

3.15 Transportation and Traffic

The purpose of this section is to address potential traffic and circulation impacts associated with implementation of the proposed project. The traffic and circulation analysis includes a description of existing traffic conditions (e.g., level of congestion at intersections in the project site vicinity), an evaluation of potential impacts associated with implementation of the proposed project and cumulative impacts. A discussion of applicable state, local and regional plans and/or programs also is included. Information in this section is based on the *Preserve at San Juan Traffic Impact Analysis* prepared by Urban Crossroads (Urban Crossroads, 2017), included as Appendix J.

3.15.1 Environmental Setting

Existing Conditions

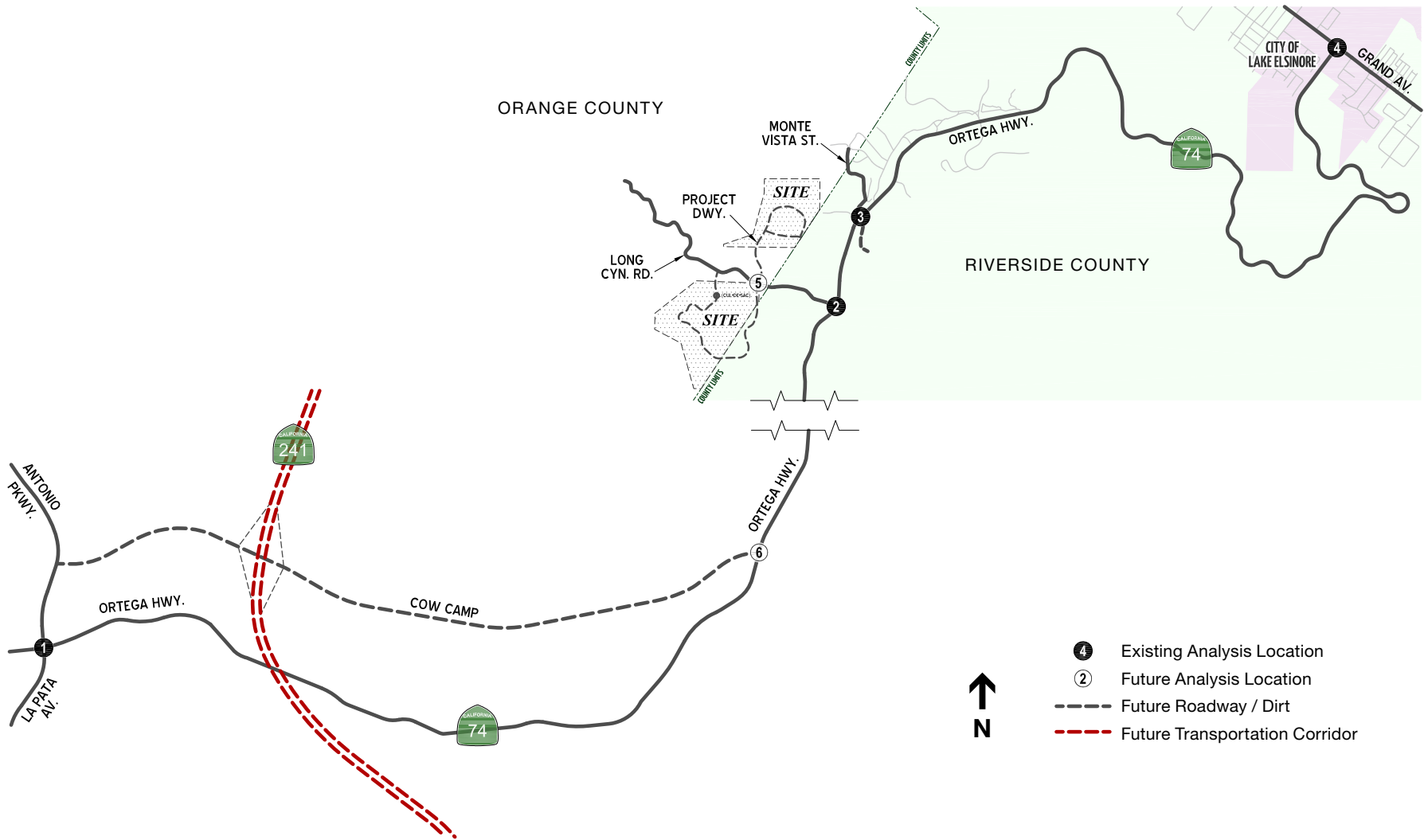
Study Area

The project site consists of two parcels located west of Ortega Highway on the north and south sides of Long Canyon Road. Ortega Highway is a two-lane highway, except between Antonio Parkway – La Pata Avenue and I-5 (in the City of San Juan Capistrano) where it is a four-lane divided highway. The current average daily traffic volume ranges from about 10,500 vehicles near the project to about 45,000 vehicles near I-5 (Caltrans, 2013). Long Canyon Road is a two-lane public road that provides access to Ortega Highway Area of the Cleveland National Forest (including Blue Jay and Falcon Group campgrounds).

Based on discussions with County staff, the study area includes seven existing and future intersections, which are shown on **Figure 3.15-1** and listed below the noted jurisdictions):

1. Ortega Highway (SR 74) at Antonio Parkway – La Pata Avenue (*Orange County*)
2. Ortega Highway (SR 74) at Long Canyon Road (*Riverside County*)
3. Ortega Highway (SR 74) at Monte Vista Street (*Riverside County*)
4. Ortega Highway (SR 74) at Grand Avenue (*City of Lake Elsinore*)
5. Long Canyon Road at South Project Driveway (*Future Intersection*) (*Orange County*)
6. Long Canyon Road at North Project Driveway (*Future Intersection*) (*Orange County*)
7. Ortega Highway (SR 74) at Cow Camp Road (*Future Intersection*) (*Orange County*)

None of the study area intersections are part of the Orange County or Riverside County Congestion Management Programs (CMP), referenced below under Regulatory Setting.



SOURCE: Urban Crossroads

The Preserve at San Juan . 120826

Figure 3.15-1
Study Area Intersections

Public Transit

Public transit service in the Orange County is provided by Orange County Transportation Authority (OCTA), and Riverside County Transit Authority (RFTA) provides transit services for Riverside County. However, there is no public transit service in the project area.

Existing Level of Service

The operation of a roadway network is commonly described using a grading system called Level of Service (LOS). The LOS grading system characterizes traffic conditions associated with varying levels of vehicle traffic, ranging from LOS A (indicating free-flow traffic conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic flows exceed design capacity and result in long queues and delays). This LOS grading system applies to both signalized and unsignalized intersections. LOS A, B, and C are considered acceptable service levels, while the influence of congestion becomes more noticeable (though still considered acceptable) at LOS D. LOS E and F are considered to be unacceptable. LOS and associated vehicle delays (and v/c ratios for signalized intersections) are shown in **Table 3.15-1**.

Study Intersections

Existing a.m. and p.m. peak-hour traffic turning movement volumes were collected in February 2017. As shown in **Table 3.15-2**, all study intersections are currently operating at acceptable levels of service during peak hours. The traffic count data and HCM and ICU calculation worksheets for existing conditions are provided in Appendix J of this EIR.

**TABLE 3.15-1
 DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE**

Unsignalized Intersections		Level of Service Grade	Signalized Intersections	
Description	Average Delay per Vehicle (Seconds)		Critical Average Delay per Vehicle (Seconds) or V/C Ratio ^a	Description
No delay for stop-controlled approaches.	≤10.0	A	≤10.0 ≤0.60	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0 ≥0.61 and ≤0.70	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0 ≥0.71 and ≤0.80	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0 ≥0.81 and ≤0.90	Approaching Unstable with Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0 ≥0.91 and ≤1.00	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0 >1.00	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

^a Per the HCM methodology, average delay (in seconds per vehicle) defines LOS. Per the ICU methodology, overall volume-to-capacity (V/C) ratio is used to define LOS.

SOURCE: Transportation Research Board, *Highway Capacity Manual*, 2010.

**TABLE 3.15-2
 INTERSECTION EXISTING CONDITIONS**

Intersection	Level of Service (V/C Ratio) ^b	
	AM Peak	PM Peak
Ortega Highway (SR 74) at		
• Antonio Parkway (Orange County)	D (0.656)	C (0.606)
• Long Canyon Road (Riverside County)	C	D
• Monte Vista Street (Riverside County)	C	C
• Grand Avenue (City of Lake Elsinore)	B	C

SOURCE: Urban Crossroads, 2017.

^b The volume-to-capacity (v/c) ratio (calculated using the ICU methodology) is provided in parentheses for signalized intersections in Orange County.

Regulatory Setting

Congestion Management Program Compliance

Based on the approval of Proposition 111 in 1990, regulations require the preparation, implementation, and annual updating of a Congestion Management Program (CMP) in each of California’s urbanized counties. One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants, and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process. Authority for local land use decisions including project approvals and any required mitigation remains the responsibility of local jurisdictions.

The purpose of the state-mandated CMP is to monitor roadway congestion and assess the overall performance of the region’s transportation system. Based upon this assessment, the CMP contains specific strategies and identifies proposed improvements to reduce traffic congestion and improve the performance of a multi-modal transportation system. Examples of strategies include increased emphasis on public transportation and rideshare programs, mitigating the impacts of new development and better coordinating land use and transportation planning decisions.

Ortega Highway is part of the Orange County and Riverside County CMP highway systems, but none of the intersections directly serving the project site are within the CMP system (OCTA, 2015). The criteria for which a project is subject to the regulations as set forth in the CMP are determined by the trip generation potential for the project. The Orange County CMP Highway System includes specific roadways and intersections and requires that a traffic impact analysis be conducted for any project generating 2,400 or more daily trips or 1,600 or more daily trips for projects that directly access the CMP Highway System.

The project site is adjacent to roadways that do not have direct access to the CMP Highway System; therefore, the threshold is 2,400 or more daily trips. As shown below in **Table 3.15-3**, the proposed project is forecast to generate 690 daily trips; and thus, does not require a CMP traffic evaluation per the Orange County CMP. The Riverside County CMP only requires analysis if the proposed development causes the LOS on a non-exempt CMP facility to fall to below the LOS E standard, which would not occur, as detailed below.

Senate Bill 743

Senate Bill (SB) 743 was adopted in 2013 (Steinberg, 2013) to change the mechanics of transportation impact assessments. SB 743 removed the CEQA requirement to evaluate automobile delay (LOS) and provided vehicle-miles traveled (VMT) as new traffic assessment criteria to better address the state's goals on climate change and multimodal transportation. Per SB 743, vehicle miles travelled is the most appropriate metric to evaluate a project's transportation impacts.

On January 26, 2016, a revised draft SB 743 Guidelines document was released to implement SB 743, by establishing VMT criteria for determining the significance of transportation impacts. Once the Natural Resources Agency adopts changes to the proposed CEQA Guidelines to implement VMT criteria, automobile delay, as measured by "level of service" will no longer constitute a significant environmental effect under CEQA. Because the revised CEQA Guidelines being considered by the Natural Resources Agency were not adopted at the time of the Notice of Preparations (NOPs) for this EIR, and are not likely to be adopted prior to certification of the Final EIR, and the County of Orange does not have adopted thresholds for VMT, the analysis contained in this EIR follows the CEQA Guidelines as they exist at the time of the NOPs for the proposed project.

2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS)

The Southern California Association of Governments (SCAG) adopted (April 2012) the 2012-2035 RTP/SCS, which focuses on improving the balance between land use and current, as well as future, transportation systems. SCAG develops, maintains, and updates the RTP on a four-year cycle. The 2012 RTP/SCS contains three projects involving Ortega Highway in Orange County, i.e., reconstruct the I-5/Ortega Highway interchange, widen Ortega Highway from Rancho Viejo Road to just east of I-5, and widen Ortega Highway from the Orange County/City (San Juan Capistrano) line to east of La Pata Avenue / Antonio Parkway.

Because the proposed project would require a General Plan Amendment, SCAG considers the project to be regionally important and, therefore, requires that the EIR consider the consistency of the proposed project with SCAG's regional plans (see Impacts 3.15-1 and 3.15-2, below).

County of Orange General Plan

Transportation Element

The Orange County General Plan Transportation Element deems LOS C an acceptable LOS, but accepts LOS D at County intersections during peak hours. The goals, objectives and policies that are applicable to the proposed project are listed below.

Policy 1.2: Apply conditions to land use development projects to ensure that the direct and cumulative impacts of these projects are mitigated consistent with established level of service policies.

Objective 2.1: Plan, develop and implement a circulation system in the unincorporated areas, which is consistent with the Master Plan of Arterial Highways and circulation plans of adjacent jurisdictions.

Policy 2.4: Apply conditions to development projects to ensure compliance with OCTA’s transit goals and policies.

Policy 2.5: Apply conditions to development projects to ensure implementation of the Circulation Plan as applicable.

Objective 3.2: Provide for safe and efficient movement of traffic on smartstreets, 8-lane, 6-lane, 4-lane and 2-lane arterials so as to provide access to the regional circulation network.

Policy 3.1: Maintain acceptable levels of service on arterial highways pursuant to the Growth Management Element of the General Plan.

Policy 3.2: Ensure that all intersections within the unincorporated portion of Orange County maintain a peak hour LOS D according to the County Growth Management Plan Transportation Implementation Manual.

Policy 3.3: Evaluate all proposed land use phasing plans for major development projects to ensure maintenance of acceptable LOS on arterial highway links and intersections.

Goal 5: Manage peak hour traffic congestion to achieve an acceptable LOS on existing and future circulation plan facilities in the unincorporated areas of the County.

Policy 5.1: Establish “traffic impact fees” for application to County development projects with measureable traffic impacts, as defined in the Growth Management Element of the General Plan. These fees may serve as local matching funds for Orange County Measure “M” state and federal highway funding programs.

Policy 5.2: Use uniform analytical methods, in conformance with the Growth Management Plan, Measure M, and the Congestion Management Plan (CMP) to aid in transportation planning and impact evaluation and support the development and utilization of sub-area models to address detailed transportation issues.

Policy 5.5: Require as conditions of approval that the necessary improvements to arterial highway facilities, of which the project contributes measurable traffic, be constructed and completed within a specified time period or ADT/peak hour milestone to attain a LOS D at intersections under the sole control of the County.

Policy 5.7: Require, as a condition of approval, that a development mitigation program, development agreement or developer fee program be adopted to ensure that development is paying its fair share of the costs associated with that development pursuant to Policy 5.1.

Growth Management Element

The purpose of the Growth Management Element of the Orange County General Plan is “to mandate that growth and development be based upon the County’s ability to provide an adequate circulation system” as well as other support services and facilities. The goals, objectives and policies that are applicable to the proposed project are listed below.

Goal 2: Ensure that adequate transportation facilities, public facilities, equipment, and services are provided for existing and future residents.

Objective 2: The circulation system shall be implemented in a manner which achieves the established Traffic Level of Service Policy.

Policy 3: It is the policy of the County that within three years of issuance of the first use and occupancy permit for a development project or five years of the issuance of a finished grading permit or building permit for said development project, whichever occurs first, that the necessary improvements to arterial highway facilities, to which the project contributes measurable traffic, are constructed and completed to attain LOS D at intersections under the sole control of the County.

County of Riverside General Plan Circulation Element

The Riverside County General Plan Circulation Element provides the following policies that are related to the proposed project:

Policy 2.1: Maintain the following countywide target Levels of Service:

- LOS "C" along all County maintained roads and conventional state highways. As an exception, LOS "D" may be allowed in community development areas, only at intersections of any combination of Secondary highways, major highways, urban expressways, conventional state highways or freeway ramp intersections.
- LOS "E" may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.

Policy 2.2: Apply level of service standards to new development via a program establishing traffic study guidelines to evaluate traffic impacts and identify appropriate mitigation measures for new development.

Policy 2.3: Traffic studies prepared for development entitlements (tracts, plot plans, public use permits, conditional use permits, etc.) shall identify project related traffic impacts and determine the "significance" of such impacts in compliance with CEQA.

Policy 2.4: The direct project related traffic impacts of new development proposals shall be mitigated via conditions of approval requiring the construction of any improvements identified as necessary to meet level of service standards.

Policy 2.5: The cumulative and indirect traffic impacts of development may be mitigated through the payment of various impact mitigation fees such as County Development Impact Fees, Road and Bridge Benefit District Fees, and Transportation Uniform Mitigation Fees to the extent that these programs provide funding for the improvement of facilities impacted by development.

Policy 3.6: Require private developers to be primarily responsible for the improvement of streets and highways service access to developing commercial, industrial, and residential areas. These may include road construction or widening, installation of turning lanes and traffic signals, and the improvement of any drainage facility or other auxiliary facility necessary for the safe and efficient movement of traffic or the protection of road facilities.

City of Lake Elsinore General Plan Circulation Element

The following discussion of City of Lake Elsinore General Plan is pertinent to the proposed project because portions of the road network serving the study area are in the city. The City of Lake Elsinore, in general, requires that peak-hour intersection operations be at LOS D or better to be considered acceptable.

Regional Improvement Funding Mechanisms

There are several funded roadway improvement programs that are in place to improve the roadway infrastructure in the study area. For Orange County, the following two roadway improvement programs are currently in place: the Avenida La Pata Supplemental Roadway Fee Program and the South County Roadway Improvement Program. For Riverside County, there is the Transportation Uniform Mitigation Fees (TUMF) program.

Avenida La Pata Supplemental Roadway Fee Program

The Avenida La Pata Supplemental Roadway Fee Program was adopted by the County of Orange Board of Supervisors, and it is administered by the County of Orange Resources and Development Management Department. The purpose of this fee program is to construct Avenida La Pata from Ortega Highway to the City of San Clemente City limits.

South County Roadway Improvement Program

The South County Roadway Improvement Program (SCRIP) was adopted by the County of Orange in 2004 with the approval of the General Plan Amendment for the project proposed by Rancho Mission Viejo and commonly referred to as the “Ranch Plan.” The SCRIP establishes a comprehensive framework for implementing transportation improvements throughout an “area of benefit” in south Orange County. The following study area roadway facilities are programmed for improvement under SCRIP:

- Ortega Highway from I-5 to Antonio Parkway/La Pata Avenue
- Antonio Parkway/La Pata Avenue from Ortega Highway to Ladera Ranch
- Antonio Parkway/La Pata Avenue from Ortega Highway to Avenida Hermosa
- Intersection of Antonio Parkway/La Pata Avenue and Ortega Highway

Transportation Uniform Mitigation Fees

The Transportation Uniform Mitigation Fees (TUMF) program is adopted by the Riverside County Board of Supervisors, and it is administered by the Western Riverside County Council of Governments. TUMF, which includes a network of regional facilities, endeavors to spread the cost of improvements on a regional basis through participation of the Riverside County and individual cities. The fees are collected as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases. The following study area roadway segments are programmed for improvement under TUMF:

- Ortega Highway south of Grand Avenue
- Grand Avenue

3.15.2 Thresholds of Significance

The *CEQA Guidelines* Appendix G provides guidance for assessing the significance of potential environmental impacts. Relative to transportation and traffic, a project could have a significant effect on the environment if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

As discussed in the Notice of Preparations/Initial Studies (see Appendices A1 and A2 of this EIR), the project does not propose any uses (i.e., blinking strobes, lights) that would affect air traffic patterns or air traffic levels. The closest operating airport, Skylark Airport, is approximately seven miles east of the project site. Phase 2 (north parcel) contains a private unused airstrip that would be converted to residential with implementation of the proposed project. No impacts related to air traffic patterns would occur. In addition, the proposed project would neither directly or indirectly eliminate existing or planned alternative transportation corridors or facilities (e.g., bike paths, lanes, bus turnouts, etc.), and would not conflict with adopted policies, plans or programs supporting public transit, bicycle, pedestrian or other alternative transportation systems. Therefore, no further analysis of the above-described criteria is provided in this EIR.

However, the following comments related to transportation and traffic were received in response to the Notice of Preparations/Initial Studies:

- Describe Ortega Highway accessibility; provide appropriate traffic analyses and mitigation for traffic impacts.
- Analyze potential traffic impacts at Long Canyon Road.
- A Traffic Impact Study is necessary to determine the near and long term impacts to State facilities. Coordinate with Caltrans District 8 for work performed within Caltrans Right-of-Way.

- Recommendation of appropriate traffic analyses and mitigation for traffic impacts.
- Describe public access to the project site.
- The project could result in increased traffic impacts.
- Describe deceleration lanes.

The following thresholds of significance are applicable to the above-described criteria:

- The County of Orange Growth Management Program (GMP) guidelines state that project traffic volumes resulting in a one-percent increase in the volume/capacity ratio of a deficient intersection (i.e., operating at LOS E or F) as compared to the No Project condition is considered a significant impact, and mitigation measures are required to reduce the project's impact to a level of insignificance.
- Based on the County of Riverside traffic study guidelines, a significant direct traffic impact would occur when the addition of project-generated traffic (50 or more peak-hour trips) would cause an intersection that operates at an acceptable level of service under Existing traffic conditions (i.e., LOS D or better) to degrade to an unacceptable level of service (i.e., LOS E or F). If an intersection is projected to operate at an unacceptable level of service without the project, and the project would contribute 50 or more peak-hour trips, the impact is considered a significant direct impact. A significant cumulative impact is identified when an intersection is projected to operate worse than an acceptable level of service standard due to cumulative future traffic and a project-related traffic increase of 50 or more peak-hour trips. Cumulative traffic impacts are created as a result of a combination of the proposed project together with other future developments contributing to the overall traffic impacts requiring additional improvements to maintain acceptable level of service operations with or without the project.

3.15.3 Methodology

The evaluation of traffic levels of service for all study area intersections is based on the methodologies set forth in the 2010 Highway Capacity Manual (HCM) and the thresholds described previously. The HCM has long been a tool critical for the planning, programming, and preliminary engineering of roadways. It provides performance measures for the evaluation of roadway systems and methodology for signalized intersections uses various intersection characteristics (such as traffic volumes, lane geometry, and signal phasing and timing) to estimate the average delay experienced by motorists traveling through an intersection. In addition, for signalized intersections in Orange County, the volume-to-capacity (v/c) ratio (calculated using the Intersection Capacity Utilization [ICU] methodology) is utilized.

For intersections that are stop sign controlled with stop control on the minor street only, the calculation of LOS is dependent on the occurrence of gaps occurring in the traffic flow of the main street. Using data collected describing the intersection configuration and traffic volumes at these locations, the LOS is determined based on the worst individual movement or movements (usually left turns from the minor street).

The trip generation rates used in the traffic impact analysis are based upon published data in the Institute of Transportation Engineers (ITE) Trip Generation Manual (9th Edition). To assess future traffic conditions, project generated traffic is combined with existing traffic, ambient growth, and traffic from other surrounding developments. For Existing plus Project conditions, projected future traffic is represented by the sum of existing (2017) traffic and project traffic. For long-range 2035 Conditions, the future traffic forecast is based on the Orange County Traffic Analysis Model (OCTAM). Additional technical methodologies are provided in the traffic impact analysis for the project, which is included as Appendix J of this EIR.

3.15.4 Project Impacts

Impact 3.15-1: Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Trip Generation

As shown in **Table 3.15-3**, the proposed project would generate about 690 daily trips, with about 55 vehicle trips (15 inbound and 40 outbound) during the a.m. peak hour and about 73 vehicle trips (45 inbound and 28 outbound) during the p.m. peak hour. Trip generation rates for the proposed project were derived from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (9th Edition).

All trips generated by the proposed project would enter/exit the project site via Ortega Highway to Long Canyon Road. The entrance to the Phase 1 (south parcel) would be on the south side of Long Canyon Road and the entrance to Phase 2 (north parcel) would be on the north side of Long Canyon Road.

**TABLE 3.15-3
 PROJECT TRIP GENERATION**

Land Use		AM Peak Hour			PM Peak Hour			Daily Total
		In	Out	Total	In	Out	Total	
Single-Family Residential (72 houses)	Rates	0.19	0.56	0.75	0.63	0.37	1.00	9.52
	Trips	14	40	54	45	27	72	685
Vineyard (5 employees)	Rates	0.23	0.03	0.26	0.04	0.22	0.26	1.00 ^a
	Trips	1	0	1	0	1	1	5
Total Project Trips		15	40	55	45	28	73	690

a The 2012 Silver Rose Winery and Resort project traffic impact study used a daily trip rate of three trips per employee for a full-production winery. For purposes of this analysis, a weekday average of one trip per employee is assumed because the project' vineyard would not include a production / wine tasting component, and employment activity for vineyard maintenance would occur at irregular intervals.

Source: Urban Crossroads, 2017, using trip generation rates from the Institute of Transportation Engineers, *Trip Generation Manual*, 9th Edition, 2012 (for residential trips), and deriving trip generation rates for the proposed vineyard from the traffic impact study for the Silver Rose Winery and Resort Project (2012).

Trip Distribution and Assignment

Trip distribution represents the directional orientation of traffic to and from the project site. Trip distribution is heavily influenced by the geographical location of the site, the location of retail, business, and recreational opportunities, and the proximity to the regional freeway system. The assignment of traffic between the project site and the adjoining roadway system is based upon the project’s trip generation and trip distribution, and the proposed arterial highway and local street systems that would be in place by the time of the development’s opening. See Appendix J of this EIR for a graphical depiction of a.m. and p.m. peak-hour intersection turning movement volumes at the study intersections.

Existing Plus Project

Less than Significant Impact. As described in Section 2.0, Project Description, the proposed project includes off-site roadway improvements that include installation of a northbound 12-foot wide acceleration lane and a northbound 12-foot wide left turn lane on Ortega Highway; and installing a minimum 22-foot wide southbound deceleration lane on Ortega Highway from Long Canyon Road to 160 feet to the north.

Intersection levels of service for the existing network with the proposed project traffic volumes and the project roadway improvements are shown in **Table 3.15-4** (LOS calculation sheets are in Appendix J of this EIR). As in Table 3.15-4, the proposed project would not result in an unacceptable LOS (LOS E or below). Therefore, the proposed project would result in a less-than-significant impact in the existing plus project condition.

**TABLE 3.15-4
 EXISTING PLUS PROJECT TRAFFIC CONDITIONS**

Intersection	Traffic Control ^{a,b}	Critical Delay Sec. (V/C Ratio) ^b		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak
Ortega Highway (SR 74) at					
• Antonio Parkway (Orange County) ^b	Signal	43.8 (0.661)	32.0 (0.618)	D	C
• Long Canyon Road (Riverside County)	SSSC	17.4	19.2	C	C
• Monte Vista Street (Riverside County)	SSSC	18.2	24.5	C	C
• Grand Avenue (City of Lake Elsinore)	Signal	14.4	27.8	B	C
Long Canyon Road at					
• South Project Access Road	SSSC	8.5	8.6	A	A
• North Project Access Road	SSSC	8.7	8.8	A	A

a SSSC = Side-Street Stop-Control; Level of service (LOS) is shown for the worst side-street movement(s).

b The volume-to-capacity (v/c) ratio (calculated using the ICU methodology) is presented in parentheses for signalized intersections in Orange County.

Source: Urban Crossroads, 2017.

2020 Plus Project

Less than Significant Impact. The year 2020 traffic volumes were developed using the Orange County Traffic Analysis Model (OCTAM) that accounts for future planned land uses and roadway improvements in the study area. In addition, the vehicular trips that would be generated

from the proposed project were added to the above-described baseline (“without project”) 2020 volumes. The a.m. and p.m. peak-hour intersection turning movement volumes in 2020 without the proposed project are provided in **Table 3.15-5**. As shown, the intersections are anticipated to operate at an acceptable level in 2020 without the proposed project.

**TABLE 3.15-5
 2020 WITHOUT PROJECT TRAFFIC CONDITIONS**

Intersection	Traffic Control ^{a,b}	Critical Delay Sec. (V/C Ratio) ^b		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak
Ortega Highway (SR 74) at					
• Antonio Parkway (Orange County) ^b	Signal	47.9 (0.687)	30.5 (0.632)	D	C
• Long Canyon Road (Riverside County)	SSSC	18.5	29.7	C	D
• Monte Vista Street (Riverside County)	SSSC	18.4	25.6	C	D
• Grand Avenue (City of Lake Elsinore)	Signal	15.5	29.7	B	C

a SSSC = Side-Street Stop-Control; LOS is shown for the worst side-street movement(s).

b For intersections controlled by traffic signals, LOS is determined using the HCM methodology, based on critical delay (in seconds per vehicle). For information purposes, the volume-to-capacity (v/c) ratio (calculated using the ICU methodology) is presented in parentheses for signalized intersections in Orange County.

Source: Urban Crossroads, 2017.

Table 3.15-6 shows that traffic in 2020 with the proposed project and the project roadway improvements would continue to operate at acceptable LOS during peak hours. Therefore, the proposed project would result in a less-than-significant impact in the 2020 with project condition.

**TABLE 3.15-6
 2020 WITH PROJECT TRAFFIC CONDITIONS**

Intersection	Traffic Control ^{a,b}	Critical Delay Sec. (V/C Ratio) ^b		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak
Ortega Highway (SR 74) at					
• Antonio Parkway (Orange County) ^b	Signal	49.0 (0.692)	31.5 (0.644)	D	C
• Long Canyon Road (Riverside County)	SSSC	17.5	20.3	C	C
• Monte Vista Street (Riverside County)	SSSC	18.8	26.4	C	D
• Grand Avenue (City of Lake Elsinore)	Signal	15.6	29.6	B	C
Long Canyon Road at					
• South Project Access Road	SSSC	8.5	8.6	A	A
• North Project Access Road	SSSC	8.7	8.8	A	A

a SSSC = Side-Street Stop-Control; Level of service (LOS) is shown for the worst side-street movement(s).

b For intersections controlled by traffic signals, LOS is determined using the HCM methodology, based on critical delay (in seconds per vehicle). For information purposes, the volume-to-capacity (v/c) ratio (calculated using the ICU methodology) is presented in parentheses for signalized intersections in Orange County.

Source: Urban Crossroads, 2017.

2035 Plus Project

Less than Significant Impact. The year 2035 traffic volumes were developed using the OCTAM that accounts for future planned land uses and roadway improvements in the study area, which include those that have been planned for Rancho Mission Viejo (Ranch Plan) and the City of Lake Elsinore General Plan that include the widening of Grand Avenue through its intersection with Ortega Highway by the City of Lake Elsinore. This project would widen Ortega Highway from two to six lanes (three lanes in each direction), west of the I-15 to the Ortega mountains. This improvement includes turn pockets and a traffic signal installation at the intersection of Ortega Highway and Grand Avenue (City of Lake Elsinore Capital Improvement Plan Budget 2016-17). The vehicular trips that would be generated by the proposed project were added to the baseline (“without project”) 2035 volumes to identify traffic volumes that would be generated with implementation of the proposed project.

**TABLE 3.15-7
 YEAR 2035 WITHOUT PROJECT TRAFFIC CONDITIONS**

Intersection	Traffic Control ^{a,b}	Critical Delay Sec. (V/C Ratio) ^b		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak
Antonio Parkway at Ortega Highway (SR 74) (Orange County) ^a	Signal	110.1 (0.914)	53.4 (0.865)	F	D
Ortega Highway (SR 74) at					
• Long Canyon Road (Riverside County)	SSSC	21.3	57.3	C	F
• Monte Vista Street (Riverside County)	SSSC	25.2	59.7	D	F
• Grand Avenue (City of Lake Elsinore) - with improvement ^c	Signal	12.8	24.6	B	C
• Cow Camp Road (Orange County) ^b	Signal	13.6 (0.607)	13.8 (0.627)	B	B

a SSSC = Side-Street Stop-Control; Level of service (LOS) is shown for the worst side-street movement(s).

b For intersections controlled by traffic signals, LOS is determined using the HCM methodology, based on critical delay (in seconds per vehicle). For information purposes, the volume-to-capacity (v/c) ratio (calculated using the ICU methodology) is presented in parentheses for signalized intersections in Orange County.

c Widening of Grand Avenue, to add a second lane in each direction, is in the City of Lake Elsinore General Plan, and anticipated for the Rancho Mission Viejo (Ranch Plan).

Source: Urban Crossroads, 2017.

As shown in **Table 3.15-7**, the following study intersections are projected to operate at unacceptable LOS during one of the peak hours without project traffic:

- Ortega Highway at Antonio Parkway (LOS F during the a.m. peak hour)
- Ortega Highway at Long Canyon (LOS F during the p.m. peak hour)
- Ortega Highway at Monte Vista Street (LOS F during the p.m. peak hour)

Table 3.15-8 shows the project condition with the project traffic in 2035. As shown, the intersection of Antonio Parkway at Ortega Highway would continue to operate at an unacceptable LOS of F in the a.m. peak hour. A comparison of Table 3.15-7 and Table 3.15-8 shows that the v/c ratio would increase from 0.914 in the a.m. peak hour without the project to 0.918 with the proposed project, which is less than a 1 percent increase in the v/c ratio of the deficient intersection (the Orange County threshold). Therefore, the proposed project would not result in an impact at the intersection of Antonio Parkway at Ortega Highway in the 2035 with project condition.

As shown on Table 3.15-8, operation of Ortega Highway at Long Canyon Road would be improved (from LOS F in the p.m. peak hour to LOS D in the p.m. peak hour) with the project implemented left turn lane. In addition, the anticipated LOS deficiency at the intersection of Ortega Highway and Monte Vista Street is based on the nominal approach volumes on Monte Vista Street, which is not anticipated to disrupt the flow of traffic along Ortega Highway. Also, the east leg of this intersection currently exists as a gated (private) driveway and the project would add less than 50 trips at this intersection (Urban Crossroads 2017). As a result, project impacts at the intersection of Ortega Highway and Monte Vista Street would be less than significant.

**TABLE 3.15-8
 YEAR 2035 WITH PROJECT TRAFFIC CONDITIONS**

Intersection	Traffic Control ^{a,b}	Critical Delay Sec. (V/C Ratio) ^b		Level of Service	
		AM Peak	PM Peak	AM Peak	PM Peak
Antonio Parkway at Ortega Highway (SR 74) (Orange County) ^b	Signal	110.6 (0.918)	51.8 (0.865)	F	D
Ortega Highway (SR 74) at					
• Long Canyon Road (Riverside County)	SSSC	18.1	28.2	C	D
• Monte Vista Street (Riverside County)	SSSC	25.7	62.3	D	F
• Grand Avenue (City of Lake Elsinore) - with improvement ^c	Signal	14.5	24.9	B	C
• Cow Camp Road (Orange County)	Signal	13.7 (0.613)	14.0 (0.634)	B	B
Long Canyon Road at					
• South Project Access Road	SSSC	8.5	8.6	A	A
• North Project Access Road	SSSC	8.7	8.8	A	A

a SSSC = Side-Street Stop-Control; Level of service (LOS) is shown for the worst side-street movement(s).
 b For intersections controlled by traffic signals, LOS is determined using the HCM methodology, based on critical delay (in seconds per vehicle). For information purposes, the volume-to-capacity (v/c) ratio (calculated using the ICU methodology) is presented in parentheses for signalized intersections in Orange County.
 c Widening of Grand Avenue, to add a second lane in each direction, is in the City of Lake Elsinore General Plan, and anticipated for the Rancho Mission Viejo (Ranch Plan).

Source: Urban Crossroads, 2017.

Construction Impacts

Less than Significant Impact. Construction of the project would occur in two sequential phases, on Phase 1 (south parcel) first and then on Phase 2 (north parcel). However, construction of Phase 2 (north parcel) is dependent on economic factors including housing market conditions at the time

of construction. Construction related traffic would vary depending on the activity, and construction would occur in the following phases: (1) site preparation; (2) grading and excavation; (3) construction of drainage, utilities, and subgrade infrastructure; (4) building construction; and (5) paving and application of architectural coatings. Grading for the project would be balanced on-site, and there would be no import or export of soils.

Construction activities would be limited to the hours between 7:00 a.m. to 5:00 p.m., Monday through Saturday, excluding federal holidays, as included by Project Design Feature PDF-21 and would be consistent with the County's Noise Ordinance.

Construction activities that would generate offsite traffic would include the delivery of construction supplies, materials, and equipment to the project site; the daily arrival and departure of construction workers; and the removal of construction debris. Large construction delivery and haul trucks have slower movements and larger turning radii compared to passenger vehicles, which may slow traffic along Ortega Highway; however, the existing capacity of the roadway, would be able to accommodate these temporary and intermittent truck trips. As described in the Project Description, the maximum number of workers on the project site would be 50 during the building construction phase. The anticipated number of employee plus equipment/materials haul trips would be less than the 690 daily trips that would be generated from operation of the proposed project (as shown in **Table 3.15-3**), and as described above, impacts related to 690 daily trips would be less than significant. Therefore, impacts related to the temporary construction related traffic that would generate less than 690 daily trips would also be less than significant. Overall, traffic impacts related to construction would be less than significant.

Impact 3.15-2: Would the project conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant Impact. As described above, Ortega Highway is part of the Orange County and Riverside County CMP highway systems, but none of the intersections directly serving the project site are within the CMP system (OCTA, 2015). In addition, the CMP criteria require CMP related traffic analysis for project that generate 2,400 daily trips or 200 peak-hour trips. As provided in **Table 3.15-3**, the proposed project would result in 690 daily trips, that includes a total of 55 a.m. peak hour trips and 73 p.m. peak hour trips. Thus, the project does not meet the criteria requiring a CMP analysis on the Orange County CMP system, and impacts would be less than significant.

For Riverside County, the CMP only requires analysis and a deficiency plan if the proposed development causes the LOS on a non-exempt CMP facility to fall to below the LOS E standard. As described above, the proposed project would not result in significant impacts at any CMP facility in Riverside County. Thus, impacts related to conflict with an applicable congestion management plan would be less than significant.

Impact 3.15-3: Would implementation of the proposed project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. The project site is generally vacant and is surrounded by sparse rural development. The project would develop residential uses on the project site. No incompatible uses would exist within or adjacent to the project area. As provided in the Project Description, the project includes 34.5 acres of vineyards throughout both phases of the project. The vineyards are included in the fuel modification and landscaping zones that surround and buffer the residential development areas. The grapes would be harvested and sold by the HOA that would be developed for the project. Thus, the project may involve some farm equipment that may be needed for harvesting grapes. However, the location of the harvesting equipment would be in the landscaped portions of the project, at limited times of the year. Due to the limited and intermittent grape harvesting activities in the rural and low density area of the proposed project, the harvesting of grapes would not substantially increase hazards related to incompatible uses, and impacts would be less than significant.

Access for the project site would be provided from Long Canyon Road, which intersects with Ortega Highway. Stop signs, stop bars, and stop legends would be provided for vehicles exiting the project at the intersection of Long Canyon Road. The gated entries to the development areas would be constructed and setback from Long Canyon Road at a distance that complies with the Orange County Standard Plan No. 1107, which is a minimum of 100 feet from the curb line of Long Canyon Road, to provide adequate vehicle stacking space, included as Project Design Feature PDF-8. In addition, the project includes provision of an eastbound left-turn lane (300-foot storage length), a westbound right-turn lane (320-foot storage length), and a westbound acceleration lane at the project access point on Ortega Highway (Project Design Feature PDF-7).

Evaluation of the project access intersection with Ortega Highway indicates that available sight distances would be inadequate without trimming of existing trees and other vegetation that encroaches into the line of sight on the south side of Long Canyon Road. In addition, the following standard County condition must be met to receive permitting approval from Orange County, which would ensure that adequate sight distance would be provided:

- T07:** Prior to the issuance of any grading permits, the applicant shall provide adequate sight distance at all street intersections and all driveways per Standard Plan 1117, in a manner meeting the approval of the Manager, Traffic Engineering. This includes any necessary revisions to the plan such as removing slopes or other encroachments from the limited use area.

In addition, all onsite roadways would be developed consistent with the County's design components (Project Design Feature PDF-9). With implementation of these Project Design Features and the County standard roadway requirements that are necessary to receive project permits from the County's Building and Safety Department, impacts related to hazards due to a design feature would be less than significant.

Impact 3.15-4: Would the project result in inadequate emergency access?

Less than Significant Impact. The proposed project would involve the construction of new housing, onsite roadways, and off-site turning lanes to access the project site. As stated above, the turning lanes and onsite roadways have been designed to Caltrans (off-site) and County (on-site) standards that would provide adequate access to the project site from a traffic operations and emergency access standpoint. In addition, prior to construction permit approval the roadway plans require review and approval by Caltrans (off-site only), County Public Works Department, and the Orange County Fire Authority to ensure adequate design for emergency access pursuant to County requirements. The Standard County plan check and permitting procedures and Caltrans coordination for the improvements to Ortega Highway are required to ensure that planned emergency access is provided pursuant to the requirements of the emergency access codes. Therefore, the proposed project would not result in inadequate emergency access, and impacts would be less than significant.

3.15.5 Cumulative Impacts

The geographic scope of for traffic impacts include the study intersections analyzed in year 2035, which include projects that could result in cumulative traffic projects. The traffic analysis of future (Year 2035) traffic conditions took into account cumulative projects and regional growth; thus, provides a cumulative analysis of potential impacts. As described above and shown in **Table 3.15-8**, with anticipated road improvements, the study intersections would operate at acceptable LOS, except for the intersections of Ortega Highway at Antonio Parkway, and Ortega Highway at Monte Vista Street, where the project would result in a limited number of a.m. and p.m. peak hour trips.

A significant cumulative impact is identified when a facility is projected to operate below the level of service standards due to cumulative future traffic AND a project-related traffic increase as measured by 50 or more peak hour trips. Cumulative traffic impacts are created as a result of a combination of the proposed project together with other future developments contributing to the overall traffic impacts requiring additional improvements to maintain acceptable level of service operations with or without the project. Based on this criteria, the project is not anticipated to contribute a significant impact to Antonio Parkway/Ortega Highway or Ortega Highway / Monte Vista Street because the project would add less than 50 trips to these locations during peak hours. Therefore, traffic impacts associated with the proposed project would be less than cumulatively considerable, and cumulative impacts would be less than significant.