

**Lyons Canyon Ranch
Draft Environmental Impact Report**

5.10 TRAFFIC AND CIRCULATION

This section of the EIR evaluates the impacts of the proposed project on the local traffic system in the project vicinity. This analysis summarizes the findings of a traffic report prepared for the proposed project by Austin-Foust Associates, Inc., dated July 2005. This report has been reviewed and approved by the Los Angeles County Department of Public Works – Traffic and Lighting Division, and the City of Santa Clarita Traffic Department. The California Department of Transportation was forwarded a copy of the Traffic Impact Study for review, but declined to render a formal written decision on the adequacy of the Traffic Impact Report until it completes a review of the Draft EIR. Because the traffic report is technical in its subject and language, this section presents a summary intended for the non-technical reader. For a detailed discussion of assumptions, calculations, and conclusions utilized in the traffic analysis, refer to the traffic report, included in its entirety in Appendix D of this EIR.

5.10.1 TRAFFIC STUDY METHODOLOGY

STUDY AREA

The project study area includes the roadways and intersections in proximity to the project site and those locations where project-generated traffic could cause a significant impact. Exhibit 5.10-1, Project Study Area, illustrates the intersections selected for study based on the distribution of project generated traffic.

METHODOLOGY

The traffic analysis performed by Austin-Foust Associates, Inc. evaluates the proposed project in accordance with the guidelines of the County of Los Angeles Department of Public Works, Traffic and Lighting Division. The project is evaluated for project only impacts (existing plus ambient growth conditions) and for cumulative impacts (existing plus ambient growth, plus project, plus related project conditions).

To derive project only impacts, background conditions are based on existing traffic counts (measured traffic volumes) plus an ambient annual growth rate specified by County staff. To derive cumulative impacts, related projects are added to the Santa Clarita Valley Consolidated Traffic Model (SCVCTM) to forecast future cumulative conditions. The SCVCTM is a travel demand model developed jointly by the City of Santa Clarita and the County of Los Angeles, and is the primary tool used for forecasting traffic volumes for the Santa Clarita Valley. The SCVCTM does utilize a comprehensive list of County of Los Angeles and City of Santa Clarita approved cumulative projects to determine background (existing + future) traffic levels within the Santa Clarita Valley.

The SCVCTM has the ability to forecast traffic volumes for an Interim Year horizon, which generally corresponds to the year 2015, and for long-range buildout conditions, which is generally referred to as year 2030.

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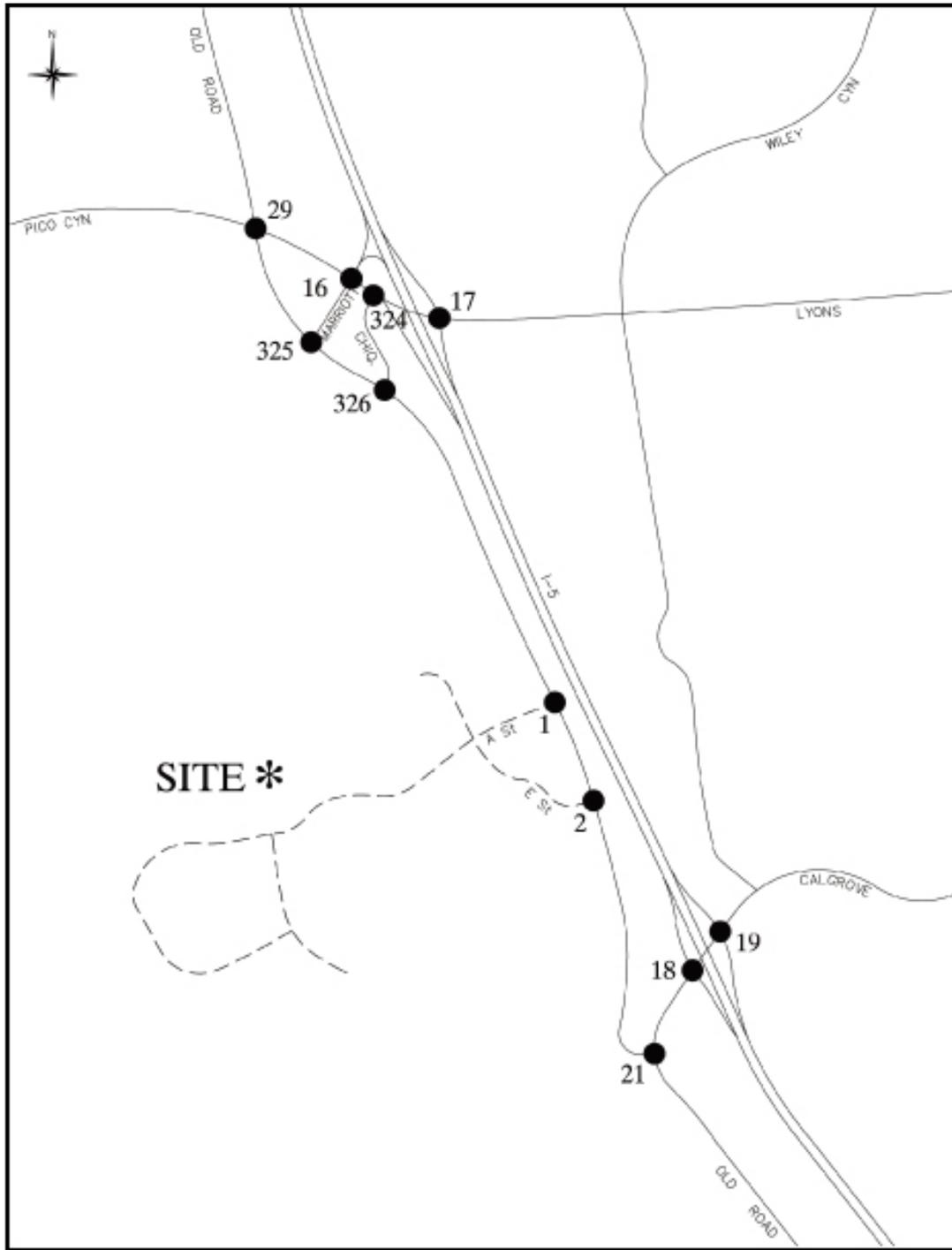
The cumulative impact analysis utilized in this traffic report has been developed utilizing the Interim Year SCVCTM model since it includes all known approved and pending projects within the entire Santa Clarita Valley. Project related traffic impacts are then calculated by determining the appropriate study area and analyzing the project related trips combined with the cumulative projects potentially impacting the same study area, plus the background cumulative traffic from the entire Santa Clarita Valley.

Since the project does not represent a change to the General Plan land use designations for the project site, a separate long-range analysis is not needed since the project traffic is already accounted for in the County's established long-range General Plan traffic forecasts.

As part of the development of this traffic impact analysis, the SCVCTM land use database was reviewed and verified by the County of Los Angeles and the City of Santa Clarita in March 2005. ¹Please see Section 2.2 of the Traffic Impact Analysis included in Appendix D for related project information obtained from the SCVCTM).

¹ "Santa Clarita Valley Consolidated Traffic Model 2004 Update and Validation." City of Santa Clarita and County of Los Angeles Department of Public Works, March 2005.

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Project Traffic Study Area

Exhibit 5.10-1

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5.10.2 EXISTING CONDITIONS

The following describes existing traffic conditions in the study area. It includes a description of the study area roadway system, existing traffic volumes and corresponding levels of service.

EXISTING ROADWAY SYSTEM

The existing roadway network in the study area is illustrated in Exhibit 5.10-2, Existing Roadway Network – Intersection Lane Configurations, in the form of mid-block lanes and intersection lane configurations for the intersections being studied. Major arterial streets near to the project site consist of The Old Road, Pico Canyon Road, Lyons Avenue, Calgrove Boulevard and Wiley Canyon Road.

The I-5 Freeway provides regional access for residents of the site and is located just east of the project site. The I-5 Freeway can be accessed from the project site via interchanges at Calgrove Blvd as well as Pico Canyon Road/Lyons Avenue.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

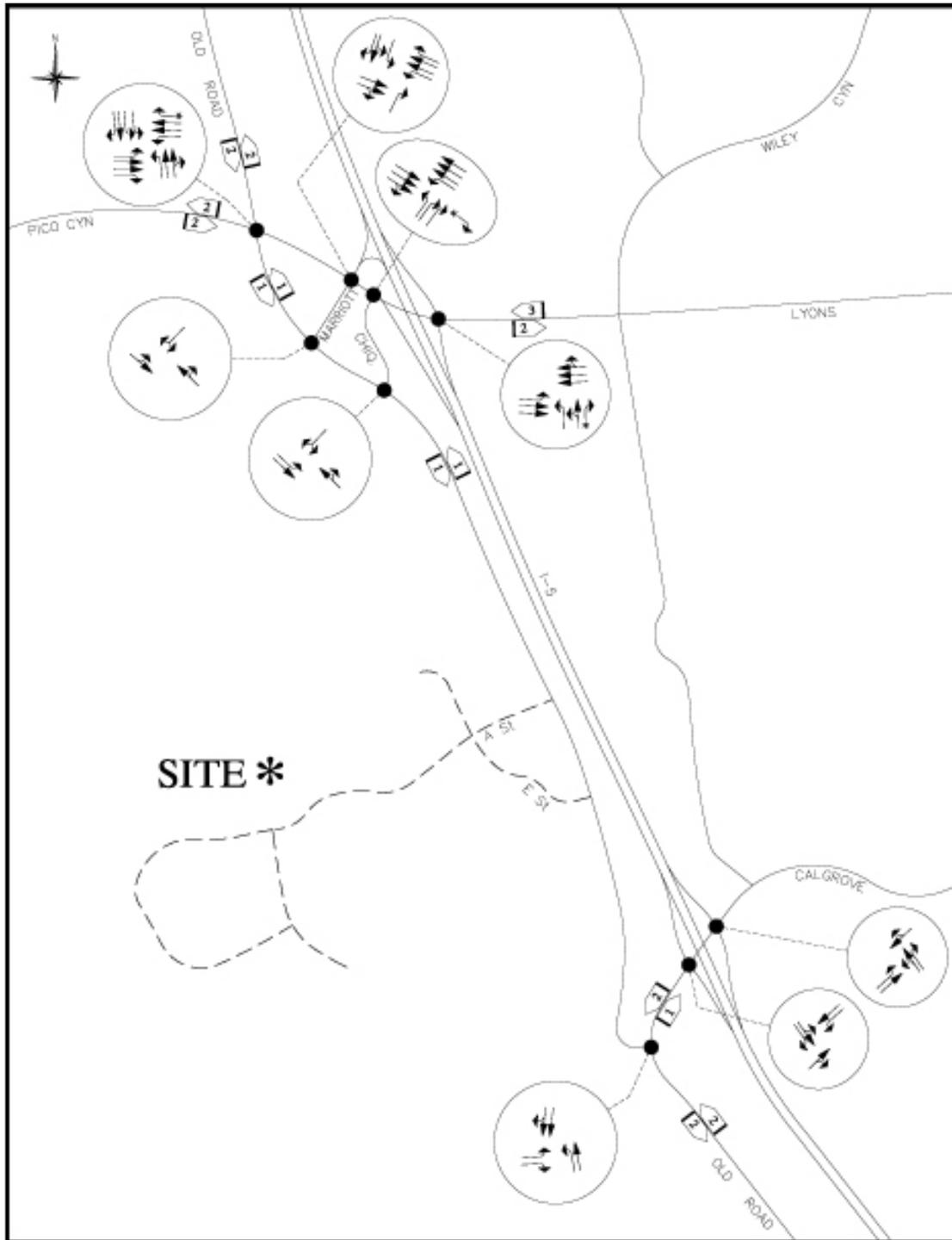
The existing average daily traffic (ADT) volumes on the study area roadway system are illustrated in Exhibit 5.10-3, Average Daily Traffic Volumes – Existing Counts. Illustrations of peak hour turning movement volumes for each study area intersection can be found in Exhibit 5.10-4, AM Peak Hour Turning Movement Volumes – Existing Counts, and Exhibit 5.10-5, PM Peak Hour Turning Movement Volumes – Existing Counts, for the AM and PM peak hours, respectively. The peak hour counts were generally collected during March and April, 2004.

Level of service (LOS) is a concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the HCM 2000, six grades are used to denote the various LOS. The six are denoted A through F and a discussion on these as given in Section 5.10.3.

The results of the ICU/LOS analyses for project area intersections are shown in Table 5.10-1, ICU Summary – Existing (2004) Conditions. The table shows how each intersection currently meets the performance standard of the respective jurisdiction.

As noted in Table 5.10-1, a number of intersections in the study area are not currently controlled by a traffic signal. For those locations, the ICU provides an indication of the level of service based on traffic signal control and provides a benchmark for comparison of future conditions with the proposed project.

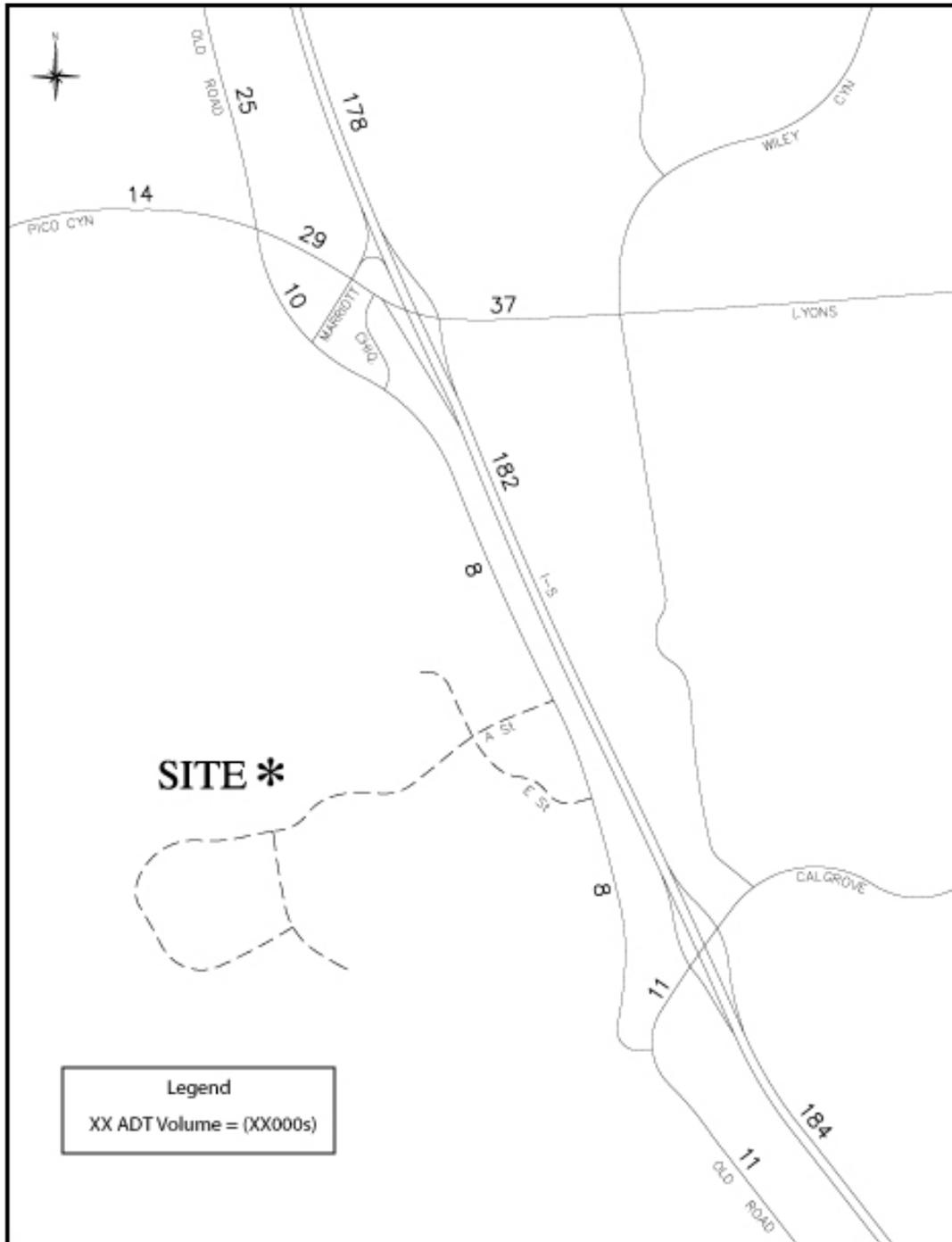
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Existing Roadway Network - Intersection Lane Configurations

Exhibit 5.10-2

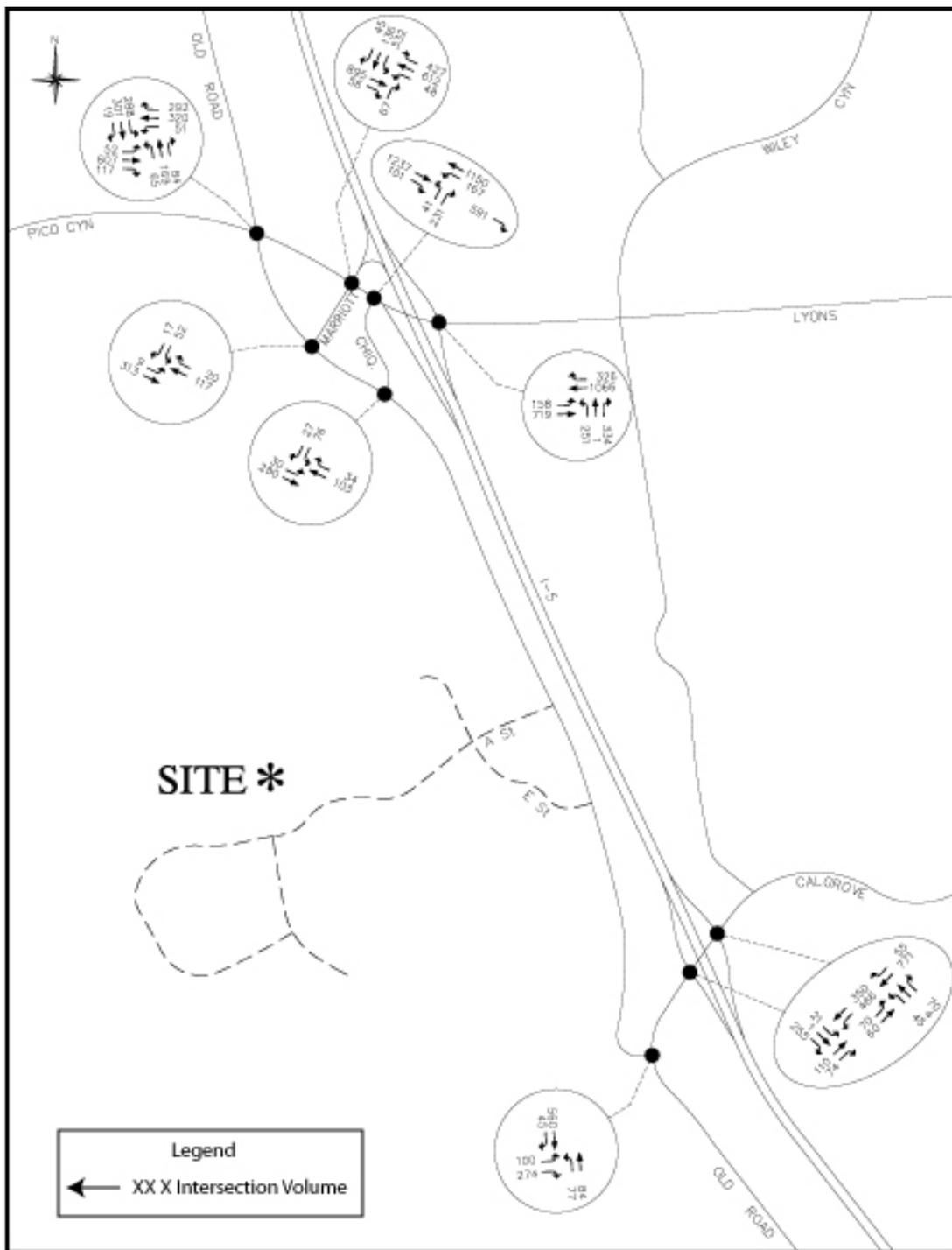
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Average Daily Traffic Volumes - Existing Counts

Exhibit 5.10-3

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AM Peak Hour Turn Movements - Existing Counts

Exhibit 5.10-4

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**Table 5.10-1
ICU Summary – Existing (2004) Conditions**

Location	AM Peak Hour		PM Peak Hour		Count Date						
	ICU	LOS	ICU	LOS							
Freeway On/Off Ramp Intersections											
I-5 SB/Marriott & Pico Cyn Rd	.55	A	.60	A	March 2004						
I-5 NB Ramps & Lyons Ave (City of Santa Clarita)	.53	A	.68	B	March 2004						
I-5 SB Ramps & Calgrove Blvd ¹	.49	A	.64	B	April 2004						
I-5 NB Ramps & Calgrove Blvd ¹	.64	B	.52	A	April 2004						
Intersections											
Calgrove and The Old Road	.47	A	.56	A	April 2004						
The Old Rd & Pico Canyon	.55	A	.73	C	March 2004						
Chiquella Ln & Pico Cyn Rd	.51	A	.55	A	April 2004						
Marriott Wy & The Old Rd ¹	.34	A	.54	A	April 2004						
Chiquella Ln & The Old Rd ¹	.34	A	.62	B	April 2004						
¹ Unsignalized, stop-sign control ² Unsignalized, no conflicting movements Level of service ranges: (See Sect 5-10.3 for LOS definitions) <table style="margin-left: 100px; border: none;"> <tr> <td>A = .00 - .60</td> <td>D = .81 - .90</td> </tr> <tr> <td>B = .61 - .70</td> <td>E = .91 - 1.00</td> </tr> <tr> <td>C = .71 - .80</td> <td>F = Above 1.00</td> </tr> </table>						A = .00 - .60	D = .81 - .90	B = .61 - .70	E = .91 - 1.00	C = .71 - .80	F = Above 1.00
A = .00 - .60	D = .81 - .90										
B = .61 - .70	E = .91 - 1.00										
C = .71 - .80	F = Above 1.00										

Public Transportation

Santa Clarita Transit (SCT) currently does not provide fixed-route transit immediately adjacent to the project site. The nearest fixed-route transit line is for Routes 5 and 6, which passes through the intersection of The Old Road and Pico Canyon Road, which is just over one mile north of the project site. Routes 5 and 6 provide service to the Stevenson Ranch Area, Hart High School, the Valencia Town Center and Canyon Country.

The nearest fixed rail transit center is the Newhall Metrolink station, which is located approximately three miles northeast of the project site.

INTERIM YEAR (2015) TRANSPORTATION SYSTEM

The Interim Year transportation system consists of roadway improvements and future infrastructure consistent with the related projects assumed for 2015, based on anticipated Santa Clarita Valley growth rates from sources such as the Southern California Association of Governments (SCAG). While this time period does not coincide specifically with the buildout of the project site, it represents the best time frame for planning purposes since it includes a comprehensive set of cumulative development projects (as determined jointly by the City of Santa Clarita and the County of Los Angeles) that have been incorporated into the SCVCTM as background traffic levels. With this, a conservative scenario is established for analyzing the impacts of the proposed project within the project study area combined with projected and approved growth on a reasonably expanded circulation system.

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Interim Year (2015) land use is based on data provided by the County of Los Angeles and the City of Santa Clarita and includes approved, pending and planned development projects. For this analysis, the recently updated Interim Year land use database was utilized since it includes the most recent data from the County and the City regarding these future projects. Table 5.10-2, Land Use and ADT Summary – Santa Clarita Valley Existing and Future, summarizes the total land use and trip generation statistics for cumulative projects in the entire Santa Clarita Valley area for existing (2004), Interim Year (2015) and Long-Range General Plan (2030) conditions². Table 5.10-3, Cumulative Projects Within or Close to the Project Study Area – Interim Year (2015) Database, lists the cumulative projects included with the Interim Year scenario that are within or close to the project study area.

**Table 5.10-2
Land Use and ADT Summary – Santa Clarita Valley
Existing And Future**

Land Use Type	Units	Existing (2004)		Interim Year (2015)		Long-Range General Plan (2030)	
		Amount	ADT	Amount	ADT	Amount	ADT
Single Family Residential	DU	51,307	501,000	72,700	713,000	90,300	886,000
Multi-Family Residential	DU	25,627	203,000	42,100	320,000	49,400	386,000
Commercial Retail, Office & Industrial	MSF	31.8	696,000	67.0	1,183,000	82.6	1,581,000
Other	--	--	171,000	--	228,000	--	247,394
TOTAL	--	--	1,570,000	--	2,444,000	--	3,100,000
Notes: DU = Dwelling Units MSF = Million Square Feet							

² Please note that Table 5.10-4 is a summary of all cumulative project traffic from existing and future projects analyzed as part of this traffic impact study. The full list of existing and future projects is contained within the Santa Clarita Valley Consolidated Traffic Model.

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**Table 5.10-3
Cumulative Projects Within or Close to the Project Study Area***

Location	Description**
TR 33608 - North of Pico Canyon Road/West of The Old Road (TAZ 147)	Stevenson Ranch Phase III 140 Single Family Residential DU 667 Multi-Family Residential DU
TR 48208 - South of Pico Canyon Road/West of Stevenson Ranch Pkwy (TAZ 161)	51 Single-Family DU
TR 52905 – South of Pico Canyon, west of Stevenson Ranch Road (TAZ 161)	23 Single-Family DU
New Commercial/Infill – South of Pico Canyon Road/West of the Old Road (TAZ 161)	83,000 SF of Commercial Retail 221,000 SF of Commercial Office
Sources: Santa Clarita Valley Subdivision Activity Map (City March 2005, County June 2004) SCVCTM 4.0 Land Use Database (2004) Aerial Topography (April 2004) ** Descriptions were provided during Traffic Impact Report preparation (2005) Notes: TAZ = Traffic Zone per the SCVCTM DU = Dwelling Unit sq. ft. = Square Feet	

*Note: The SCVCTM database contains other projects outside of this study area, which are used to calculate baseline trip forecasts

LONG-RANGE TRANSPORTATION SYSTEM

The County Highway Plan includes significant future roadway projects throughout the valley that will affect traffic patterns of both existing and future trips. Near to the project site, The Old Road will be expanded from its existing two-lane configuration to a four-lane roadway.

The I-5 freeway is part of a recent study prepared by the Los Angeles County Metropolitan Transportation Authority (MTA), and Caltrans, in which it was determined that the I-5 corridor, between SR-14 and SR-126 West, will ultimately double from the current four lanes in each direction to eight lanes in each direction. Two of the eight lanes would be for high occupancy vehicles (HOVs), two lanes for trucks, and four lanes for general use. The increase in the number of lanes would accommodate that study's forecast of a doubling of I-5 travel demand by 2025.

5.10.3 SIGNIFICANCE THRESHOLD CRITERIA

GENERAL CEQA TRAFFIC STUDY GUIDELINES AND PERFORMANCE CRITERIA

For the purposes of CEQA, defined performance criteria are utilized if a proposed project causes a significant impact. In most traffic studies, performance criteria are based on two primary measures. The first is "capacity," which establishes the vehicle carrying ability of a roadway, and the second is "volume." The volume measure is either a traffic count (in the case of existing volumes) or a forecast for a future point in time. The ratio between the volume and the capacity gives a volume/capacity (V/C) ratio, which defines a corresponding level of service (LOS).

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Traffic LOS is designated A through F with LOS A representing free-flow conditions and LOS F representing severe traffic congestion. Traffic flow quality for each LOS is described in Table 5.10-4, Level of Service Descriptions.

Both the V/C ratio and the LOS are used in determining impact significance in the traffic study. Certain LOS values are deemed unacceptable by the County of Los Angeles, and increases in the V/C ratio which cause or contribute to the LOS being unacceptable are defined as a significant impact in the evaluation of traffic impacts in the traffic study.

In establishing V/C-based performance criteria, there are certain items that need to be addressed to obtain suitable V/C estimates and relate them to LOS. For instance, while average daily traffic (ADT) is a useful measure to show general levels of traffic from a facility, and to provide data for other related aspects such as noise and air quality, highway/intersection congestion is largely a “peak hour” or “peak period” occurrence and ADT does not reflect peak period conditions very effectively. Because of this, ADT is not used in the traffic study as the basis for capacity evaluation, but instead the evaluation focuses on those parts of the day when such congestion occurs, specifically the AM and PM peak hours.

**Table 5.10-4
Level of Service Descriptions**

LOS	Arterial Roads/Intersections	Freeway Segments
A (0.0-0.60 V/C Ratio)	Describes primarily free-flow operations at average travel speeds, usually about 90 percent of the free-flow speed for the given street class. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.	Describes free-flow operations. Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed at this level.
B (0.61-0.70 V/C Ratio)	Describes reasonably unimpeded operations at average travel speeds, usually about 70 percent of the free-flow speed for the street class. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at signalized intersections are not significant.	Represents reasonably free flow, and free-flow speeds are maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.
C (0.71-0.80 V/C Ratio)	Describes stable operations; however, ability to maneuver and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50 percent of the free-flow speed for the street class.	Provides for flow with speeds at or near the free-flow speed of the freeway. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed, but the local deterioration in service will be substantial. Queues may be expected to form behind any significant blockage.

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LOS	Arterial Roads/Intersections	Freeway Segments
D (0.81-0.90 V/C Ratio)	Borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40 percent of free-flow speed.	The level at which speeds begin to decline slightly with increasing flows and density begins to increase somewhat more quickly. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels. Even minor incidents can be expected to create queuing, because the traffic stream has little space to absorb disruptions.
E (0.91-1.00 V/C Ratio)	Characterized by significant delays and average travel speeds of 33 percent or less of the free-flow speed. Such operations are caused by a combination of adverse signal progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.	At its highest density value, LOS E describes operation at capacity. Operations at this level are volatile, because there are virtually no usable gaps in the traffic stream. Vehicles are closely spaced, leaving little room to maneuver within the traffic stream at speeds that still exceed 49 miles per hour. Any disruption of the traffic stream, such as vehicles entering from a ramp or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic flow. At capacity, the traffic stream has no ability to dissipate even the most minor disruption, and any incident can be expected to produce a serious breakdown with extensive queuing. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is poor.
F (> 1.00 V/C Ratio)	Characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.	Describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points. LOS F operations within a queue are the result of a breakdown or bottleneck at a downstream point. LOS F is also used to describe conditions at the point of the breakdown or bottleneck and the queue discharge flow that occurs at speeds lower than the lowest speed for LOS E, as well as the operations within the queue that forms upstream. Whenever LOS F conditions exist, they have the potential to extend upstream for significant distances.

Source: *Highway Capacity Manual 2000 (HCM 2000)*, Transportation Research Board, National Research Council.

COUNTY OF LOS ANGELES TRAFFIC STUDY GUIDELINES AND PERFORMANCE CRITERIA

County Impact Criteria for Arterial Roads

The ICU calculation methodology and associated impact criteria for the study area arterial system are summarized in Table 5.10-5, Arterial Intersection Significance/Threshold Criteria.

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Freeway Segments

For the freeway system, the peak hour is the accepted time period used for impact evaluation. The procedures for determining LOS are established by the State of California Department of Transportation (Caltrans) and by regional programs such as the CMP.

The Caltrans guidelines for the preparation of traffic impact studies define the transition between LOS C and LOS D as the target LOS to be maintained. Caltrans acknowledges that this may not always be feasible and utilizes an alternative target LOS when appropriate. If an existing freeway is operating at less (worse) than the appropriate target LOS, the guidelines state that the existing measure of effectiveness (MOE) should be maintained. The MOE used by Caltrans for freeway segments is “density” and is measured in passenger cars per mile per lane (pc/mi/ln).

**Table 5.10-5
Arterial Intersection Significance/Threshold Criteria**

V/C Calculation Methodology									
Level of service to be based on peak hour intersection capacity utilization (ICU) value calculated using the following assumptions:									
Saturation Flow Rates: 1600 vehicles/hour/lane for through lanes, right-turn lanes & single left-turn lanes 2,800 vehicles/hour for dual left-turn lanes 1,750 vehicles/hour/lane for intersections within the City of Santa Clarita									
Clearance Interval: 0.10									
Performance Standards									
County: LOS D (peak hour ICU less than or equal to 0.90) for new/future intersections for buildout conditions. LOS C (peak hour ICU less than 0.75) or existing LOS, whichever is greater, for existing intersections									
City: LOS D or existing LOS, whichever is greater									
Impact Thresholds									
An intersection is considered to be adversely impacted if compared to the ICU in the no-project alternative, the ICU in the with-project alternative increases the ICU by the following:									
County Thresholds: <table style="display: inline-table; vertical-align: top; border: none;"> <tr> <td style="padding-right: 20px;"><u>Pre Project ICU</u></td> <td><u>Project Increment</u></td> </tr> <tr> <td>.71-.80 (LOS C)</td> <td>greater than or equal to .04</td> </tr> <tr> <td>.81-.90 (LOS D)</td> <td>greater than or equal to .02</td> </tr> <tr> <td>.91 or more (LOS E & F)</td> <td>greater than or equal to .01</td> </tr> </table>		<u>Pre Project ICU</u>	<u>Project Increment</u>	.71-.80 (LOS C)	greater than or equal to .04	.81-.90 (LOS D)	greater than or equal to .02	.91 or more (LOS E & F)	greater than or equal to .01
<u>Pre Project ICU</u>	<u>Project Increment</u>								
.71-.80 (LOS C)	greater than or equal to .04								
.81-.90 (LOS D)	greater than or equal to .02								
.91 or more (LOS E & F)	greater than or equal to .01								
City Thresholds: <table style="display: inline-table; vertical-align: top; border: none;"> <tr> <td style="padding-right: 20px;"><u>With-Project ICU</u></td> <td><u>Project Increment</u></td> </tr> <tr> <td>.81-.90 (LOS D)</td> <td>greater than or equal to .02</td> </tr> <tr> <td>.91 or more (LOS E & F)</td> <td>greater than or equal to .01</td> </tr> </table>		<u>With-Project ICU</u>	<u>Project Increment</u>	.81-.90 (LOS D)	greater than or equal to .02	.91 or more (LOS E & F)	greater than or equal to .01		
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.81-.90 (LOS D)	greater than or equal to .02								
.91 or more (LOS E & F)	greater than or equal to .01								
Abbreviations: V/C – Volume/Capacity Ratio LOS – Level of Service ICU – Intersection Capacity Utilization									

The CMP guidelines for a transportation impact analysis require a simplified analysis of freeway impacts that consists of a demand-to-capacity calculation for the affected CMP monitoring

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locations. The CMP defines a significant impact occurring when the proposed project increases traffic demand by two percent of capacity ($V/C \geq .02$), causing or worsening LOS F.

According to the County of Los Angeles Traffic Impact Analysis Guidelines, a significant traffic and circulation impact would result if any of the following thresholds are exceeded:

INTERSECTIONS

An intersection is considered to be adversely impacted if:

- A. The intersection is forecast to operate deficiently (i.e., worse than the performance standard), or
- B. The ICU in the with-project scenario increases the ICU by the following:

County Thresholds:	<u>Pre-Project ICU</u>	<u>Project Increment</u>
	.71 - .80 (LOS C)	greater than or equal to .04
	.81 - .90 (LOS D)	greater than or equal to .02
	.91 or more (LOS E & F)	greater than or equal to .01

FREEWAY SEGMENTS

As pertains to freeway segments, the CMP defines a significant impact occurring when the proposed project increases traffic demand by two percent of capacity ($V/C \geq .02$), causing or worsening LOS F.

The impact analysis is based on specific performance criteria that are outlined above. These criteria are used as the basis for determining the significance of traffic impacts in this EIR. Where appropriate, mitigation measures were identified in the traffic study for those scenarios in which significant impacts were determined to occur based on traffic performance criteria identified below.

5.10.4 IMPACTS AND MITIGATION MEASURES

The following discussion describes the proposed project in terms of its transportation characteristics. Trip generation is summarized and the distribution of project trips on the study area roadway network is presented.

PROPOSED PROJECT OVERVIEW

The proposed project is located on a 234 acre site and consists of 190 residential dwelling units, a neighborhood park, a 1.26 acre fire station site and open space. One hundred (100) of the residential units are proposed as single-family detached homes and the remaining 90 residential units are proposed as attached senior housing.

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On-Site Circulation

Access for the residential uses, would be from two new roadways that intersect with The Old Road and extend west into the project site. The first roadway, “A” Street, intersects with The Old Road approximately 0.65 miles north of Calgrove Boulevard and will function as the primary access point for the project. The second roadway, “E” Street, would intersect The Old Road approximately 1,100 feet south of the “A” Street intersection and will be configured for right-turn-in and right-turn-out movements only to ensure adequate sight distance and safe intersection operation.

PROJECT TRIP GENERATION

Trip generation estimates for the proposed project are shown in Table 5.10-6, Trip Generation and Trip Rate Summary. The trip generation is calculated using published data and formulas from the Institute of Transportation Engineers (ITE) Trip Generation Manual (Seventh Edition). The ITE senior housing trip rate is derived from the studies of active senior communities composed of detached homes, and is applied for the senior condominiums as well as the senior detached homes. The same rate is used for both based on an expectation of occupancy by active seniors, as opposed to seniors that require convalescent care.

The proposed project is estimated to generate approximately 1,300 total average daily trips (ADT), with approximately 90 occurring in the AM peak hour (64 outbound) and approximately 120 occurring in the PM peak hour (76 inbound).

**Table 5.10-6
Land Use and Trip Generation Summary**

Land Use	Units	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Lyons Canyon Ranch (June 2005)								
Single Family Residential	95 DU	18	53	71	61	35	96	909
Senior (Active) Residential	95 DU	8	11	19	15	10	25	352
<i>Sub-total - Residential</i>	<i>190 DU</i>	<i>26</i>	<i>64</i>	<i>90</i>	<i>76</i>	<i>45</i>	<i>121</i>	<i>1,261</i>
TRIP RATES								
Single Family Residential ¹	DU	.19	.56	.75	.64	.37	1.01	9.57
Senior (Active) Residential ²	DU	.08	.12	.20	.16	.10	.26	3.71
Notes: ¹ ITE Category 210 (Single Family Residential) ² ITE Category 251 (Senior Adult Housing - Detached) ³ The traffic generated by a fire station is generally random and occurs at various times throughout the day. The trip generation characteristics of a neighborhood fire station typically consist of emergency response, shift changes for staff, and other miscellaneous trips into the community. DU = Dwelling Unit								

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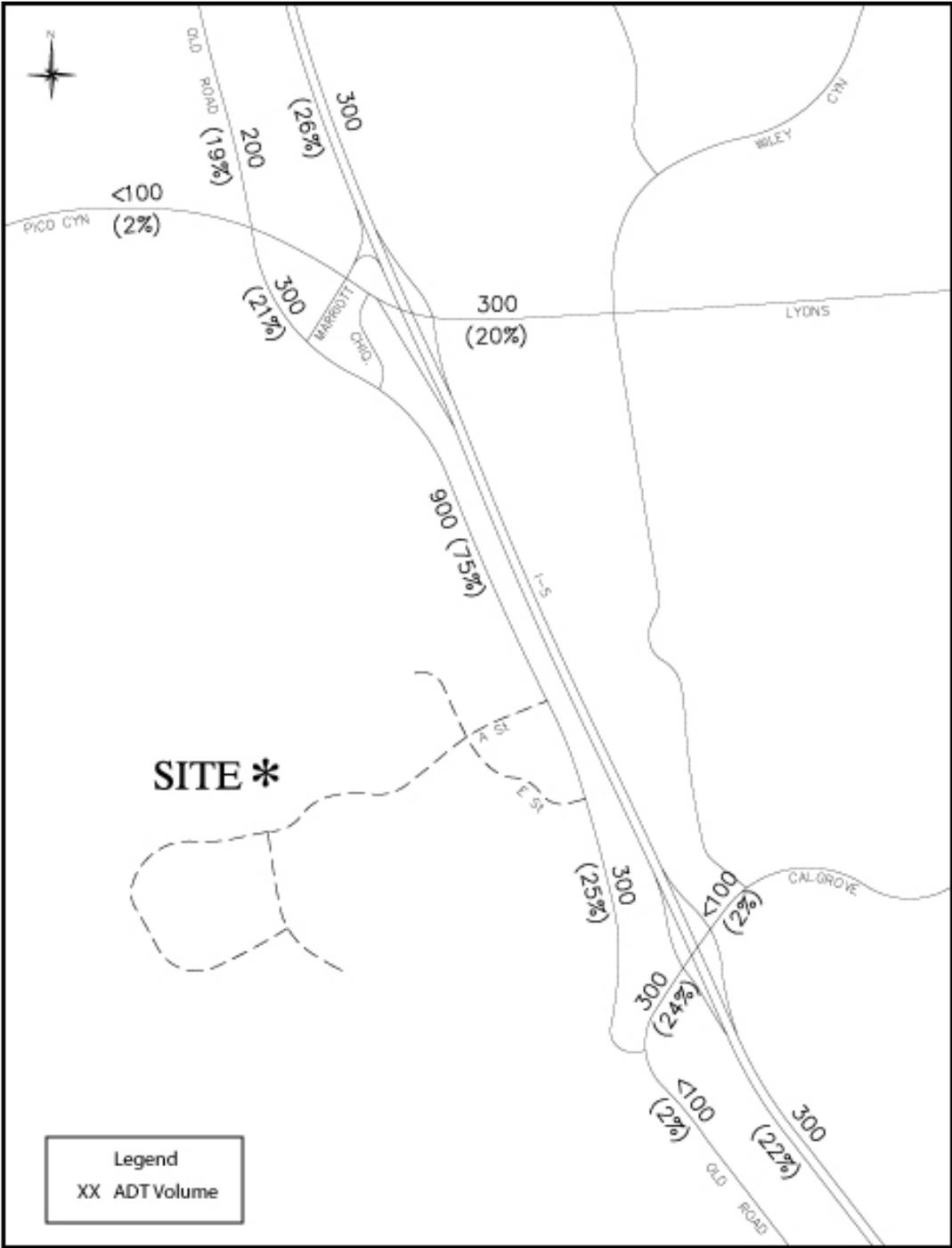
PROJECT TRIP DISTRIBUTION

The geographic distribution of project-generated trips was determined using the SCVCTM to prepare a project-only select zone run. The Interim Year (2015) version of the SCVCTM provided the background conditions for this select zone run. The model takes into account the specific type of land use proposed for the site and how that land use would interact with the other land uses in the County and the immediately surrounding areas in the City of Santa Clarita.

Exhibit 5.10-6, Average Daily Traffic Volumes: Project Only, illustrates the project only average daily trips (ADT) and distribution percentages for the proposed project. Exhibit 5.10-7, AM Peak Hour Turning Movement Volumes – Project Only, and Exhibit 5.10-8, PM Peak Hour Turning Movement Volumes – Project Only, illustrate the project-generated trips for the AM and PM peak hours, respectively, within the study area. Since the SCVCTM performs separate assignments for the AM peak hour, the PM peak hour, and the off-peak period, the specific volumes for any individual time period will not precisely match the percentages noted in the Exhibit 5.10-6.

Approximately 75 percent of the new trips generated by the project are forecast to travel north of the project site via The Old Road. These project only trips are then forecast to travel north via the I-5 freeway, continue north along The Old Road past Lyons Avenue, travel west along Pico Canyon Road, or travel east along Lyons Avenue. Approximately 25 percent are forecast to travel south of the project site. These project only trips are then forecast to travel south on the I-5 Freeway via the Calgrove Boulevard interchange, continue east along Calgrove Blvd., or continue south along The Old Road.

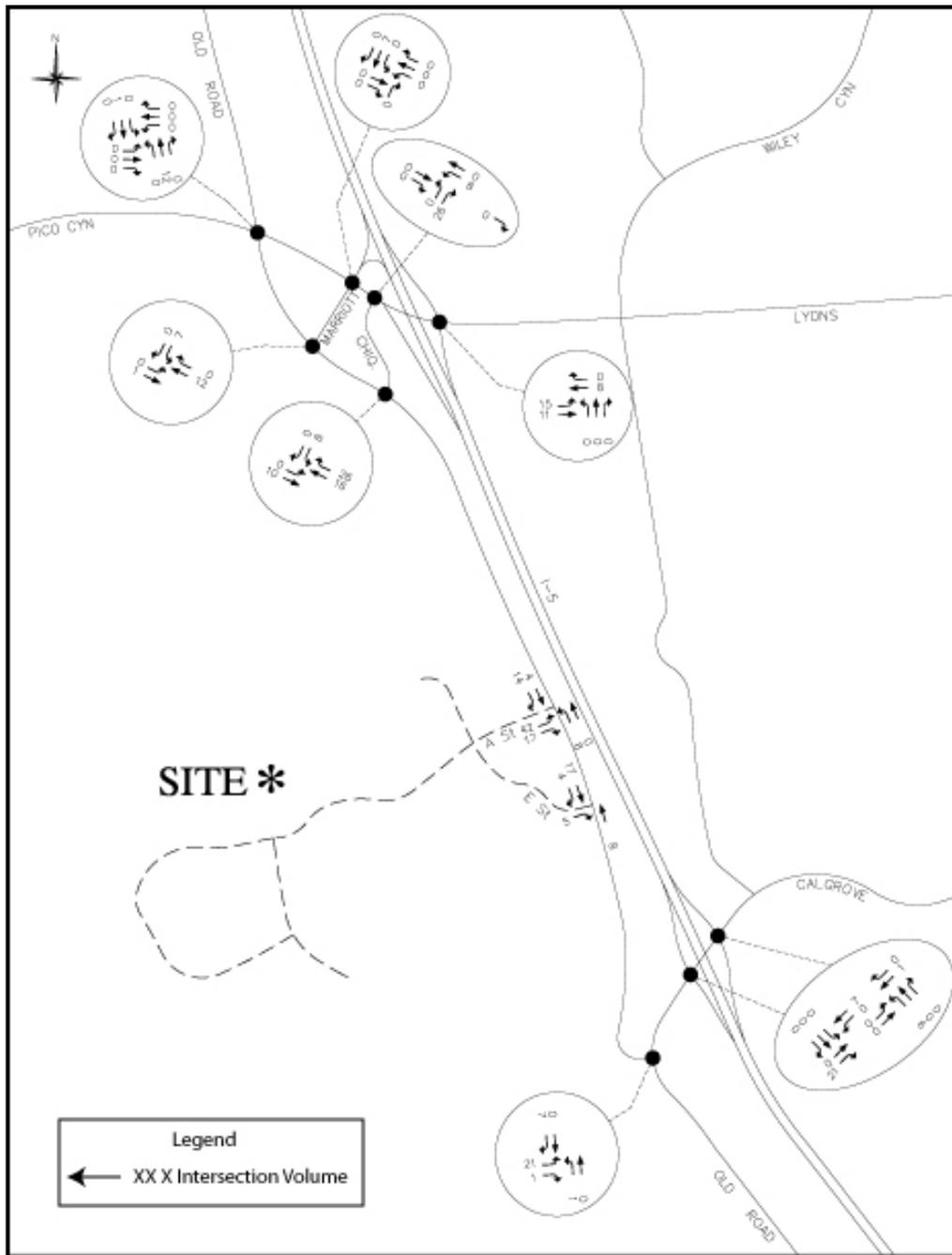
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Average Daily Traffic Volumes - Project Only

Exhibit 5.10-6

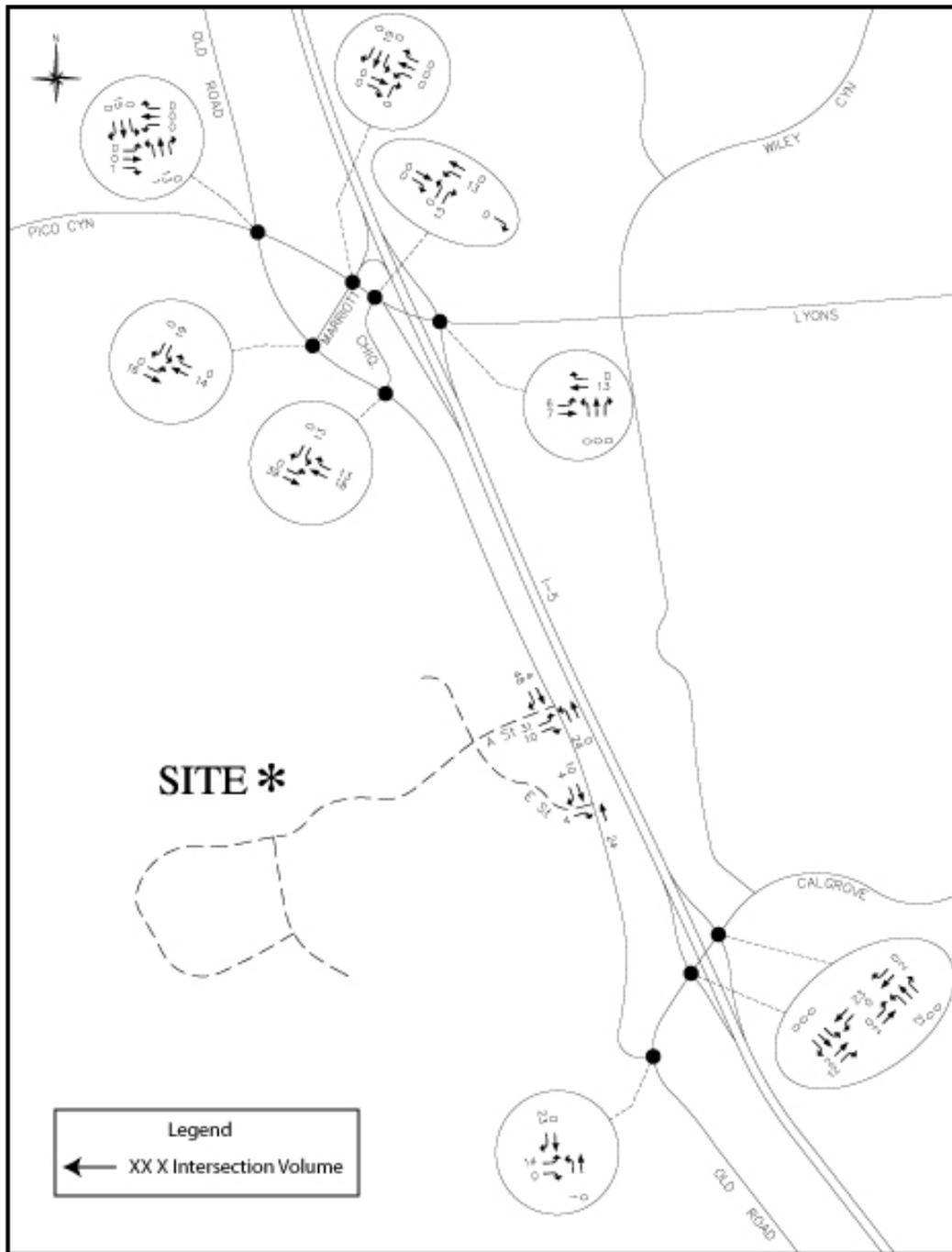
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AM Peak Hour Turn Movements - Project Only

Exhibit 5.10-7

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PM Peak Hour Turn Movements - Project Only

Exhibit 5.10-8

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PROJECT IMPACTS

The following addresses the traffic impacts of the proposed project. Traffic conditions with and without the proposed project are described in the following analysis. Project impacts are evaluated using the criteria previously outlined under *Thresholds of Significance*.

- ◆ ***THE PROPOSED PROJECT COULD RESULT IN ADVERSE IMPACTS TO THE FUNCTION OF TRAFFIC SYSTEM INTERSECTIONS AND ROADWAY SEGMENTS IN THE PROJECT AREA.***

Level of Significance Prior to Mitigation: Potentially Significant Impact.

Impact Analysis: Traffic impacts within the project study area are based on the cumulative traffic volumes within the study boundaries pursuant to the County of Los Angeles methodology described above. The incremental increase in traffic generated by the proposed project is compared to the baseline scenario described above in order to determine the significance of project-related traffic impacts.

Existing plus Ambient Growth Traffic Conditions

Since occupancy of the project site is anticipated in 2007 and 2008, a 2008 horizon year was utilized for analysis purposes to determine project-only impacts. To derive 2008 conditions, County staff has specified a 3.8 percent per year growth rate for this portion of Los Angeles County. Traffic volumes for existing plus ambient growth conditions plus project conditions within the study area are shown in Exhibit 5.10-9, Average Daily Traffic Volumes – Horizon Year (2008) With Project. The Horizon Year peak hour turning movement volumes for intersections in the study area are illustrated in Exhibit 5.10-10, AM Peak Hour Turning Movement Volumes – Horizon Year (2008) With Project, and Exhibit 5.10.11, PM Peak Hour Turning Movement Volumes – Horizon Year With Project, for the AM and PM peak hours, respectively.

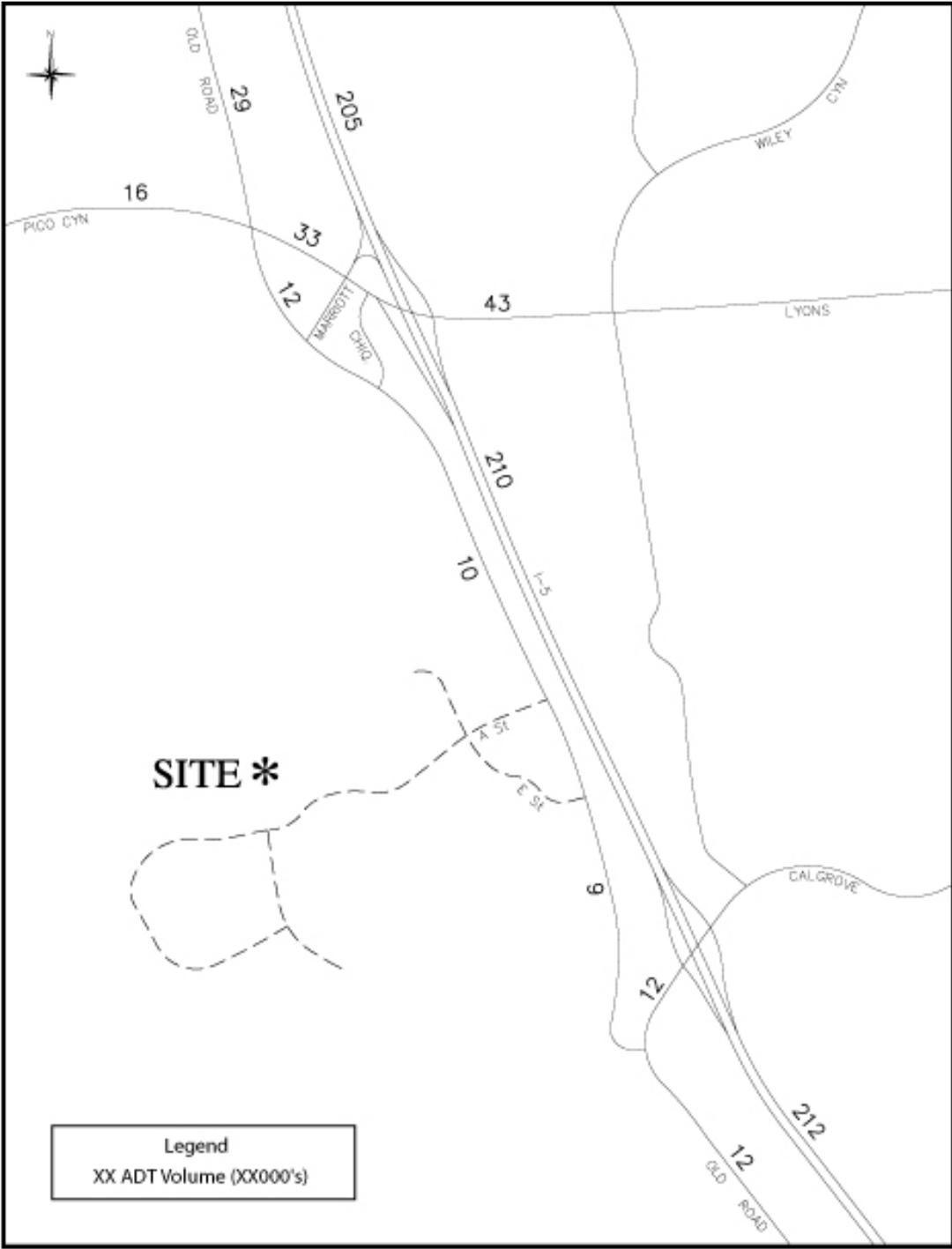
Table 5.10-7, ICU and LOS Summary – Existing and Horizon Year (2008) Traffic Conditions, provides the corresponding ICU values and also listed for comparison purposes are the ICUs for existing conditions. The ICU tabulations indicate that none of the study area intersections are forecast to exceed the available capacity by the Horizon Year (2008) without and with the proposed project.

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**Table 5.10-7
Existing and Horizon Year (2008) Traffic Conditions**

Intersection	Horizon Year Without Project				Horizon Year With Project				Increase							
	AM		PM		AM		PM		AM	PM						
Freeway On/Off Ramp Intersections																
I-5 SB/Marriott & Pico Cyn Rd	.67	B	.72	C	.67	B	.73	C	.00	.01						
I-5 NB Ramps & Lyons Ave	.59	A	.77	C	.60	A	.77	C	.01	.00						
I-5 SB Ramps & Calgrove Blvd ¹	.59	A	.78	C	.61	B	.79	C	.02	.01						
I-5 NB Ramps & Calgrove Blvd ¹	.72	C	.58	A	.73	C	.58	A	.01	.00						
Intersections																
The Old Rd & "A" Street ²	--	--	--	--	.28	A	.30	A	--	--						
Calgrove Blvd & The Old Road	.53	A	.63	B	.53	A	.64	B	.00	.01						
The Old Rd & Pico Canyon	.63	B	.69	B	.63	B	.69	B	.00	.00						
Chiquella Ln & Pico Cyn Rd	.57	A	.62	B	.58	A	.63	B	.01	.01						
Marriott Wy & The Old Rd ¹	.38	A	.61	B	.38	A	.63	B	.00	.02						
Chiquella Ln & The Old Rd ¹	.37	A	.71	C	.39	A	.74	C	.02	.03						
¹ Unsignalized, stop-sign control ² Project Access Location Level of service ranges: <table style="margin-left: 100px; border: none;"> <tr> <td>A = .00 - .60</td> <td>D = .81 - .90</td> </tr> <tr> <td>B = .61 - .70</td> <td>E = .91 - 1.00</td> </tr> <tr> <td>C = .71 - .80</td> <td>F = Above 1.00</td> </tr> </table>											A = .00 - .60	D = .81 - .90	B = .61 - .70	E = .91 - 1.00	C = .71 - .80	F = Above 1.00
A = .00 - .60	D = .81 - .90															
B = .61 - .70	E = .91 - 1.00															
C = .71 - .80	F = Above 1.00															

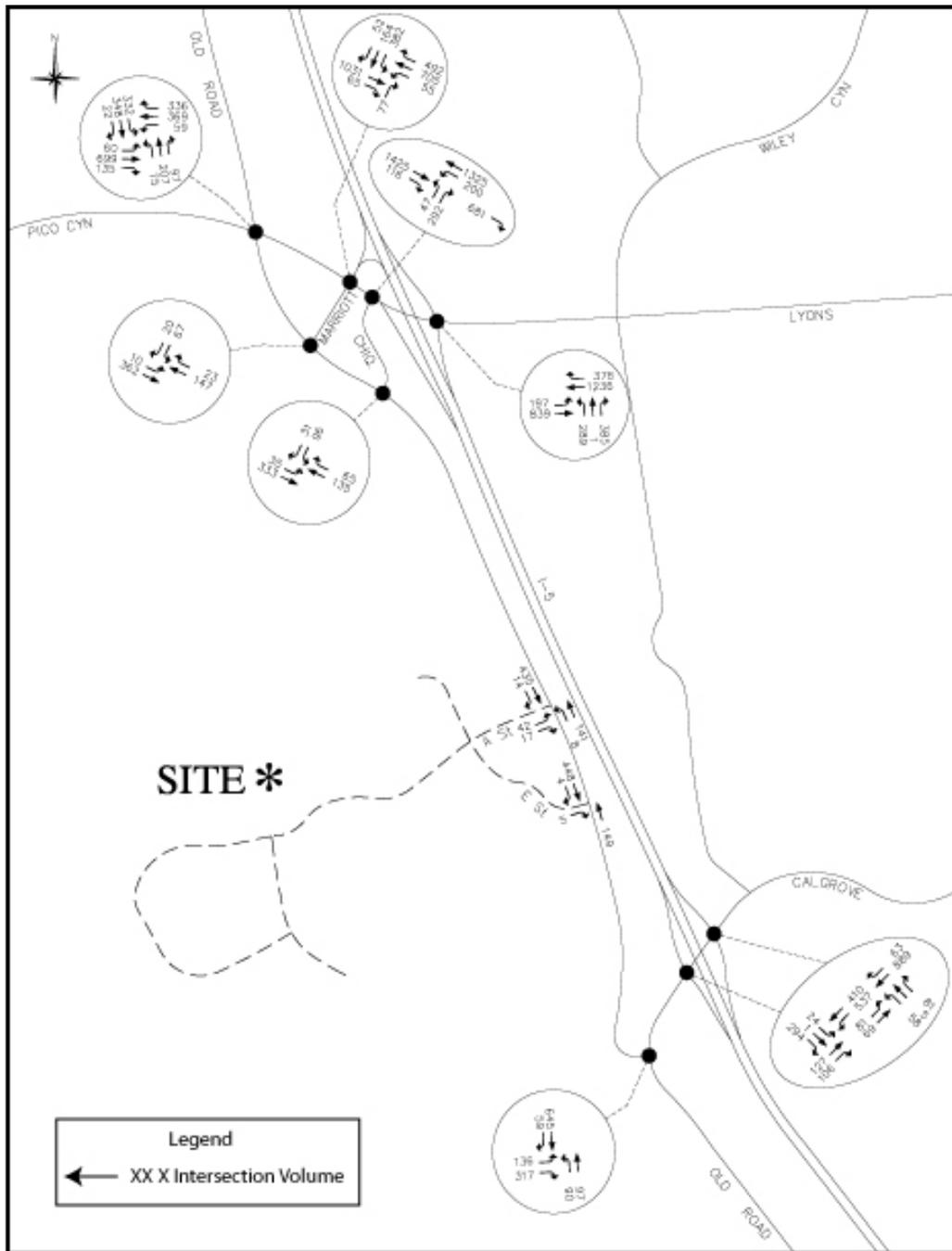
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Average Daily Traffic Volumes - Horizon Year (2008) With Project

Exhibit 5.10-9

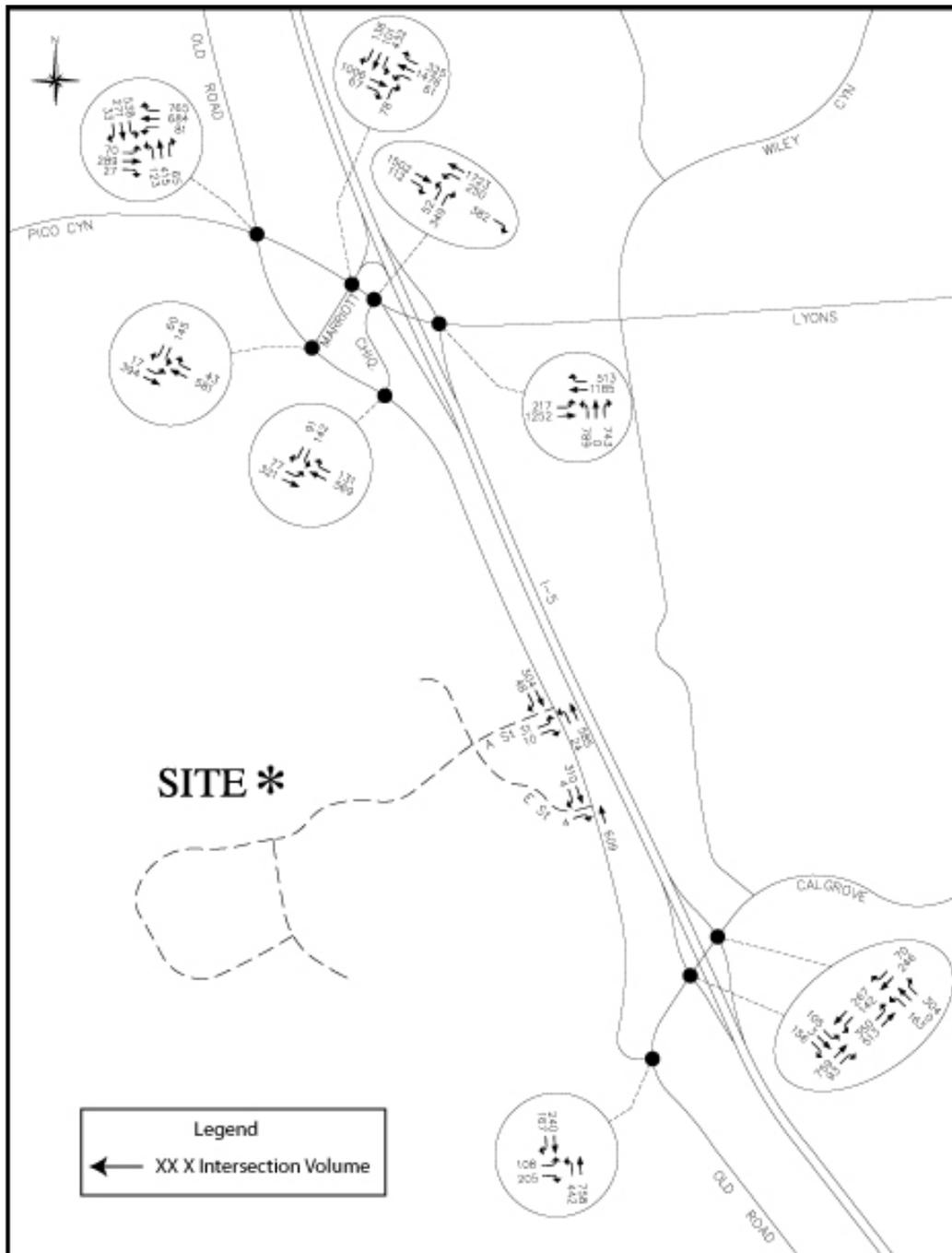
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AM Peak Hour Turn Movements - Horizon Year (2008) With Project

Exhibit 5.10-10

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PM Peak Hour Turn Movements - Horizon Year (2008) With Project

Exhibit 5.10-11

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Interim Year (2015) Traffic Conditions

The cumulative traffic conditions are based on the Interim Year setting. This setting forms the basis for identifying the potential cumulative traffic impacts of the proposed project together with other planned and pending development projects. The Interim Year traffic volumes represent existing plus ambient growth plus project plus related project conditions. Table 5.10-8, ICU and LOS Summary – Existing and Interim Year (2015) Without and With Project, provides the corresponding ICU values and also listed for comparison purposes are the ICUs for existing conditions.

**Table 5.10-8
ICU And LOS Summary – Interim Year (2015)
With And Without Project**

Intersection	Existing plus Ambient Without Project				Existing plus Ambient plus Project & Related Projects				Increase	
	AM		PM		AM		PM		AM	PM
Freeway On/Off Ramp Intersections										
I-5 SB/Marriott & Pico Cyn Rd	.67	B	.72	C	.68	B	.77	C	.01	.05*
I-5 NB Ramps & Lyons Ave	.63	B	.83	D	.70	C	.89	D	.07	.06*
I-5 SB Ramps & Calgrove Blvd ¹	.59	A	.78	C	.68	B	.87	D	.09	.09*
I-5 NB Ramps & Calgrove Blvd ¹	.78	C	.63	B	.88	D	.65	B	.10	.02
Intersections										
The Old Road and "A" Street	--	--	--	--	.30	A	.31	A	--	--
Calgrove Blvd & The Old Rd ³	.53	A	.63	B	.56	A	.74	C	.03	.11
The Old Rd & Pico Canyon	.63	B	.69	B	.70	B	.76	C	.07	.07*
Chiquella Ln & Pico Cyn Rd	.57	A	.62	B	.63	B	.74	C	.06	.12
Marriott Wy & The Old Rd ¹	.38	A	.61	B	.40	A	.67	B	.02	.06
Chiquella Ln & The Old Rd ¹	.37	A	.71	C	.40	A	.79	C	.03	.08*
*Significant Impact										
¹ Unsignalized, stop-sign control										
² Unsignalized, no conflicting movements										
³ Project Access Location										
Level of service ranges:										
A = .00 - .60 D = .81 - .90										
B = .61 - .70 E = .91 - 1.00										
C = .71 - .80 F = Above 1.00										

As discussed previously, the proposed project would generate approximately 1,261 new vehicle trips per day, with approximately 90 trips in the AM peak hour and approximately 121 trips in the PM peak hour.

Interim Year (2015) volumes that include project-generated traffic are provided in Exhibit 5.10-12, Average Daily Traffic Volumes – Interim Year (2015) With Project, and in Exhibit 5.10-13, AM Peak Hour Turning Movement Volumes – Interim Year (2015) With Project, and Exhibit 5.10-14, PM Peak Hour Turning Movement Volumes – Interim Year (2015) With Project, for the AM and PM peak hours, respectively. Peak hour ICU values can be found in Table 5.10-8, ICU and LOS Summary – Interim Year (2015) With and Without Project, which provides a

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comparison between existing plus ambient growth (no project) conditions and Interim Year with-project conditions. Table 5.10-8 shows that several intersections experience a significant impact due to the cumulative impact of project traffic and related traffic (refer to Table 5.10-2 for significant impact criteria). The following five intersections are significantly impacted:

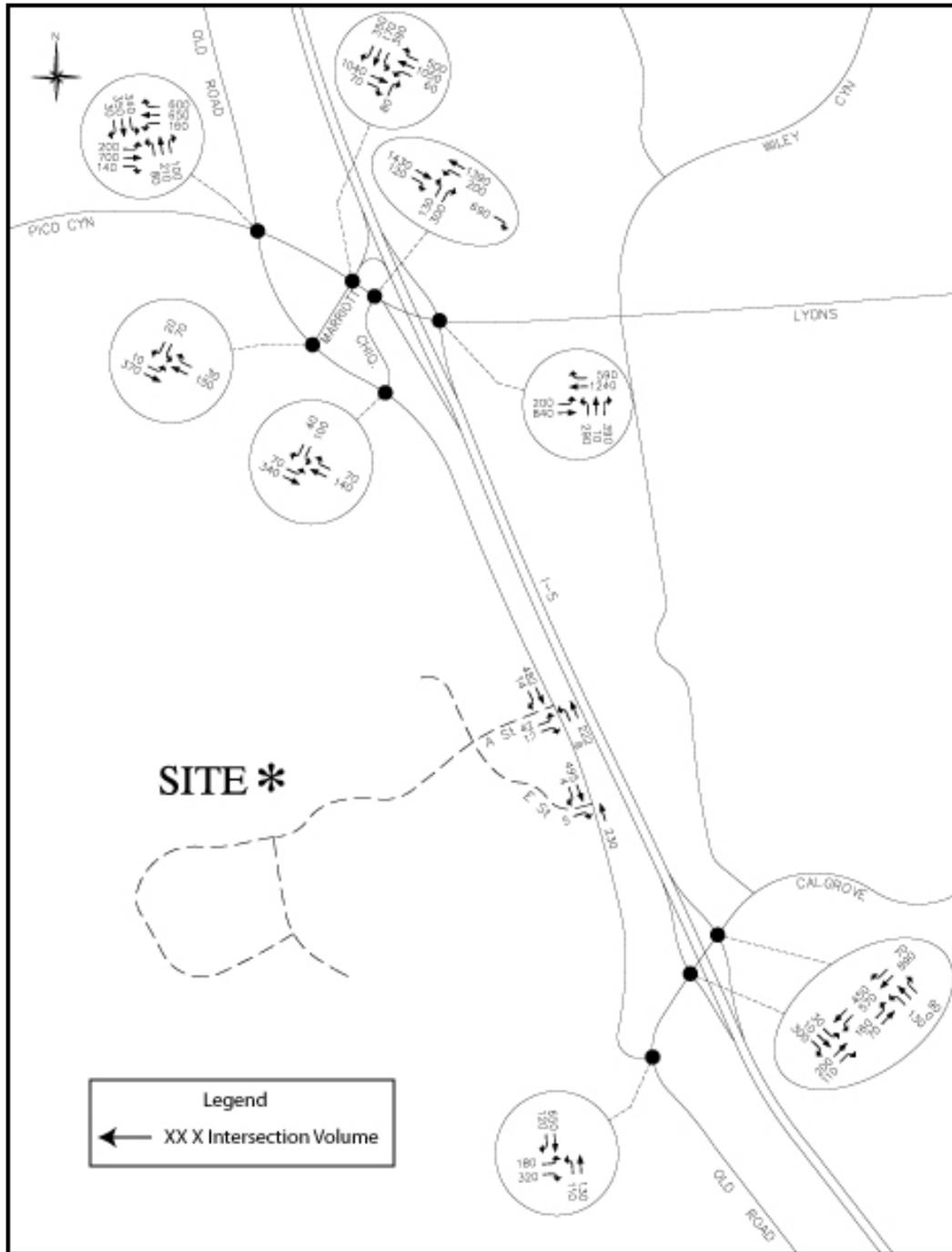
◆ **Freeway Ramp Intersections**

- I-5 SB Ramps/Marriott & Pico Cyn Rd – LOS C (PM Peak Hour)
- I-5 NB Ramps & Lyons Ave – LOS D (PM Peak Hour)
- I-5 SB Ramps & Calgrove Blvd – LOS D (PM Peak Hour)

◆ **County Intersections**

- The Old Rd & Pico Cyn Rd – LOS C (PM Peak Hour)
- Chiquella & The Old Rd – LOS C (PM Peak Hour)

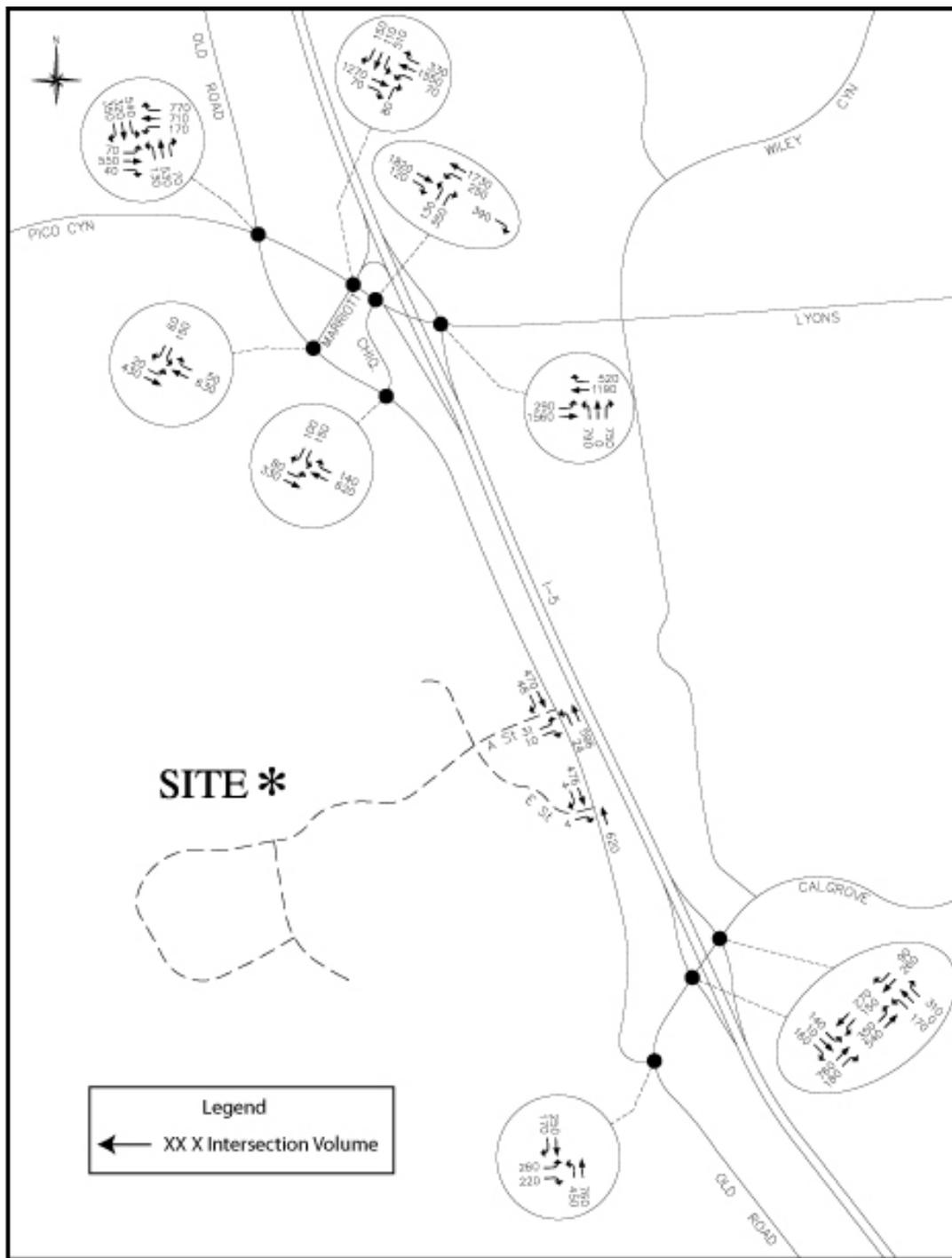
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AM Peak Hour Turn Movements - Interim Year (2015) With Project

Exhibit 5.10-13

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PM Peak Hour Turn Movements - Interim Year (2015) With Project

Exhibit 5.10-14

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Although the proposed project would increase traffic volumes at local intersections and along roadways in the project area, implementation of recommended mitigation measures would reduce such impacts to a level less than significant. Traffic impacts, before and after implementation of applicable mitigation measures, are summarized in Table 5.10-9, ICU And LOS Summary With Project And Mitigation.

**Table 5.10-9
ICU and LOS Summary
With Project and Mitigation**

Intersection	Existing plus Ambient without Project				Existing plus Ambient plus Project & Related Projects with Mitigation				Net Change			
	AM		PM		AM		PM		AM	PM		
Freeway On/Off Ramp Intersections												
I-5 SB/Marriott & Pico Cyn Rd	.67	B	.72	C	.64	B	.68	C	-.03	-.04		
I-5 NB Ramps & Lyons Ave	.63	B	.83	C	.64	C	.84	D	.01	.01		
I-5 SB Ramps & Calgrove Blvd	.59	A	.78	C	.59	B	.57	D	.00	-.21		
County Intersections												
The Old Road & Pico Cyn Rd	.63	B	.69	B	.70	B	.74	C	.07	.05		
Chiquella & The Old Rd	.37	A	.71	C	.37	A	.72	C	.00	.01		
Level of service ranges:	A = .00 - .60		D = .81 - .90		B = .61 - .70		E = .91 - 1.00		C = .71 - .80		F = Above 1.00	

Traffic Signal Warrants

Two of the study locations are currently stop sign controlled intersections. Please refer to Table 4-3, Traffic Signal Volume Warrant Summary, included in Appendix D. This table summarizes peak hour traffic volumes for these locations and evaluates them using the Caltrans peak hour volume warrant.

The following locations meet the peak hour volume warrant for existing plus ambient growth plus project conditions:

- ◆ I-5 SB Ramps & Calgrove Blvd; and
- ◆ Chiquella Lane & The Old Road

No additional locations meet the peak hour volume warrant when related projects are included.

The proposed project would incrementally increase the need for signalization to maintain an adequate level of service at these locations. As such, the project applicant would be required to pay a portion (as noted below) of the total improvement fees for these intersections to the County of Los Angeles. It is important to note that actual construction of the traffic signals would not be undertaken until such time that each intersection reaches the signalization traffic volume warrant.

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Mitigation Measures:

Traffic mitigation measures can generally be classified into two categories, measures related directly to project site access, and measures related to off-site locations. The following mitigation measures address both project-specific and off-site roadway and intersection impacts.

- T1 The improvements summarized below shall be implemented to address project site-specific traffic impacts at the following locations:

Roadway Improvements

a) The Old Road

The Old Road shall be improved to include four travel lanes and a center turn-lane/median along the project frontage. Appropriate roadway transitions south of the project site shall also be constructed by the developer pursuant to the Los Angeles County Department of Public Works roadway design standards.

Project Share – 100%

Intersection Improvements

a) The Old Road & “A” Street

The developer shall improve the above referenced intersection to include the following lane specifications:

Northbound: 1 Left-turn Lane, 2 Through Lanes

Southbound: 1 Through Lane, 1 Shared Through/Right-turn Lane

Eastbound: 1 Left-turn Lane, 1 Right-turn Lane

Project Share – 100%

b) The Old Road & “E” Street

The developer shall improve the above referenced intersection to include the following lane specifications:

Northbound: 2 Through Lanes (left-turns prohibited)

Southbound: 1 Through Lane, 1 Shared Through/Right-turn Lane

Eastbound: 1 Right-turn Lane (left-turns prohibited)

Project Share – 100%

- T2 The improvements summarized below shall be implemented to address off-site traffic impacts. Please note that these mitigation measures are required to address cumulative traffic impacts. Thus, the project developer shall be responsible for providing its “fair-share” contribution prior to recordation of the final map. This

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contribution will go towards implementation of the following roadway improvements:

Freeway On/Off Ramp Intersections

a) I-5 SB Ramps/Marriott & Pico Cyn Rd

Add 3rd Eastbound Through Lane, and convert Westbound Right-turn Lane to Shared Westbound Through/Right-turn Lane (striping)

Project Share – 4.0%

b) I-5 NB Ramps and Lyons Ave

Add 2nd Eastbound Left-turn lane (striping)

Project Share – 100%

c) I-5 SB Ramps & Calgrove Blvd

Add 2nd Eastbound Through Lane, and

Add 2nd Westbound Through Lane

(striping)

Install Traffic Signal

Project Share – 20.3%

d) The Old Road & Pico Cyn Rd

Convert Eastbound Right-turn Lane to Shared Eastbound Through/Right-turn Lane (striping)

Project Share – 3.3%

e) Chiquella Lane and The Old Road

Add Southbound Right-turn Lane (striping)

Install Traffic Signal

Project Share – 48.3%

Level of Significance After Mitigation: Less Than Significant Impact.

- ◆ ***THE PROPOSED PROJECT COULD RESULT IN ADVERSE IMPACTS TO THE FUNCTION OF LOS ANGELES COUNTY CONGESTION MANAGEMENT PROGRAM (CMP) INTERSECTIONS AND ROADWAY SEGMENTS IN THE PROJECT AREA.***

Level of Significance Prior to Mitigation: Less Than Significant Impact.

Impact Analysis: The Los Angeles County Congestion Management Program (CMP) requires that a proposed development address two major subject areas with respect to traffic impacts.

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These are the project's impacts on the CMP highway system and on the local and regional transit systems. According to the CMP guidelines, the geographical area examined in a CMP traffic impact analysis (TIA) consists of the CMP monitoring locations that meet the following criteria:

1. CMP intersections where the proposed project will add 50 or more trips during the AM or PM weekday peak hours (of adjacent street traffic).
2. Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.

In the vicinity of the project site, CMP monitoring locations include the intersection of Lyons Avenue and San Fernando Road and the segment of I-5 between Calgrove Blvd. and SR-14. Neither of the criteria for analysis noted above is caused by the project at these monitoring locations.

Vehicular speeds for the mainline segments of the I-5 Freeway within the study area frequently drop below 50 mph during the peak hours in the peak travel condition, which in the AM period is southbound and in the PM period is northbound. Caltrans has prepared a Project Study Report (PSR) for I-5 North of SR-14 to add one truck lane and one high occupancy vehicle (HOV) lane in each direction in order to alleviate the deficiencies noted above. The Transportation Concept Report (TCR) for this section of I-5 identifies ultimate improvements consisting of two truck lanes and two HOV lanes in each direction.

A mainline freeway analysis, which was prepared in accordance with the adopted Los Angeles County CMP, shows that the proposed project does not have a significant impact to the I-5 Freeway mainline. Depending on the mainline freeway or ramp location, project generated traffic on the freeways is expected to range from 1-21 trips during the AM peak hour and 1-21 trips during the PM peak hour. Please refer to Table 4-4, Project Volumes on State Highways, Lyons Canyon Traffic Impact Analysis, located in Appendix D for a specific breakdown of vehicle trips per monitoring location.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Not applicable.

◆ ***THE PROPOSED PROJECT COULD RESULT IN ADVERSE IMPACTS TO THE FUNCTION OF PUBLIC TRANSIT SERVICES IN THE PROJECT AREA.***

Level of Significance Prior to Mitigation: Less than Significant Impact.

Impact Analysis: Another component of the CMP transportation impact analysis is a review of transit impacts. This review includes evidence that transit operators received the Notice of Preparation (included in this EIR in Appendix A), identification of existing transit services near the project, estimation of the number of project trips assigned to transit, information on facilities and/or programs that will encourage public transit use, and an analysis of project impacts on transit service.

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The proposed project is forecast to generate 1,261 ADT. The conversion to person trips is accomplished by using the CMP guidelines (multiplying the ADT by a factor of 1.4), which results in a total of 1,765 average daily person trips. Since the project site is over one mile from the nearest existing fixed route transit service, the CMP guidelines estimate that no transit trips would ordinarily be generated by the proposed project. However, a fixed route bus line is anticipated to be added to The Old Road in the future. Using the CMP designated factor of 3.5 percent, a total of 62 total person transit trips would be generated by the project each day. Transit trips generated by the proposed project would also include publicly and privately provided bus service to the public schools and Dial-a-Ride service for the senior housing.

Mitigation Measures: No mitigation measures are required.

5.10.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- ◆ ***THE PROPOSED PROJECT, IN CONJUNCTION WITH RELATED PROJECTS IN THE COUNTY OF LOS ANGELES AND THE CITY OF SANTA CLARITA, WOULD NOT RESULT IN SIGNIFICANT CUMULATIVE TRAFFIC AND CIRCULATION IMPACTS.***

Level of Significance Prior to Mitigation: Significant Impact.

Impact Analysis: Due to the nature of traffic-related impacts and the location of the project site (i.e., along the southwestern edge of the Santa Clarita Valley), the project's traffic study focused on all cumulative projects located within the Santa Clarita Valley (please refer to Tables 5.10-4 and 5.10-5). The cumulative projects relevant to the traffic impact analysis were taken directly from the valley-wide traffic model, as is standard practice in the County of Los Angeles and in the City of Santa Clarita for evaluation of traffic network impacts.

The evaluation of the project's traffic impacts is based on a comparison of cumulative traffic conditions (including the project) to existing traffic conditions (without project). The Interim Year scenario, utilized as a basis for calculating the project's traffic impacts, incorporates all cumulative development in the Santa Clarita Valley. Therefore, cumulative impacts of the project and other related projects have been addressed. With implementation of applicable mitigation measures for on- and off-site traffic system improvements, cumulative impacts associated with implementation of the proposed project would be less than significant.

Mitigation Measures: Refer to mitigation measures T1 through T2 above.

Level of Significance After Mitigation: Less Than Significant Impact.