None
<b>El Norte Parkway</b>											
Lincoln Ave to Washington Ave	Escondido	4 Ln Major Rd	37,000	19,280	B	0.521	20,020	C	0.541	0.020	None
Washington Ave to Valley Pkwy	Escondido	2 Ln Collector	15,000	<b>18,880</b>	<b>F</b>	<b>1.259</b>	<b>19,860</b>	<b>F</b>	<b>1.324</b>	<b>0.065</b>	<b>Direct</b>

CONTINUED ON THE NEXT PAGE

TABLE 9-3 (CONTINUED)  
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Jurisdiction	Roadway Classification	Existing Capacity (LOS E) <sup>a</sup>	Existing + Cumulative Projects			Existing + Cumulative Projects + Project			Δ V/C / Project Traffic <sup>e</sup>	Impact Type
				ADT <sup>b</sup>	LOS <sup>d</sup>	V/C <sup>c</sup>	ADT	LOS	V/C		
<b>Bear Valley Parkway</b>											
Valley Pkwy to Citrus Ave	Escondido	4 Ln Major Rd	37,000	16,200	B	0.438	17,140	B	0.463	0.025	None
Citrus Ave to Midway Dr	Escondido	4 Ln Major Rd	37,000	23,280	C	0.629	24,180	C	0.654	0.024	None

**Footnotes:**

- a. Capacities based on City of Escondido and San Diego County Roadway Classification & LOS table (Tables 4-3 and 4-4)
- b. Average Daily Traffic
- c. Level of Service
- d. Volume to Capacity ratio
- e. Δ denotes a project-induced increase in the Volume to Capacity ratio in the City of Escondido and increase in traffic due to the project in San Diego County.
- f. Only three lanes are provided and hence 75% of the capacity of 4 Lane Major Road is assumed.
- g. Only two lanes are provided and hence 50% of the capacity is assumed.
- h. This segment is partially a 4-lane facility and the remaining portion is a six-lane facility. For a conservative analysis, the lower of the two capacities is assumed.

**General Notes:**

**BOLD** typeface indicates a potentially significant impact.

## 9.3 Existing + Cumulative Projects + Project

### 9.3.1 Intersection Analysis

Table 9-1 summarizes the Existing + Cumulative projects + Project intersection levels of service. As seen in Table 9-1, with the addition of Project traffic and Cumulative projects traffic, all intersections are calculated to operate at LOS D or better except the following:

- Valley Parkway / Beven Drive (LOS F during the PM peak hour)

The Project has a significant Cumulative impact at the Valley Parkway / Beven Drive intersection.

The Existing + Cumulative projects + Project peak hour intersection analysis worksheets are included in *Appendix F*.

### 9.3.2 Daily Street Segment Levels of Service

Table 9-3 summarizes the Existing + Cumulative projects + Project segment levels of service. As seen in Table 9-3, with the addition of Project traffic and Cumulative projects traffic, the following segments are calculated to continue to operate at worse than LOS D:

- **Valley Center Road:** East of Cole Grade Road (LOS F)
- **Valley Center Road:** Escondido City Limits to Lake Wohlford Road (LOS F)
- **Valley Parkway:** Lake Wohlford Road to Beven Drive (LOS F)
- **El Norte Parkway:** Washington Avenue to Valley Parkway (LOS F)

The Project has significant Cumulative impacts on the above three segments.

## 10.0 ANALYSIS OF LONG-TERM SCENARIO

### 10.1 Long-Term Forecast Volumes

The City of Escondido General Plan update was approved and adopted by the City in May of 2012. Hence, Long-Term volumes were obtained from the City of Escondido General Plan Traffic Study. For the roadway segments within San Diego County, volumes were obtained from the County GP Update.

The Project was contemplated to be built in the City General Plan Update Traffic Study since the increase in units is the result of transferring density from the parcel within the City's sphere of influence. Therefore, the long-term volumes include project traffic. **Figure 10-1** depicts the Long-Term volumes.

### 10.2 Long-Term Network Assumptions

The ultimate mobility element is assumed for the long-term analysis. As explained in *Section 3*, the section of Valley Parkway between Beven Drive and the City Limits is being widened to a 4-Lane Major Road with two through lanes and a bike lane in each direction. Associated intersection improvements and related traffic signal modifications at the Beven Drive and Lake Wohlford Road South intersections will also be completed by around mid-2019 and are therefore assumed for the long-term intersection and segment analyses.

### 10.3 Long-Term Analysis

#### 10.3.1 Intersection Analysis

**Table 10-1** summarizes the Long-Term intersection levels of service. As seen in **Table 10-1**, with the improvements to the ultimate City of Escondido / County Mobility Element, all intersections are calculated to operate at LOS D or better.

The Long-Term peak hour intersection analysis worksheets are included in **Appendix G**.

#### 10.3.2 Daily Street Segment Levels of Service

**Table 10-2** summarizes the Long-Term segment levels of service. As seen in **Table 10-2**, the following study area segments are calculated to operate worse than LOS D:

- **Valley Center Road:** East of Cole Grade Road (LOS E)
- **Valley Center Road:** Cole Grade Road to Lilac Road (LOS F)

**TABLE 10-1  
LONG-TERM YEAR 2030 INTERSECTION OPERATIONS**

<b>Intersection</b>	<b>Peak Hour</b>	<b>Traffic Control</b>	<b>Delay <sup>a</sup></b>	<b>LOS <sup>b</sup></b>
1. Valley Center Rd / Lake Wohlford Rd N. (Thundernut Ln)	AM	Signal	26.0	C
	PM		23.8	C
2. Valley Center Rd / Cole Grade Rd	AM	Signal	40.0	D
	PM		54.9	D
3. Valley Center Rd / Lilac Rd	AM	Signal	31.2	C
	PM		37.4	D
4. Valley Center Rd / Woods Valley Rd	AM	Signal	11.2	B
	PM		14.1	B
5. Valley Center Rd / Project Dwy	AM	Signal	10.5	B
	PM		10.3	B
6. Valley Center Rd (Valley Pkwy)/ Lake Wohlford Rd S.	AM	Signal	24.5	C
	PM		22.1	C
7. Valley Pkwy / Beven Dr	AM	Signal	10.8	B
	PM		14.0	B
8. Valley Pkwy / Eureka Dr	AM	Signal	9.1	A
	PM		15.3	B
9. Valley Pkwy / El Norte Pkwy (Hidden Trails Dr)	AM	Signal	25.9	C
	PM		32.5	C
10. Valley Pkwy / Bear Valley Pkwy	AM	Signal	22.4	C
	PM		20.9	C
11. El Norte Pkwy / Washington Ave	AM	Signal	15.1	B
	PM		17.1	B
12. Valley Pkwy / N. Citrus Ave	AM	Signal	53.6	D
	PM		34.7	C

**Footnotes:**

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.

**General Note:**

Ultimate mobility element and resulting improvements in intersection geometry assumed in the peak hour intersection analysis.

**SIGNALIZED**

<b>Delay</b>	<b>LOS</b>
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

**TABLE 10-2  
LONG-TERM STREET SEGMENT OPERATIONS**

<b>Street Segment</b>	<b>Jurisdiction</b>	<b>Roadway Classification</b>	<b>Existing Capacity (LOS E)<sup>a</sup></b>	<b>ADT<sup>b</sup></b>	<b>V/C<sup>c</sup></b>	<b>LOS<sup>d</sup></b>
<b>Valley Center Road</b>						
East of Cole Grade Rd	SD County	2.1D Comm Coll	19,000	<b>16,700</b>	<b>E</b>	<b>0.879</b>
Cole Grade Rd to Lilac Rd	SD County	4.1A Major Rd	37,000	<b>35,800</b>	<b>E</b>	<b>0.968</b>
Lilac Rd to Woods Valley Rd	SD County	4.1A Major Rd	37,000	23,500	B	0.635
Woods Valley Rd to Project Dwy	SD County	4.1A Major Rd	37,000	26,500	C	0.716
Project Dwy to City of Escondido Limits	SD County	4.1A Major Rd	37,000	26,900	C	0.727
Escondido City Limits to Lake Wohlford Rd	Escondido	8-Ln Prime Art	70,000	41,900	C	0.599
<b>Valley Parkway</b>						
Lake Wohlford Rd to Beven Dr	Escondido	8-Ln Prime Art	70,000	54,000	D	0.771
El Norte Pkwy to Bear Valley Pkwy	Escondido	6-Ln Prime Art	60,000	34,400	C	0.573
Bear Valley Pkwy to N. Citrus Avenue	Escondido	6-Ln Prime Art	60,000	18,100	A	0.302
<b>El Norte Parkway</b>						
Lincoln Ave to Washington Ave	Escondido	4 Ln Major Rd	37,000	21,400	C	0.578
Washington Ave to Valley Pkwy	Escondido	4 Ln Major Rd	37,000	25,500	C	0.689
<b>Bear Valley Parkway</b>						
Valley Pkwy to Citrus Ave	Escondido	4 Ln Major Rd	37,000	20,800	C	0.562
Citrus Ave to Midway Dr	Escondido	4 Ln Major Rd	37,000	14,000	B	0.378

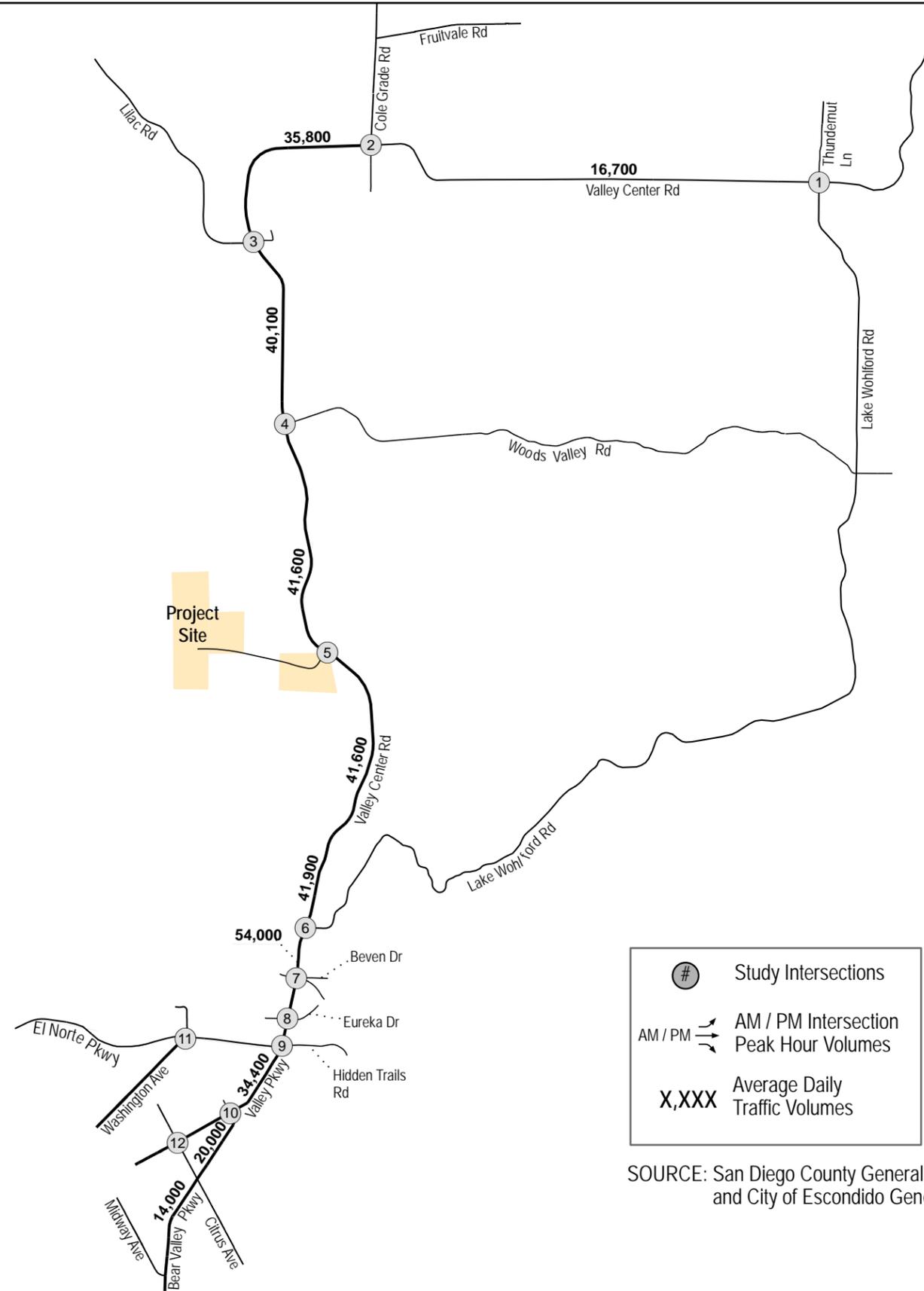
**Footnotes:**

- a. Capacities based on City of Escondido and San Diego County Roadway Classification & LOS tables (*Tables 5-1 and 5-2*).
- b. Average Daily Traffic
- c. Volume to Capacity ratio
- d. Level of Service

**General Notes:**

**BOLD** typeface indicates LOS E or worse operations.

<p>①</p>	<p>②</p>	<p>③</p>
<p>④</p>	<p>⑤</p>	<p>⑥</p>
<p>⑦</p>	<p>⑧</p>	<p>⑨</p>
<p>⑩</p>	<p>⑪</p>	<p>⑫</p>



# Study Intersections  
 AM / PM ↕ AM / PM Intersection Peak Hour Volumes  
 X,XXX Average Daily Traffic Volumes

SOURCE: San Diego County General Plan Update and City of Escondido General Plan.



Figure 10-1

Year 2030 Traffic Volumes

## 11.0 ACCESS

The only day-to-day access to the site is via a new driveway on Valley Center Road. An exclusive northbound left-turn lane and an exclusive southbound right-turn lane should be provided on Valley Center Road at the project driveway. Two outbound lanes should be provided, one each for left and right turning movements. A traffic signal should be installed at the project driveway.

It is possible that traffic from the Valley View Project located immediately to the north of the proposed Project could be granted day-to-day access through the proposed Project.

## 12.0 SIGNIFICANCE OF IMPACTS AND MITIGATION MEASURES

### 12.1 Significance of Impacts

Based on the analysis in this report, the following significant direct impacts are identified:

#### INTERSECTION:

D-1. Valley Parkway / Beven Drive

#### SEGMENTS:

D-2. Valley Center Road: East of Cole Grade Road

D-3. Valley Center Road: Escondido City Limits to Lake Wohlford Road

D-4. Valley Parkway: Lake Wohlford Road to Beven Drive

D-5. El Norte Parkway: Washington Avenue to Valley Parkway

### 12.2 Mitigation Measures

The following mitigation measures are recommended:

#### INTERSECTION:

##### **D-1. Valley Parkway / Beven Drive**

As explained in Section 3, the City of Escondido has a project to widen the remaining portion of Valley Parkway / Valley Center Road from Beven Drive to the end of the County improvements to City of Escondido 4-Lane Major Road standards. As part of this project, the existing Valley Parkway / Beven Drive will be widened and necessary signal modification will be done. These improvements will mitigate the calculated significant direct impacts at this intersection to a level below significance, assuming completion of the Valley Parkway widening project prior to project completion.

#### SEGMENTS:

##### **D-2. Valley Center Road: East of Cole Grade Road**

Providing a westbound right-turn lane at the Valley Center Road / Cole Grade Road intersection, if not completed by others, will mitigate the calculated significant direct impacts at this intersection to a level below significance.

##### **D-3. Valley Center Road: Escondido City Limits to Lake Wohlford Road S.**

As described in the mitigation for the significant direct impact D-1, the City of Escondido project to widen Valley Parkway to a 4-lane Major Road will mitigate this direct impact to a level below significance, assuming completion of the Valley Parkway widening project prior to project completion.

##### **D-4. Valley Parkway: Lake Wohlford Road S. to Beven Drive**

As described in the mitigation for the significant direct impact D-1, the City of Escondido project to widen Valley Parkway to a 4-lane Major Road will mitigate this direct impact to a level below

significance, assuming completion of the Valley Parkway widening project prior to project completion.

**D-5. El Norte Parkway: Washington Avenue to Valley Parkway**

There is a project to widen this segment to a 4-Lane Major Road. This widening project is a fully funded City CIP project and construction is expected to begin in late 2017. This widening will mitigate this direct impact to a level below significance.

## 13.0 LIST OF REFERENCES

The following references were used in preparing this Transportation Impact Analysis:

- City of Escondido. (2011). *General Plan – Mobility Element*.
- City of Escondido. (2013). *Traffic Impact Analysis Requirement Guidelines*.
- County of San Diego. (2011). *General Plan – Mobility Element*.
- County of San Diego. (2011). *Guidelines for Determining Significance – Transportation and Traffic*.
- County of San Diego. (2012). *Public Road Standards*.
- County of San Diego. (2011). *Report Format & Content Requirements – Transportation and Traffic*.
- SANDAG. (2002). *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*.
- Transportation Research Board. (2010). *Highway Capacity Manual (HCM) 2010*.