

VOLUME I

DRAFT ENVIRONMENTAL IMPACT REPORT

TR 060922

CUP No. 04-075

Oak Tree Permit No. 04-075



SKYLINE RANCH PROJECT



County Project No. 04-075

State Clearinghouse No. 2004101090

County of Los Angeles

Department of Regional Planning

Impact Analysis Section

320 West Temple Street

Los Angeles, California 90012-3225

JULY 2009

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SKYLINE RANCH PROJECT



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EXECUTIVE SUMMARY

A. INTRODUCTION

In accordance with *State CEQA Guidelines* §15123, this Chapter of the EIR provides a brief description of the project, identification of significant effects and proposed mitigation measures or alternatives that would reduce or avoid those effects, areas of controversy known to the lead agency, and issues to be resolved.

B. PROJECT LOCATION

The Skyline Ranch site, which occupies approximately 2,173 acres, is located in the Santa Clarita Valley west of Sierra Highway, north of Highway 14 (Antelope Valley Freeway) and the City of Santa Clarita in unincorporated Los Angeles County. The project site includes 258 undeveloped parcels west of Sierra Highway between the Santa Clara River and Vasquez Canyon Road. The project site is roughly defined by Sierra Highway (Mint Canyon) on the east and southeast, residential communities in Santa Clarita on the south and southwest, Plum Canyon Road on the west, Bouquet Canyon Road to the northwest, and Vasquez Canyon Road to the northeast.

C. PROPOSED PROJECT

The project applicant proposes to develop on approximately 622 acres of the 2,173-acre site 1,260 single-family residential lots with pads ranging in size from 5,775 to 7,350 square feet, an approximately 11-acre elementary school site, approximately 12 acres of public parkland to be dedicated to the Los Angeles County Department of Parks and Recreation, and approximately 6 acres of private parkland to be maintained by a homeowners' association. Development is proposed for the southern portion of the property where slopes of 25 percent or less predominate. Nearly three quarters of the site (the northern 1,551 acres) is proposed to remain undeveloped, with approximately 1,355 acres dedicated or designated as natural open space through establishment of the proposed Skyline Ranch Conservation Area (SRCA). Approximately 166 acres of undeveloped land in the northern portion of the site on Cruzan Mesa would remain undeveloped and designated as a Non-Development/Continuing Use Area. Also, within the northern portion of the site approximately 22 acres would be preserved as a Mitigation Exchange Area for 22 acres of preserve area within adjacent recorded Tract 46018 that would be disturbed due to the construction of Skyline Ranch Road. These three areas would preserve approximately

80 percent of the lands being proposed by the County for establishment of the Cruzan Mesa Vernal Pools Significant Ecological Area (SEA). No development associated with the project would occur within proposed SEA areas. The remainder of the undeveloped northern area, approximately 9 acres, would be designated as open space.

The area proposed for development would be subdivided into 1,313 lots, including 1,260 residential lots, 10 lots for park areas, 1 lot for a school site, 13 debris basin lots, 4 water tank/booster pump station lots, and 25 open space lots. Primary access to the tract is provided by the proposed extension of Whites Canyon Road from Plum Canyon to the southeast through the project interior ultimately connecting to Sierra Highway. More detailed descriptions of the various components of the project are provided in Chapter 2.0, Project Description, of this Draft EIR.

D. AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

According to *State CEQA Guidelines* §15123(b)(2), the Executive Summary of an EIR shall identify potential areas of controversy and issues to be resolved. Generally, these include those areas where a significant unavoidable impact has been identified as well as issue areas where concerns have been raised, primarily through the Notice of Preparation process. For the Skyline Ranch project, a significant unavoidable impact would occur in the areas of visual qualities, noise, air quality, law enforcement services, and cumulative traffic, solid waste disposal, and global climate change.

In addition, a number of comments have been received by the County in response to the Notice of Preparation and at the scoping meeting for the proposed project. These comments raised issues concerning growth inducing impacts, traffic, sewer and water services, fire and emergency access, impacts to the California Highway Patrol and County Sheriff's services, impacts to Vasquez Canyon Road, and past and current uses of the project site related to filmmaking in the sensitive northern portion.

E. ALTERNATIVES

The *State CEQA Guidelines* require an EIR to “describe the range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” The *State CEQA Guidelines* direct that selection of alternatives be guided by a “rule of reason” that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.

As described in detail in Chapter 5.0, Alternatives, of this Draft EIR, four alternatives to the project were identified, including a No Project/No Development Alternative, a Reasonably Foreseeable On-Site Development Alternative, and two Reduced Project Alternatives, Reduced Project Alternative A and Reduced Project Alternative B. Based on an analysis of these alternatives, an environmentally superior alternative is identified. The four identified alternatives, as well as the identified environmentally superior alternative, are summarized below.

1. Summary of Alternatives

a. No Project/No Development Alternative

The No Project/No Development Alternative assumes that no project is approved, and no development occurs within the project site. Thus, the physical condition of the project site would remain as it is today. Under this alternative, areas on Cruzan Mesa would continue to be leased by a film production company for use as an outdoor movie set.

b. Reasonably Foreseeable On-Site Development Alternative

The Reasonably Foreseeable On-Site Development Alternative involves development of Recorded Tract Map No. 44967, a 200-lot subdivision on 360 acres in the northern portion of the site. The area of site disturbance is estimated to be 189 acres. Site access would be from Vasquez Canyon Road to Mystery Mesa Drive.

c. Reduced Project Alternatives

The Reduced Project Alternative A would include development of both the recorded 200-lot tract map in the northern portion of the site, as described under No Project/Reasonably Foreseeable On-Site Development, and a reduced residential development in the southern portion of the site. The southern component would include a 600-lot single-family residential development on approximately 300 acres. The total area of site disturbance is estimated to be 536 acres (189 acres associated with the 200-lot tract map and 347 acres associated with the 600 lot development and the roadway linking the two residential developments). Due to the reduction in the size of the southern development, no elementary school site or improved public park is proposed, and there would be no extension of Whites Canyon Road to Sierra Highway. Access would be provided through the construction of a roadway that would connect to Whites Canyon Road at the western boundary of the site and then run east and north, linking both residential developments before connecting with Vasquez Canyon Road at the northern boundary of the site.

Reduced Project Alternative B would involve a 935-lot single-family residential development on 397 acres in the southwestern portion of the site. This Alternative represents an approximately 26 percent reduction in residential development and the area subject to grading. A 7.5-acre public park site and a 7.5-acre public school site would be provided, proportionately reduced in size from the proposed project. Project access would be provided with a loop road that would connect to Whites Canyon Road at the western boundary of the site and by a connection to Bakerton Avenue in the existing residential neighborhood immediately west of the project site. In contrast to the proposed project, the Reduced Project B Alternative would not provide a Highway connecting Whites Canyon Road to Sierra Highway. This change in site access would avoid impacts on the unnamed drainage on the southern portion of the site.

2. Comparison of Alternatives and Identification of the Environmentally Superior Alternative

The comparison of Alternatives indicates that the Reduced Project Alternative B would be environmentally superior as it would reduce almost all of the project-related impacts, including biological resource impacts associated with grading of the unnamed drainage in the southern portion of the site. Although the magnitude of impacts for most environmental issues would be reduced compared to the proposed project, Reduced Project Alternative B would still have the same, albeit reduced, significant and unavoidable impacts. Even with a 26 percent reduction in project size and other design changes, there would still be significant and unavoidable impacts associated with visual impacts due to grading/landform alteration, traffic, construction and operational air quality and noise, law enforcement, and global climate change. Even with a notably smaller project, these impacts are difficult to avoid or fully mitigate. For example, the topography of the site is such that unless important biological resources in the northern (more level) portion of the site are impacted, grading to support residential development will have significant impacts on landform and views. Furthermore, even a more substantial reduction in the size of the project than provided with Alternative B would still result in significant impacts associated with both construction and operational air and noise, due to the nature of these impacts.

Regarding project objectives, as discussed in detail in Chapter 5.0, Alternatives, by reducing the size of the project by approximately 26 percent, Reduced Project Alternative B would not fulfill certain objectives to the same degree as the proposed project. For example, due to the reduction in the amount of residential development, the Alternative would not increase the supply of housing to serve existing and future needs in the Santa Clarita Valley to the same degree as the proposed project. This Alternative would also not fulfill park and recreation objectives to the same extent as the proposed project, since no trail easement would be provided to support the extension of the County Trail System. Additionally, Reduced Project Alternative B would not fulfill the mobility objective of providing for the major highway improvement involving the Whites Canyon Extension to Sierra Highway, as proposed by the project and

conditionally approved and shown on the County's Draft Highway Plan. Without this highway improvement as part of the project, the County's ability to complete such a connection could be compromised, as it would not be substantially funded by the project and its implementation, if it were to occur, could be significantly delayed.

F. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 on page ES-6 presents a summary of the environmental impacts associated with the proposed project, the mitigation measures that would reduce or avoid those effects, and the level of significance of the impacts following implementation of the mitigation measures.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
A. GEOTECHNICAL RESOURCES		
<p>As with all of southern California, the proposed project would be exposed to strong seismic ground shaking in the event of an earthquake along any of major faults in the vicinity. Strong ground shaking can result in serious damage to structures; personal injuries, including loss of life; damage to property; and economic and social dislocations. However, by complying with the Uniform Building Code (UBC) and County of Los Angeles standards and procedures, project impacts related to ground shaking would be less than significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>Portions of Whites Canyon and a tributary canyon, which extend on-site within the development area, have been delineated as Seismic Hazard Zones, where liquefaction hazards may exist. Placement of structures in this or any other area of the site containing alluvial materials could result in a potentially significant impact due to liquefaction. In addition, seismically-induced settlement occurs during seismic ground shaking due to coarse-grained soils above the groundwater table settling into a tighter packing configuration. The seismic settlement below the groundwater is related to pore pressure changes during liquefaction. Similarly, placement of structures in this or any other area of the site containing surficial materials of low relative density could result in a potentially significant impact due to seismically-induced settlement.</p>	<p>4.A-1: The following materials are considered unsuitable and shall be removed and recompacted in the grading of the site: existing fill soils, colluvial deposits and slopewash, alluvial deposits, landslide debris, and terrace deposits. Their removal and recompaction mitigate the potential for seismic settlement.</p>	<p>Less than significant.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Much of the sloping terrain on the site has been delineated a Seismic Hazard Zone with the potential for earthquake-induced landslides. Placement of structures in areas identified as having potential for landslides would be considered a significant impact with potential for damage to structures; personal injuries, including loss of life; damage to property; and economic and social dislocations.</p>	<p>4.A-2: Landslides (or portions thereof) that remain in place and are not removed and recompacted following the grading of the project site shall be designated as Restricted Use Areas, in accordance with Los Angeles County Department of Public Works (LACDPW) requirements. Landslides designated as Restricted Use Areas and landslides that are removed and recompacted are identified in the Geotechnical Investigations prepared by Geolabs-Westlake Village (dated March, 6, 2004, August 23, 2004, January 3, 2005, November 16, 2006, April 13, 2007, and August 28, 2008).</p>	<p>Less than significant.</p>
<p>The project site would be graded to provide for major roads and infrastructure, establish drainage patterns and for creation of building pads for the various land uses within the project. Remedial grading in the form of buttress and stability fills would also be required for graded slopes that expose unfavorable geologic conditions or unsuitable soils. Approximately 20,800,000 cubic yards of soil would be graded within the southern 622 acres of the site and on 33.7 acres of adjacent property to the east, west, south, and southwest. Geologic mapping of the site indicates that surficial instability of the natural slopes commonly occurs at gradients of 1.25:1 or steeper within thin, sandy surficial soil in the form of shallow isolated soil slips. The most common occurrences of such features are along the sides of steeply incised canyons such as Whites Canyon. In addition, review of the Tentative Tract Map indicates that some lots would be exposed to ascending natural slope conditions. Placement of structures in areas identified as having potential for</p>	<p>4.A-3(a): Interior slopes with daylighted bedding conditions shall be analyzed for appropriate buttress design. Tall cut slopes in the southerly portion of the site are anticipated to expose friable, uncemented bedrock zones and large cobbles and boulders. Several of these slopes require stabilization in order to mitigate the potential for raveling and dislocation of cobbles and boulders. All stability fills and buttresses shall be provided with backdrains and shall incorporate the generalized stability fill key dimensions for the “refacing” of planned cuts slopes.</p> <p>4.A-3(b): Fill caps for cut/fill lots shall be constructed to provide uniform foundational support for future structures. Shallow cut lots and cut/fill lots shall be provided with a minimum 5-foot cap of compacted fill. Cut/fill lots underlain by 10 feet or less of compacted fill on the fill portion of the lot shall have the cut portion overexcavated a minimum of 5 feet below finish grade and replaced with compacted fill, thus providing a fill cap with a minimum 5-foot fill</p>	<p>Less than significant.</p>

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<p>surficial instability would be considered a significant impact.</p>	<p>thickness. For those transition lots with 10 to 20 feet of fill on the fill side, the cut side shall be provided with a minimum 7-foot-thick fill cap. For those transition lots with in excess of 20 feet of fill on the fill side, the cut side shall be provided with a minimum 10-foot-thick fill cap. Fill caps shall extend a minimum of 5 feet beyond the perimeter footings.</p> <p>Where the backslope is 3:1 or steeper, the last bench prior to reaching the undercut shall be at least 15 feet in width. The 15-foot-wide bench is intended to reduce the steep dip of the fill-bedrock contact commonly created during undercutting.</p> <p>4.A-3(c): All vegetation, trash debris, or other deleterious material shall be stripped from the area to be graded. These materials shall be removed from the site and deposited at a local landfill or recycled on site. Soils bearing sparse grasses may be thoroughly mixed with at least ten parts clean soil and incorporated into the engineered fill. Other materials shall be removed from the site.</p> <p>4.A-3(d): Fill slopes, which toe onto sloping ground, shall be founded in bedrock, below the compressible surface soils. The key shall be at least 20 feet wide and 3 feet deep (measured on the downslope side). The bottom of the key shall be graded so that there is at least 1 foot of fall across its width (toward the upslope side). The key shall be located in front of the toe of slope (as shown on the plan) so that the outside limit of the key lies at or beyond a 1:1 projection from the planned toe of the slope.</p>	

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	<p>4.A-3(e): Fill-over-cut slopes shall have the fill founded on a 20-foot-wide bench cut into the bedrock or, where bedrock is not present in the cut portion of the slope, on a key cut below the toe of the slope. The 20-foot bench shall be graded to provide at least 1 foot of fall toward its upslope side. If keyed below the toe of slope, then the key shall be at least 20 feet wide, 3 feet deep (below the toe), and tilted (at least 1 foot) into the slope. The cut portion of the slope shall be exposed (and observed by a representative of a qualified geotechnical firm) prior to constructing the fill portion of the slope.</p> <p>4.A-3(f): Exposed surfaces shall be scarified, moistened, or air-dried, as appropriate, and compacted to 90 percent of the material’s maximum dry density prior to placement of fill.</p> <p>4.A-3(g): Where the ground slopes steeper than 5:1 (horizontal: vertical), the fill shall be properly benched into bedrock.</p> <p>4.A-3(h): All fill slopes shall utilize mixed soils [sand with some proportion of fines; i.e., clayey sand] in the outer 20 feet of the fill slope in order to minimize the potential for surficial slope deterioration.</p> <p>4.A-3(i): Fill materials shall be placed in thin lifts, watered to near the material’s optimum moisture content (or to near two percent over optimum moisture content and compacted to the applicable level of relative compaction prior to placing the next lift).</p> <p>4.A-3(j): The 90 percent relative compaction standard</p>	

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	<p>applies to the face of fill slopes. This may be achieved by overfilling the constructed slope and trimming to a compacted finished surface, rolling the slope face with a sheepsfoot, or any method that achieves the desired product.</p> <p>4.A-3(k): All retaining walls constructed within the project site shall be constructed in accordance with the Los Angeles County Code requirements and a design-level geotechnical investigation.</p> <p>4.A-3(l): Backfill for retaining walls shall be properly compacted. An impervious cap shall be provided at the top of the backfill to retard infiltration of water.</p> <p>4.A-3(m): Slope setbacks set forth in the Los Angeles County Building Code shall be applied to residences and appurtenant structures. Structures situated within the setback area shall require special foundation design, which might include deepening footings, pile/caisson construction, and/or consideration of creep loads.</p> <p>4.A-3(n): Backfill for utility trench excavations shall be compacted to at least 90 percent relative compaction. Where installed in sloping areas, the backfill shall be properly keyed and benched.</p> <p>4.A-3(o): Those lots exposed to ascending natural slope conditions shall be provided with drainage ditches or swales, berms or impact walls, and/or small slopes descending from the pads to the natural slopes, to provide protection from potential debris flow hazard.</p>	

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<p>Deep cuts are planned within the Saugus and Mint Canyon Formations, where hard, crystalline cobbles and boulders within the conglomerate beds are expected to be encountered and that may be difficult to excavate. Although this is a less than significant impact, overexcavation where these materials are anticipated may be considered.</p> <p>Oversized materials encountered in cut areas are expected to create difficult conditions as they are not expected to break down with normal grading equipment or operations. Therefore, it is expected that much of these materials would be placed in canyons within the grading area as windrows in accordance with traditional rock disposal methods and in compliance with applicable regulations. In addition to such rock disposal measures, a sizable amount of oversized rock is expected to remain toward the later part of grading. These materials would be handled through such means as use as rip-rap, placement and covering in canyons within the graded area, or crushing for use as base. No oversized rock is anticipated for export. Based on the above, excavation of oversized materials is not anticipated to significantly impact geological and soils conditions on the project site.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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<p>The vast majority of the soils on the project site are within the very low and low expansion index ranges. However, expansive lithologies were identified within the westerly portion of the project site within the Saugus Formation. Therefore, placement of structures in this area of the site would result in a potential significant impact relative to expansive soils, creating substantial risks to life or property.</p>	<p>4.A-5: Expansive lithologies shall be over-excavated where encountered within lots and streets in order to mitigate the potential for differential expansion. The depth of such over-excavation shall range between 7 and 10 feet.</p>	<p>Less than significant.</p>
<p>The on-site soils and bedrock formations are predominantly sandy in nature but contain some fines. Extensive excavation and grading of the project site would result in the movement of approximately 20.8 million cubic yards of on-site earth materials. Consequently, soil erosion may potentially result from project development. Compliance with applicable Best Management Practices, required erosion control plans, and other regulatory requirements will be mandatory by the governing agencies. Such measures have proven to reduce undue soil erosion on projects in the nearby vicinity with similar soils types. Ultimately, the proper planting and landscaping (accompanied by diligent maintenance) of the slopes provides the most effective erosion control. However, a more specific mitigation measure is identified to ensure that impacts associated with soil erosion are reduced to less-than-significant levels.</p>	<p>4.A-6: During grading, soils containing significant fines content (cohesive soils) shall be preferentially placed in the outer five feet of fill slopes. In addition, the required 90 percent relative compaction standard shall be applied to the outer face of fill slopes in order to reduce the amount of infiltration and erosion. Cut slopes exposing erodible bedrock formations shall require stabilization with engineered fill.</p>	<p>Less than significant.</p>
<p>B. HYDROLOGY AND WATER QUALITY</p>		
<p>Construction of the proposed project would not have a significant impact on flow rates for a 50-year storm within the five watersheds that would be affected by the project. In addition, the project would not change</p>	<p>4.B-1: Final drainage plans for the project shall ensure that there is no displacement of flood plain area in the vicinity of Sierra Highway and its intersection with proposed Skyline Ranch Road through construction of</p>	<p>Less than significant.</p>

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<p>drainage patterns in a manner that would increase flood potential. However, the proposed project could have an effect on Sierra Highway in an area that is designated as a FEMA AO Flood Zone, which is defined as subject to 100-year shallow flooding, due to construction of Skyline Ranch Road. In order to achieve the grade necessary to connect this roadway to the proposed developed areas of the site, an area of fill would be required near the roads intersection with Sierra Highway. This potential for displacement of flood plain area is considered a significant impact.</p>	<p>a culvert, bridge, or combination thereof, within the flood plain area. Final drainage plans and the culvert or bridge shall be designed during the engineering stage by a licensed engineer to ensure that the water surface shall be equal or lower than existing conditions both downstream and upstream of the proposed project entrance along Sierra Highway and adjacent properties during a 50-year storm event and that post-development flow rates shall be less than existing conditions downstream along Sierra Highway and adjacent properties. Final drainage plans to achieve these standards shall be designed to the satisfaction of, and approved by, the Los Angeles County Department of Public Works and City of Santa Clarita, Department of Public Works.</p>	
<p>Grading and construction activities would result in the removal of existing vegetation in an approximately 622 acre area of the site, which would result in a denuded site that would be susceptible to erosion from construction irrigation (i.e., dust control measures) and precipitation. Additionally, due to the extent of soils that would be graded, re-engineered, and reused, stockpiling of soils would occur within the site and would be subject to erosion from construction irrigation and/or precipitation. If not properly controlled, erosion of exposed soils would pollute runoff waters and transport these soils as sediment into the natural channels southwest of the site and ultimately into the Santa Clara River, which is an</p>	<p>4.B-2: Prior to issuance of grading permits, the construction contractor shall prepare an Erosion Control Plan (ECP) that incorporates BMPs to specifically address and reduce the potential for erosion and sedimentation impacts on downstream receiving waters. The project shall include any combination of the following erosion control BMPs: Hydraulic mulch, preservation of existing vegetation, hydroseeding,¹ streambank stabilization, diversion of runoff (such as earth dikes, temporary drains, slope drains), velocity dissipation devices (outlet protection, check dams, and slope roughening/terracing), and dust control measures (such as sand fences and watering). Sedimentation control BMPs may include filtration devices and</p>	<p>Less than significant.</p>

¹ California Stormwater Quality Association, *California Stormwater BMP Handbook—Construction*, January 2003.

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<p>impaired water body. These potential construction-related erosion and sedimentation effects would have a significant impact on water quality.</p>	<p>barriers (such as silt fencing, check berms, debris basins, sediment traps, fiber rolls, sandbags, gravel inlet filters, and straw bale barriers) and/or settling devices (such as sediment traps or basins). Stabilization control BMPs may include blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments. The construction entrance(s)/exit(s) should also be stabilized (e.g. aggregate underdrain with filter cloth). Specific application of these BMPs shall occur before site runoff is discharged to proposed and existing off-site storm drain/flood control channel systems that ultimately discharge water to the Santa Clara River.</p> <p>The ECP shall be reviewed by the Los Angeles County Department of Public Works and by the Los Angeles Regional Water Quality Control Board for inclusion of appropriate and effective erosion and sedimentation controls.</p>	
<p>In addition to grading, pollutants generated from construction activities would have a significant impact on water quality.</p>	<p>4.B-3: Prior to issuance of any grading permits, a Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the construction contractor and submitted to the Los Angeles County Department of Public Works and the Los Angeles Regional Water Quality Control Board for approval. The SWPPP shall meet all applicable regulations by requiring controls of pollutant discharges that utilize best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to reduce pollutants. The SWPPP shall be certified in</p>	<p>Less than significant.</p>

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	<p>accordance with the signatory requirements of the General Construction Permit.</p> <p>The SWPPP shall be developed and amended or revised, when necessary to meet the following objectives:</p> <ul style="list-style-type: none"> • Identify all pollutant sources including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site; • Identify non-storm water discharges; • Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction; and, • Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs). Paving operations shall be performed using measures to prevent runoff pollution. <p>In compliance with the SWPPP, non-stormwater level BMPs shall be implemented that include controls and objectives for vehicle and equipment maintenance, cleaning, and fueling, and potable water/irrigation practices. Material/waste management BMPs shall include: liquid waste management, spill prevention and control, hazardous waste management, and</p>	

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	<p>sanitary/septic waste management. Specific BMPs to be implemented by the construction contractor may include but are not necessarily limited to the following:</p> <ul style="list-style-type: none"> • Paving operations shall be performed using measures to prevent runoff pollution; • Wash out areas for concrete trucks, construction vehicles and equipment, paint and stucco equipment, and other construction materials shall be designated, and containment measures employed, to prevent discharges of wash water; • Vehicle and equipment maintenance and fueling activities shall occur off-site to the degree feasible; • Construction area, street and pavement washing shall be controlled to preclude discharges of wash water; • Discharging super-chlorinated water pipe and sprinkler system flushing and test water to the storm drain system shall be prohibited; • All waste shall be properly stored and disposed of off-site; • Employees and subcontractors shall be trained in the prevention of storm water contamination; • Hazardous material (specifically chlorine- and ammonia-containing products) shall be stored in elevated (e.g., on pallets or a deck) and covered structures to prevent any contact between the chemicals and irrigation or precipitation; 	

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	<ul style="list-style-type: none"> • All hazardous and chemical materials generated during construction (i.e., diesel fuel, hydraulic fluid, motor oil, etc.) shall be cleaned up and disposed of in compliance with Federal, State, and local laws, regulations and ordinances; and • All structure construction and painting areas shall be enclosed, covered, or bermed to prevent run-on/run-off in these areas and associated contamination of storm water. 	
<p>Under the operational phase of the project 18 percent of previously permeable surface would become impervious surfaces, due to the addition of residential development, roads, and sidewalks a school, and offsite infrastructure improvements. Development of the site would result in an increase of urban-related pollutants that can be carried off-site by nuisance and storm water runoff into downstream receiving waters. If not mitigated, discharge of urban-related pollutants would have a significant impact on water quality.</p>	<p>4.B-4: Prior to approval of a NPDES Stormwater Permit No. CAS004001 (Order No. 01-182) and issuance of a grading permit, the applicant or an applicant designee shall complete and have approved a Stormwater Quality Management Plan (SQMP) and a Standard Urban Stormwater Mitigation Plan (SUSMP) outlining usage of BMPs for non-point source pollution control measures to address pollutants from such sources as roofing materials, atmospheric deposition, grease, oil, suspended solids, metals, solvents, phosphates, fertilizers and pesticides. Post-construction structural or treatment BMPs shall be designed to meet performance standards that mitigate (treat) storm water runoff from either: 1) the 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), or; 2) the volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more treatment by the method recommended in California Stormwater Best Management Practices Handbook—</p>	<p>Less than significant.</p>

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	<p>Industrial Commercial, (1993), or: 3) the volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system; and, 4) the volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff even. Furthermore, project BMPs and design features shall control peak flow discharge to provide stream channel and over bank flood protection, based on design criteria selected by the local agency.</p> <p>The range of BMPs, which shall meet the performance standards identified above, shall include but not be limited to the following to the extent feasible:</p> <p><u>Site Planning and Design BMPs</u></p> <p>Minimize Impervious Area and Directly Connected Impervious Areas</p> <ul style="list-style-type: none"> • Minimize impervious areas by incorporating landscaped areas over substantial portions of the project area. [For the Skyline Ranch Project, the area designated solely for uses with impervious surfaces are about 401 acres or 18 percent of the entire project site. This means the remaining 1,772 acres or 82 percent will be either vacant or in uses with impervious ground surface such as landscaped and park areas.] • If possible, minimize directly connected impervious areas by draining parking lots to 	

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	<p>landscaped areas, desilting (secondary infiltration) basins or other pervious surfaces to promote filtration and infiltration of storm water, if landscaping slopes are less than 2 percent and the area is not directly adjacent to steep slopes (which promotes further erosion); or the area is being treated with catch basin inserts. Furthermore, lot runoff (from the pervious surfaces) shall be infiltrated from the graded pad areas through onsite pervious soils.</p> <ul style="list-style-type: none"> • To the extent practicable, utilize vegetated areas (e.g., parks, setbacks, end islands, and median strips) for biofiltration and/or bioretention of nuisance and storm runoff flows from parking lots. <p><u>Selection of Construction Materials and Design Practices</u></p> <ul style="list-style-type: none"> • Select building materials for roofs, roof gutters and downspouts that do not include exposed copper or zinc. • Construct streets, sidewalks, and parking lot aisles to the minimum widths as specified in the Los Angeles County Department of Public Work’s requirements (also in compliance with regulations for the Americans with Disabilities Act) for safety requirements for fire and emergency vehicle access and incorporate landscaped buffer areas between sidewalks and streets. <p><u>Conserve Natural Areas</u></p> <ul style="list-style-type: none"> • Concentrate or cluster the development on the least environmentally sensitive portions of the project 	

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	<p>site while leaving the remaining land in a natural, undeveloped condition. [For the Skyline Ranch Project, about 1,551 acres of the site (71 percent of the project site) is proposed to remain undeveloped, including 1,355 acres to be designated as natural open space through the establishment of the Skyline Ranch Conservation Area (SRCA) .]</p> <ul style="list-style-type: none"> • Maximize canopy interception and water conservation by preserving existing native trees and shrubs and planting additional native or drought tolerant trees and large shrubs. [For the Skyline Ranch Project, approximately 71 percent of the project site is proposed to remain undeveloped, and along the perimeter of the site, landscaping would consist of a mix of native, drought-tolerant and non-invasive plant species.] <p><u>Protect Slopes and Channels</u></p> <ul style="list-style-type: none"> • Protect slopes and minimize erosion potential by covering highly erodible soils with vegetative cover (preferably native or drought tolerant plants), route flows safely from or away from steep and or sensitive slopes, stabilize disturbed slopes. All slopes within the project should be designed and constructed to minimize erosion. • Protect channels and minimize erosion by controlling and treating flows in landscaping and/or other controls prior to reaching existing natural drainage systems; stabilize channel crossings; ensure that increases in runoff velocity and frequency caused by the project do not erode the 	

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	<p>channel; install energy dissipaters (riprap), at the outlets of storm drains, culverts and conduits.</p> <p><u>Source (non-structural) Control BMPs</u></p> <ul style="list-style-type: none"> • Drain Inlet Stenciling or Signage. Stenciling (or signage) is intended to raise public awareness and limit illegal dumping of trash, debris, oil, and other pollutants into storm drains. "Stenciling" may be accomplished via a traditional stencil or via the use of grates with text such as "Warning! Drains to Ocean" notes or other equivalent symbols. All catch basins and inlets shall be stenciled. • Irrigation Controls and Management. Irrigation controls shall be implemented to ensure that irrigation is conducted efficiently. Where feasible, plants with similar watering requirements shall be grouped in order to reduce excess irrigation runoff and promote surface filtration. Efficient irrigation systems may include computerized and/or radio telemetry that controls the amount of irrigation based on soil moisture or other indicators. • Proper Application of Fertilizers and Pesticides. Best management practices shall be implemented to minimize the application of fertilizers, pesticides, and other landscape management products on slopes and landscaped areas maintained by the homeowner's association (HOA) and/or landscape maintenance districts (if any). Examples of these management practices include, but are not to limited to: the use of slow release fertilizers, applying fungicides only to greens to limit the use of pesticides, and closely monitoring 	

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	<p>weather forecast to ensure appropriate timing (during dry periods) for the application of landscape management products.</p> <ul style="list-style-type: none"> • Community Education Program. Public education shall be used to reduce the potential for hazardous materials entering the storm drain system. This shall be accomplished through distribution of brochures or other materials to property managers, owners and occupants, and employees at the time of initial sale or lease of property or hiring of employees and periodically thereafter. Brochures shall discuss, among other topics and as appropriate for the audience: 1) the importance of downstream water bodies, the storm water system, management of fertilizers, pesticides, and other harmful chemicals, 2) the impacts of dumping oil, antifreeze, pesticides, paints, and other pollutants into storm drains and proper handling and disposal of these materials, 3) effective cleaning practices such as the cleaning of vehicles only in maintenance areas where the water will be recycled or routed to the sanitary sewer system to prevent nuisance flows, 4) the benefits of the prevention of excessive erosion and sedimentation, 5) the benefits of proper landscaping practices, 6) pavement clean-up practices, 7) the impacts of over-irrigation, 8) swimming pool draining practices, and 9) other relevant issues. • Prevention of Nuisance Flows. Grease traps shall be included for school cafeterias (if any). Draining swimming pools into storm drains shall be 	

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	<p>prohibited. These flows shall be properly connected to sewer lines.</p> <ul style="list-style-type: none"> • Pavement Sweeping Program. The majority of roads in the project area are proposed to be dedicated to the public, and would thus be maintained by the Los Angeles County Department of Public Works. The County has street sweeping programs that will help control trash, vegetation debris and sediment that may accumulate on roadways. Other non-public roadways shall also be periodically swept. • Litter Control Program & Design of Trash Storage Areas. A program for litter control shall be implemented to control litter in common areas. The program may include standards for proper placement and emptying of trash receptacles, practices to ensure that trash bins are maintained in the closed position, and regular removal of trash from parking and landscaped areas. In conjunction with the litter control program, trash storage areas shall be designed to prevent introduction of pollutants into runoff. The design principles to prevent this pollution from occurring are using impervious surfaces for storage areas which prevent run-on from adjacent areas, ensuring that there is no connection of trash drains to the storm drain system, and keeping lids on all trash receptacles in addition to the use of roofs or awnings to minimize direct precipitation. 	

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	<ul style="list-style-type: none"> • Proper Connection and Maintenance of Sewer Lines. Sewer lines shall be properly connected and adequately maintained. • Activity Restrictions (Conditions, Covenants, and Restrictions). For source control BMPs, County maintenance and implementation of BMPs or Conditions, Covenants, and Restrictions (CC&Rs) shall be prepared requiring maintenance and implementation of BMPs by the HOA for the purpose of surface water quality protection, or use restrictions shall be developed through lease terms. • BMP Maintenance. Los Angeles County shall assume responsibility for the inspection and maintenance of structural BMPs within their boundaries. For the public school site, the school district with jurisdiction shall be responsible for the inspection and maintenance of structural BMPs. For private roads and private parks the HOA shall be responsible for BMP maintenance. • Common Area Drainage Facility Inspection. Privately-owned common area drainage facilities shall be inspected each year and, if necessary, cleaned and maintained prior to the storm season. <p><u>Structural and Treatment Control BMPs</u></p> <p>Implementation of NPDES General Permit requirements entails the use of post-construction structural controls that will remain in service to protect water quality throughout the life of the project. Therefore, these BMPs will need to be regularly maintained for proper function. As Los Angeles County</p>	

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	<p>will assume maintenance of BMPs in public rights-of-way, the main structural BMPs recommended below are systems that the County currently approves of for use within their jurisdiction. Final selection, design and siting of structural BMPs will ultimately depend on the project-wide drainage plan approved by the County. The following BMP options were selected due to their relative effectiveness for treating potential pollutants from the project site; as well as consideration for County of Los Angeles requirements and acceptance of these systems (as they would be maintained by the County), site feasibility, relative costs and benefits; and other constraints. The recommended BMP design flow rates, volumes, types and other specifications will be provided during final design stage of the project (with hydrology map approval).</p> <ul style="list-style-type: none"> Hydrodynamic Separator Systems and Gross Solids Removal Devices. Hydrodynamic Separation Systems (HSS) and Gross Solids Removal Devices (GSRDs) are flow-based, flow-through BMPs that are installed within a storm drain line in order to remove large sediment particles and associated storm water pollutants, as well as trash, oils, and grease. HSS and/or GSRDs, such as a Continuous Deflective Separator (CDS), manufactured by CDS Technologies, Inc., supplemented with oil absorbent materials (such as pellets), are recommended for use at various locations in the proposed storm drain systems. Depending on the particular model and manufacturer, maintenance shall occur quarterly to yearly for clean-outs. Cleaning after a storm event may also be required. 	

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	<p>Inspection is required to make certain that the unit is operating correctly and to make any repairs.</p> <ul style="list-style-type: none"> • Stormscreen. The StormScreen is a manufactured patented BMP by CONTECH Stormwater Solutions, Inc., designed to remove mostly trash and debris and larger suspended solids at high flow rates. The StormScreen is comprised of a grouping of StormScreen cartridges placed in a precast or cast-in-place concrete vault. Although maintenance may be required within six (6) months of project completion due to erosion occurring on newly constructed sites, it is intended that the StormScreen be maintained annually by the Los Angeles County Department of Public Works, Flood Control Division. For the StormScreen maintenance, during the first year, an inspection is recommended every other month for the first six months of operation in order to develop an ongoing maintenance schedule. A visual inspection can be conducted without entering the vault. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. • Catch Basin Inserts. Catch basin inserts are flow-based BMP options for consideration at various locations to treat runoff before it enters the storm drain system by filtering or screening out sediments and associated storm water pollutants during dry weather and low flow events. During large flow events, they are typically designed to allow storm water runoff to bypass the inlet device and continue directly into the storm drain system. Although treatment levels are generally low for the 	

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>pollutants of concern for this project, the inserts would provide pre-treatment of storm water runoff prior to further treatment at downstream BMPs. Drainage inserts could be replaced with HSS or GSRDs that perform similar functions and are interchangeable. At the time of final design, if the implementation of a CDS is deemed infeasible, a catch basin insert may be used in its place. Although maintenance requirements vary greatly depending on the particular model and manufacturer, they are typically maintained quarterly to yearly for clean-outs. Cleaning after a storm event and in anticipation of storm events after extended dry periods or periods of typical debris removal is recommended. Inspection will be required to make certain that the unit is operating correctly and to make any repairs.</p> <ul style="list-style-type: none"> • Detention/Retention Basins. Detention and retention basins require a fairly large amount of space to build them. Basins can be used on sites with slopes up to about 15 percent. The design should incorporate enough elevation drop from the basins inlet to the outlet to ensure that flow can move through the system. These systems require regular maintenance (semi-annual and annual), as well as sediment removal from the forebay every 5 to 7 years and monitoring the sediment accumulation and removal when the volume has been significantly reduced (about every 25 to 50 years). Basins shall be properly maintained to avoid safety hazards. 	

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
C. BIOLOGICAL RESOURCES		
<p>Two agency-listed plant species, spreading navarretia and California Orcutt grass, associated with vernal pools were located within the study area but are well outside the development footprint and would not be affected by project development. One California Native Plant Society (CNPS) List 1B plant, the slender mariposa lily, was found commonly in the northern portion of the study area with smaller scattered locations in the southern portion of the study area. Approximately one acre (or two percent) of the occupied habitat within the study area would be impacted by the proposed project, which would remove approximately 100 plants. A total of 42 acres (or 98 percent) of the habitat occupied by slender mariposa lily would be preserved. Slender mariposa lily is not Federally or State listed as threatened or endangered; however, it is a CNPS List 1B plant species. This species is known only from Los Angeles County and was once thought to be limited to the San Gabriel Mountains. The removal of two percent of the population is not expected to threaten the regional population of this species because ninety-eight percent of the population would be avoided and preserved within the SRCA. Impacts to the slender mariposa lily would not drop the species below self-perpetuating levels, therefore impacts are considered less than significant. Three CNPS List 4 plant species were detected within the study area: Paso Robles navarretia, Peirson’s morning-glory, and Palmer’s grappling hook. Paso Robles navarretia, was restricted to the vicinity of Cruzan Mesa and would not be affected by the</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>proposed project. Peirson’s morning-glory and Palmer’s grappling hook were fairly widespread within proposed development areas on site. Although these List 4 species may have a limited distribution in California, their susceptibility to threat is considered low, as indicated by their List 4 status, and the existing data on these species does not support a conclusion that these species are rare. The loss of these species resulting from the proposed project is not expected to reduce regional population levels such that their existence is threatened. Therefore, impacts to Peirson’s morning-glory and Palmer’s grappling hook are considered less than significant.</p>		
<p>One Federally listed species was observed on the site, the vernal pool fairy shrimp. This species occurs within the Plum Canyon and Cruzan Mesa vernal pools, outside of the proposed development area, and would not be impacted by the proposed project. Therefore, no impacts to vernal pool fairy shrimp are expected to occur. One State listed species, the Swainson’s hawk, was observed flying over the study area, because the proposed land use plan would not affect their migratory passage, no impacts would occur to the Swainson’s hawk. Another State listed species, bank swallow, may occur within the study area as a migrant but was not observed; therefore, no impacts are expected to occur to this species. One sensitive wildlife species, the western spadefoot, was observed on site but is not expected to occur within the development area due to the lack of suitable habitat. Nineteen additional special-status, but not listed, species were observed within the study area including</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>coast horned lizard, coastal whiptail, white-tailed kite, northern harrier, Cooper’s hawk, sharp-shinned hawk, ferruginous hawk, golden eagle, prairie falcon, merlin, loggerhead shrike, Vaux’s swift, California horned lark, yellow warbler, yellow-breasted chat, southern California rufous-crowned sparrow, Bell’s sage sparrow, grasshopper sparrow, and San Diego black-tailed jackrabbit. These species are not Federally or State listed and considerable habitat for these species would be preserved on site within the 1,551-acres of open space. Impacts of the proposed project are not expected to threaten regional populations and are therefore less than significant. Ten additional special-status species were not observed but have the potential to occur due to the presence of suitable habitat including silvery legless lizard, coastal rosy boa, coast patch-nosed snake, burrowing owl, long-eared owl, western mastiff bat, pallid bat, pale big-eared bat, southern grasshopper mouse, and San Diego desert woodrat. These species are not Federally or State listed and suitable habitat for these species would be preserved within the 1,551 acre open space within the study area. Therefore, potential impacts of the proposed project are not expected to threaten regional populations of these species and are therefore less than significant.</p>		
<p>Project development would result in the loss of approximately 84.8 acres of annual grassland (83.9 acres onsite and 0.9 acre offsite), and 37.2 acres of disturbed/barren/developed areas (20.0 acres onsite and 17.2 acres offsite). An additional estimated 4.7 acres of annual grassland (3.3 acres on site and 1.4 acres</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>offsite), and 2.2 acres of disturbed/barren/developed areas (1.1 acres onsite and 1.1 acres offsite), would be impacted within fuel modification zones (calculated at 200 feet beyond the limits of grading). These plant communities do not represent sensitive plant communities. Non-native grassland is a common habitat that is dominated by non-native, weedy species. Approximately 146.23 acres of this habitat type would remain within open space areas of the proposed project, 46.8 acres within the SRCA and an additional 99.43 acres within the Non-Development/Continuing Use Area. An additional 511 acres are subject to long-term preservation in the region. Due to the dominance of non-native species, relatively low value as habitat (compared to surrounding native habitats), and the preservation of similar habitat on site and within the region, impacts are considered less than significant. Impacts to disturbed/barren/developed areas, which contain no native vegetation and provide no meaningful value as wildlife habitat, are also considered less than significant. No impacts would occur within chaparral habitat.</p>		
<p>Development is proposed in the southern third of the Skyline Ranch study area, contiguous with existing development to the southwest, south and southeast. Proposed open space areas in the northern portion of the study area would continue to foster wildlife movement between areas of the Angeles National Forest to the north and west (i.e., Lake Hughes, San Francisquito Canyon, Bouquet Canyon) and areas to the east and south (i.e., Placerita Canyon State Park, Tujunga Wash). In addition to the project's proposed</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>SRCA, the proposed project avoids impacts to the Cruzan Mesa, which contributes additional resources (i.e., water, foraging areas, vegetative cover) to facilitate wildlife movement. As such, development of the proposed project would not have a significant adverse effect on any known or suspected wildlife movement corridors. The proposed project would not affect the vernal pools on Cruzan Mesa and within Plum Canyon, thus habitat linkages for migrating waterfowl and other mobile wildlife species using vernal pool resources would not be adversely affected by the project. Additionally, impacts to the unnamed canyon in the southern portion of the study area would not significantly impact regional wildlife movement as this canyon is currently fragmented from open space areas to the south. Effects on wildlife movement would be a less than significant impact of the proposed project.</p>		
<p>The proposed project would have the potential to result in indirect impacts to biological resources as a result of construction activities and development of the site associated with drainage (increased urban run-off and pollutant concentration), lighting, noise, barriers, invasive species, and brush management. However, as further discussed in Section 4.C, Biological Resources, these indirect impacts were determined to be less than significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>Project development would result in the loss of approximately 254.9 acres of coastal sage scrub (252.2 acres onsite and 2.7 acres offsite), 200.8 acres of disturbed coastal sage scrub (188.9 acres onsite and 11.9 acres offsite), 70.3 acres of coastal sage-chaparral</p>	<p>4.C-1 Mitigation for grading and fuel modification impacts (calculated 200 feet beyond the limits of grading) to 467.9 acres of combined coastal sage scrub and disturbed coastal sage scrub (452.3 acres within on- and off-site, and 15.6 acres within on- and</p>	<p>Less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>scrub (70 acres onsite and 0.3 acre off-site), 4.6 acres of sycamore riparian woodland, and 2.1 acres of holly-leaved cherry scrub (all onsite) due to grading. An additional 12.7 acres of coastal sage scrub (8.9 acres onsite and 3.8 acres offsite), 2.7 acres of disturbed coastal sage scrub (2.6 acres onsite and 0.1 acre offsite), 5.7 acres of coastal sage-chaparral scrub (5.1 acres onsite and 0.6 acre offsite), and 0.5 acre of holly-leaved cherry scrub (0.4 acre onsite and 0.1 acre offsite) would be impacted due to vegetation trimming for fuel management. These native vegetation communities are representative of the native character and natural history of this area and provide habitat for a variety of plant and wildlife species, including a number of sensitive species. Therefore, impacts to sensitive plant communities including sycamore riparian woodland, holly-leaved cherry scrub, coastal sage scrub, disturbed coastal sage scrub, and coastal sage-chaparral scrub are significant prior to mitigation. The proposed project would not impact southern vernal pool or southern willow scrub habitat because the project does not include development or grading in the northern portion of the study area where these resources occur.</p> <p>In addition, the proposed project may result in temporary impacts to vegetation communities within a 50-foot grading buffer zone surrounding the permanent grading impact footprint. These areas fall within the SRCA and would be restored to pre-project conditions following project grading.</p>	<p>off-site fuel modification zones), 77.0 acres of coastal sage-chaparral scrub (69.9 acres within on- and off-site grading and 7.1 acres within on- and off-site fuel modification zones), and 2.8 acres of holly-leaved cherry scrub (2.1 acres within on-site grading and 0.7 acre within on- and off-site fuel modification zones) shall be provided by establishing a 1,355 acre conservation area [Skyline Ranch Conservation Area (SRCA)] within the northern portion of the study area as shown in Figure 2-3, Aerial View-Development and Conservation Area. The applicant shall cause the preservation of this 1,355-acre area through either a Declaration of Restrictions or a Conservation Easement, or dedication or transfer of the land to a conservation organization committed to the preservation of the land in perpetuity. A Declaration of Restrictions, Conservation Easement, or similar recorded instrument shall be placed and recorded in this area to ensure its long-term preservation. The applicant shall arrange for the long-term management of the property to ensure the long-term persistence of the property’s biological resources through a non-profit organization, conservation-oriented entity, or entity with experience in biological resource conservation approved by the County. The applicant shall provide long-term funding to assure the management of the property to protect its biological resources in perpetuity. The SRCA includes approximately 623.9 acres of coastal sage scrub, 115.8 acres of disturbed coastal sage scrub, 248.6 acres of coastal sage-chaparral scrub, and 10.6 acres of holly-leaved cherry scrub. This area shall be preserved as natural open space. These 1,355 acres provide substantial</p>	

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>ecological value based on the quantity, quality, and regional value of the habitats preserved. Establishment of the 1,355-acre SRCA shall achieve the following performance standards:</p> <ol style="list-style-type: none"> 1. Provision of sufficient quantity of habitat to offset vegetation impacts associated with the proposed project. When considering coastal sage scrub, disturbed coastal sage scrub, coastal sage-chaparral scrub, and holly-leaved cherry scrub collectively, this 1,355-acre area will provide close to 2:1 preservation of like and contiguous habitats [1,354.6 acres preserved vs. 642.1 acres impacted (621.7 acres impacted by grading and 20.4 acres impacted by fuel modification)]. Preserved habitats are similar to those impacted by the project and most vegetation communities (with the exception of sycamore woodland), regionally common species, and special status plant and wildlife species impacted by the project are represented within the SRCA. 2. An on-going maintenance and management program shall be adequately funded and implemented to ensure the long-term integrity of biological resources within the 1,355-acre SRCA. Direct and indirect degradation of habitat shall be prevented in part through steep topography that separates the SRCA from the proposed development area and through the prohibition or restriction of uses within the SRCA. 3. The SRCA shall include signage, where appropriate, and other management practices to 	

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>discourage off-road vehicles, domestic pets, and other activities harmful to natural lands.</p> <p>4. Any continued use of lands within the SRCA (such as film-making) shall be subject to approval by the SRCA habitat manager and restricted to uses that are not incompatible with the resource conservation objectives of the SRCA.</p> <p>5. A 21.6-acre Mitigation Exchange Area shall be provided to replace the 21.6 acres of preserve area that would be disturbed within Tract 46018 due to the construction of Skyline Ranch Road. This shall be established separately from the SRCA through an agreement between the applicant, Shapell-Monteverde Partnership (owner of the recorded Tract 46018), the Army Corps of Engineers, and the County of Los Angeles.</p> <p>6. Following grading operations any areas that have been disturbed within the 50-foot grading buffer zone; which includes coastal sage scrub (10.7 acres), disturbed coastal sage scrub (6.1 acres), coastal sage-chaparral scrub (3.3 acres), non-native grassland (1.8 acres), disturbed (0.8 acres), holly-leaved cherry scrub (0.7 acres) and sycamore riparian woodland (0.2 acres), shall be restored to pre-graded conditions by a qualified biologist. Restoration shall be designed to provide the same vegetation resources and habitat value as those removed within the buffer zone. At the end of all project grading, proposed restoration actions within the buffer zone (if necessary) shall be presented in a restoration plan provided to the</p>	

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>County. Following approval by the County, restoration shall be initiated and completed according to the approved restoration plan.</p> <p>Mitigation for impacts to sycamore riparian woodland (including 96 sycamore trees and nine Fremont cottonwood trees) is discussed in Mitigation Measure 4.C-2.</p>	
<p>The proposed project would impact 5.22 acres of “waters of the U.S.” under the jurisdiction of the U.S. Army Corps of Engineers (ACOE) and Regional Water Quality Control Board, and 9.3 acres of streambed under the jurisdiction of the California Department of Fish and Game (CDFG), including 2.71 acres of vegetated riparian habitat. No wetlands were identified within the study area; therefore, no wetlands would be impacted by the proposed project. All impacts would occur within the southern portion of the study area and would result in impacts to a series of ephemeral drainages, many of which are degraded, and one drainage which supports high-quality sycamore riparian woodland. Impacts to sycamore riparian woodland would result in the removal of 96 western sycamore trees and nine Fremont cottonwood trees. Due to the extent of impacts, including the removal of 2.71 acres of vegetated riparian habitat supporting a large number of native trees this impact is considered significant.</p> <p>Project implementation would also cause temporary impacts within the 50-foot grading buffer zone to 0.14 acre of ACOE and RWQCB jurisdiction, none of which consists of jurisdictional wetlands, and 0.27 acre</p>	<p>4.C-2: As detailed in the Habitat Mitigation and Monitoring Plan (HMMP) prepared by GLA, mitigation for impacts to 5.22 acres of Army Corps of Engineers (ACOE) and RWQCB jurisdiction, none of which consists of jurisdictional wetlands, and 9.30 acres of California Department of Fish and Game (CDFG) jurisdiction (of which 2.91 acres is vegetated riparian habitat) shall be accomplished by the applicant through the following:</p> <ol style="list-style-type: none"> 1. The preservation of 1,355 acres of natural open space within the SRCA through the use of a conservation easement or the dedication of such land to a qualified conservation organization. This 1,355-acre area includes approximately 5.35 acres of ACOE and RWQCB jurisdiction, none of which consists of jurisdictional wetlands and approximately 5.71 acres of CDFG jurisdiction (of which 0.31 acre is vegetated riparian habitat). 2. The preservation of 1.53 acres of southern vernal pool and artificial pool habitats within the SRCA subject to RWQCB jurisdiction. 	<p>Less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>of CDFG jurisdiction, of which 0.04 acre consists of vegetated riparian habitat. However, this would be restored to pre-project conditions following grading and all on-site areas will become part of the SRCA. Therefore, impacts to jurisdictional waters off-site are considered less than significant.</p>	<p>3. On-site establishment of 7.27 acres of sycamore/cottonwood riparian woodland within Plum Canyon.</p> <p>As described further in the HMMP, the proposed 7.27-acre sycamore riparian woodland (mitigation site) will be established within portions of Plum Canyon on-site within the SRCA as shown in Figure 4.C-7, Proposed Conservation and Mitigation Areas, on page 4.C-74. Hydrology is currently present at the mitigation site and the mitigation site supports Cortina sandy loam and Saugus loam which are conducive to the establishment of sycamore riparian woodland. An ACOE-approved reference site will be used prior to implementation of the mitigation program to provide the necessary data to measure the performance of the mitigation site.</p> <p>The plant palette for the proposed mitigation site includes the planting of two riparian species; 727 one-gallon containers of Fremont cottonwood and 1,818 one-gallon containers of western sycamore. One-gallon upland buffer species will also be planted including chamise, hoaryleaf ceanothus, California buckwheat, deerweed, coast prickly pear, snake cholla, scrub oak, white sage, black sage, and our Lord's candle. A seed mix of 12 native shrub and herbaceous species will also be used.</p> <p>The planting of a sycamore riparian woodland in the vicinity of the holly-leaved cherry woodland is not intended to, nor is it expected to, result in an inadvertent conversion of the riparian area from holly-leaved cherry to sycamore woodland. The creation of</p>	

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	<p>7.27 acres of sycamore riparian woodland within Plum Canyon within the SRCA is expected to provide an overstory on the edges of the holly-leaved cherry woodland that replicates the conditions currently found in Drainage 5 (where impacts are proposed). On-site occurrences of both species indicate that they can exist concomitantly without the risk of conversion from one type to another altogether. With appropriate spacing and the use of drip irrigation on the planted sycamores, the existing swath of holly-leaved cherry will not be adversely affected by the addition of the sycamore riparian woodland.</p> <p>The HMMP includes a number of features to ensure the success of the mitigation site including supervision by a qualified habitat restoration specialist, a 5-year qualitative and quantitative monitoring program, contractor education, the use of mycorrhizal fungi, supplemental irrigation, regular maintenance (e.g., exotic vegetation control, pest control, trash removal), and adaptive management assurances.</p> <p>The Hybrid Functional Assessment (HFA) conducted by GLA (2009) concluded that the proposed project, considering off-setting mitigation measures, would result in a 25 percent increase in the total functionality of the aquatic features remaining within the SRCA after project implementation.</p> <p>In addition to the measures proposed above, the project will require permits from the ACOE under section 404 of the Clean Water Act (CWA), from the Regional Water Quality Control Board (RWQCB) under section 401 of the CWA, and from the CDFG under section</p>	

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	<p>1602 of the State Fish and Game Code. Should the ACOE, RWQCB, and/or CDFG impose additional or greater mitigation measures on the project for these impacts, those measures – to the extent that they exceed what is required by the measures contained herein – may be substituted for the measures set forth herein, as the County does not intend to require the project to mitigate twice for the same impact once the project has already mitigated the impact below a level of significance.</p>	
<p>The project study area provides habitat for a variety of native bird species. Disturbance to any of these species during the nesting season (approximately mid-February to mid-August) would be a violation of the Migratory Bird Treaty Act of 1918. Nests and eggs of these species are also protected under Fish and Game Code Section 3503. Therefore, the anticipated impact to nesting birds is considered significant.</p>	<p>4.C-3: In order to avoid impacts to nesting birds protected by the Migratory Bird Treaty Act and raptors protected by State Fish and Game Code, project grading and vegetation removal should take place outside of the nesting season, roughly defined as mid-February to mid-August. If grading or vegetation removal is to take place during the nesting season, a biologist acceptable to Los Angeles County shall be present during vegetation clearing operations to search for and flag active nests so that they can be avoided. A raptor survey will also be required in the unnamed canyon prior to the fill of that drainage. An avoidance buffer of 100 to 500 feet (exact radius to be determined by the monitoring biologist) will be fenced around any active raptor nests and impacts to nests will be avoided until after the nesting season is over. After mitigation the anticipated impact on nesting birds is less than significant. The results of the nesting bird construction monitoring will be provided in writing to the CDFG and County Department of Regional Planning (DRP).</p>	<p>Less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Project development would result in the removal of one coast live oak with a diameter at breast height (dbh) of 32 inches in the County of Los Angeles and may result in the removal of one coast live oak located offsite, in the City of Santa Clarita. Within the County, coast live oak trees that are 8 inches dbh or greater are regulated by the County's oak tree ordinance. Therefore, the removal of this oak tree is considered significant.</p> <p>The second coast live oak may be removed due to the installation of a proposed 78-inch storm drain. While the second coast live oak is not located within the storm drain alignment, trenching for the installation of the storm drain falls within the drip line of the tree and could damage the root system. Therefore, while this tree would not be removed by the storm drain installation, it may be adversely affected by trenching for the pipeline resulting in a potentially significant impact. Due to the potential loss of the off-site oak tree, the applicant would be required to obtain an oak tree removal permit from the City of Santa Clarita prior to initiation trenching and construction for the pipeline.</p>	<p>4.C-4: To mitigate the loss of the coast live oak on-site (32 inches diameter at breast height [dbh]) in the southeastern section of the study area, an oak tree permit will be obtained from the County. The impacted oak tree will be replaced at a minimum ratio of 10:1 in the appropriate location at the interface between development and undeveloped areas. This ratio is in excess of the mitigation ratio set forth in the County ordinance, which is 2:1.</p> <p>No mitigation is necessary for oak woodlands regulated under SB 1334 because no oak woodlands occur within the study area.</p> <p>The loss of two California junipers within mixed coastal sage chaparral scrub shall be replaced in the landscaping scheme along roadways and in parks and other recreational areas at a minimum ratio of 3:1. Trees grown from local area stock shall be used, along with salvaged trees from the development area where possible.</p> <p>To mitigate the potential loss of the coast live oak off-site, the Applicant shall obtain an oak tree removal permit from the City of Santa Clarita for the coast live oak tree that may be adversely impacted by trenching for the proposed 78-inch pipeline installation, prior to initiation of pipeline trenching and construction. To the extent feasible, impacts to areas within the drip line (or root system) should be avoided during construction.</p>	Less than significant.
<p>Although landscaping would consist of a mix of native, drought-tolerant, low-fuel, and non-invasive plant species designed to provide a transition between natural open space areas and developed areas, the</p>	<p>4.C-5 To mitigate potentially significant indirect impacts to open space areas adjacent to fuel modification zones due to the possible spread of invasive plant species, the proposed project shall</p>	Less than significant.

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potential exists for indirect impacts from invasive plants. Therefore, it has been conservatively concluded that indirect impacts would be potentially significant on biological resources.	incorporate the use of native plant species to the maximum extent practicable and avoid the use of plant species known to be highly invasive adjacent to open space areas. The plant palette for the fuel modification areas adjacent to open space areas shall be consistent with the County of Los Angeles Fire Department Fuel Modification Plan Guidelines ² and shall focus on native species provided in the table of desirable plant species.	
D. CULTURAL AND PALEONTOLOGICAL RESOURCES		
The known archaeological resources within the Area of Potential Effect (APE) have been subject to Phase II testing, which indicated a low probability for the sites to provide additional information to the extent that the sites are not considered unique archaeological resources as defined in Section 21083.2 of the Public Resources Code. As a result, and pursuant to State CEQA Guidelines Section 15064.5(c)(4), project impacts on these sites are considered less than significant. However, because archaeological resources have been found within the APE, there is potential for construction and grading to uncover unknown subsurface cultural material, particularly near or around discovered sites. This potential effect on as yet undiscovered archaeological resources is considered a significant impact.	4.D-1(a): Archaeological Monitoring. Archaeological Monitoring. At the commencement of project grading or construction, all workers associated with earth disturbing activities (particularly remedial grading and excavation) shall be given an orientation regarding the possibility of exposing unexpected archaeological material and/or cultural remains by a qualified archaeologist who satisfies the Secretary of the Interior's Professional Qualification Standards for Archaeology (prehistoric/historic archaeology) pursuant to 36 CFR 61. The archaeologist shall also instruct the workers as to what steps are to be taken if such a find is encountered. Due to the moderate sensitivity and possibility of buried cultural materials within the project area, it is recommended that initial grading and ground disturbing activities in areas determined to be sensitive (primarily those areas	Less than significant.

² County of Los Angeles Fire Department, Fuel Modification Unit, Prevention Bureau, Forestry Division, Brush Clearance Section. Fuel Modification Plan Guidelines. January 1998. Available at <http://www.fire.lacounty.gov/Forestry/PDF/FuelModificationPlan.pdf>.

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	<p>proximal to recorded sites) be monitored by an archaeologist who meets the Secretary of the Interior’s Professional Qualifications Standards for Archaeology (prehistoric/historic archaeology) pursuant to 36 CFR 61. The archaeologist shall have the authority to stop work if sensitive or potentially significant cultural remains are discovered during excavation or ground disturbing activities. Test excavations may be necessary to reveal whether such cultural materials are significant. In the event the archaeologist indicates that a significant or unique archaeological/cultural find has been unearthed, grading operations shall cease in the affected area until the geographic extent and scientific value of the resources can be reasonably verified. Upon such discoveries the archaeologist shall notify the applicant and Los Angeles County. Any excavation and recovery of resources shall be performed by a qualified archaeologist using standard archaeological techniques. If necessary, a mitigation plan shall be formulated. Work in the area shall only resume with the approval of the project archaeologist. Artifacts, notes, photographs, and other project materials recovered during the monitoring program shall be curated at a facility meeting federal and state standards.</p> <p>4.D-1(b): Human Remains. If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the</p>	

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	coroner will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent (MLD) of the deceased Native American, who will have 24 hours to make a formal recommendation as to disposition of the remains. All work associated with the remains will be done respectfully, and with recognition that the remains are considered sacred. All work in the area of the remains will be monitored by an authorized representative of the MLD.	
Because there are no known Native American resources recorded near the project area, the project is not expected to have an impact on these resources.	No mitigation measures are required.	Not applicable; no impacts are anticipated.
Given the substantial grading and excavation associated with project development and within the Saugus and Mint Canyon Formations, which have high fossil sensitivity, impacts on paleontological resources are considered potentially significant.	4.D-2(a): Paleontological Survey and Treatment Program. Prior to the implementation of grading or construction related activities, a qualified paleontologist shall be retained by the applicant to survey the project area to relocate known fossil localities, and determine the most sensitive areas. Following the survey, a paleontological resources monitoring and mitigation program will be developed that will include salvage of known fossil resources, areas that will be monitored during project-related earth-moving activities. The paleontological resources monitoring and mitigation program shall be submitted to the County for review and approval prior to construction grading activities. The program shall define specific procedures for construction monitoring; emergency discovery; sampling and data recovery, if needed; museum storage of any specimen and data recovered; preconstruction coordination; and reporting.	Less than significant.

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>4.D-2(b): Paleontological Monitoring. The paleontologist shall monitor earth-moving construction activities at depths determined to be sensitive as specified in the County approved monitoring plan. Monitoring will not be conducted in areas where the ground has been previously disturbed or in areas where exposed sediment will be buried, but not otherwise disturbed.</p> <p>4.D-2(c): Paleontological Data Recovery. Prior to the start of grading or construction related activities, construction personnel involved with earth-moving activities shall be informed of procedures to follow if fossil remains are encountered. In the event that paleontological resources are encountered during construction-related earth-moving activities, all work shall cease within the immediate area and be redirected elsewhere until the paleontological monitor has evaluated the situation and provided recommendations for the protection of, or mitigation of adverse effects to, significant paleontological resources assessed. Upon such discoveries the contractor shall notify the applicant and Los Angeles County. Procedures for mitigating potential impacts to significant paleontological resources shall follow the monitoring and mitigation program previously developed under this mitigation measure. Construction work within this area shall resume upon approval from the principal project paleontologist.</p>	

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
E. VISUAL QUALITIES		
<p>Development of the proposed project would cause changes in visual conditions on the project site during construction. Some receptors with direct views of the site would observe some alteration of landform to accommodate the homes abutting the existing residential neighborhoods. As the residential lots begin to be developed on-site, the appearance of the proposed development area would change in an incremental fashion from one of openness to the one associated with full build out of the project area. Receptors and motorists along Sierra Highway would have a view of graded slopes on both sides of Skyline Ranch Road near the southern entrance to the project site and of the gap in the ridgeline created for the road. Some receptors would also have views of excavation and construction activities for the 78-inch storm drain and channel. Impacts on these views during construction would be significant.</p>	<p>4.E-1: Construction Impact. During construction, the applicant or his contractors shall locate equipment, stockpiles, and staging areas out of direct public or private view to the extent feasible.</p>	<p>Significant unavoidable.</p>
<p>Impacts associated with the change in views from the existing residential neighborhood to the west, particularly from those residences located west of the project site that are oriented to the east, would be considered significant due to the alteration of a scenic vista and the modification of hillsides and ridgelines. Other views of the project site may be prominent; however, due to the receptors' orientation, distance, intervening topography, and the addition of monumentation and landscaping, impacts on other views of the project site would be considered less than significant. Areas to the north, northwest, and</p>	<p>4.E-2(a): To reduce the significant aesthetic impact associated with graded slopes and paved terrace drains along the southern entrance to the project site, the slopes on both sides of proposed Skyline Ranch Road shall be revegetated and landscaped as soon as feasible following grading and roadway development. Landscaping in this area shall be selected and planted to screen proposed terrace drains from public views and to merge ornamental and native materials such that sharp contrasts in form and color with undeveloped areas are avoided.</p>	<p>Significant unavoidable.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>northeast of the site (including Mint Canyon Trail, Bouquet Canyon Trail and two unnamed trails) would have views of the Cruzan Mesa, which is not proposed for development. The areas that are proposed for development are generally not visible from these vantage points due to a major intervening ridgeline. Therefore, impacts on views north, northwest, and northeast of the site would be less than significant.</p>	<p>4.E-2(b): A landscape plan for the planned residential development shall be prepared by a Landscape Architect with a plant palette that will merge ornamental and native materials such that shape contrasts in form and color are avoided with adjacent undeveloped areas. Trees and shrubs on streets, slopes and ridgelines should emphasize mounded rather than columnar forms (such as palm trees and cypress). Plantings on the hillsides to the south and east of the entry road shall be specifically selected, sized, and placed to soften angular forms created by grading at the interface of manufactured slopes and natural hillsides. Furthermore, every effort shall be made as grading plans are finalized and during grading to create rounded landforms that are generally reflective of the natural topography of the area. Planting of common landscape areas shall be undertaken as soon as possible following grading to avoid prolonged view degradation. Landscaping on the site shall be routinely maintained by a homeowners association and/or through Covenants, Conditions and Restrictions (CC&Rs) throughout the life of the project. The landscape plan shall be subject to review and approval by the County prior to issuance of any grading permits.</p>	
<p>Potential light and glare impacts on adjacent residential areas and adjacent open space areas were determined to be less than significant, since lighting at the project site and within the development area would be shielded and directed on site and would be separated from open space areas by landscaped buffer areas and interceding topography.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
F. TRAFFIC/ACCESS		
<p>The addition of project traffic to ambient traffic conditions plus traffic generated by an adjacent approved development (TT 46018) would result in a significant impact at the County intersection of Plum Canyon Road with Skyline Ranch Road/Heller Circle (South), which would also function as an access point for the proposed project.</p>	<p>4.F-1(a): Plum Canyon Road at Skyline Ranch Road/Heller Circle (South)): Prior to issuance of a certificate of occupancy, the project shall redesign and construct the new east leg (Skyline Ranch Road) to include one left-turn lane, one shared left/through lane, and one right-turn lane; and restripe the existing west leg (Heller Circle South) to consist of one left-turn lane and one shared through/right-turn lane; and restripe the existing north leg (Plum Canyon Road) left-turn pocket to allow the left-turn movement. Implementation of improvements and fare share determination shall be coordinated with adjoining Tract 46018, since many of the stated improvements are conditions of approval for Tract 46018 and are required to be in place prior to occupancy of Tract 46018 or the proposed project.</p>	<p>Less than significant.</p>
<p>The proposed project would cumulatively contribute to traffic impacts at the County intersection of Golden Valley Road at Plum Canyon Road during the A.M. peak hour.</p>	<p>4.F-1(b): Golden Valley Road at Plum Canyon Road: The project shall pay its fair share (53 percent) to restripe the northbound Golden Valley Road approach to provide a second left-turn lane, for a total of two northbound left-turn lanes, one northbound through lane, and one northbound right-turn lane. Timing of improvement shall be determined by the County based on Bridge and Thoroughfare (B&T) District priorities.</p>	<p>Less than significant.</p>
<p>The proposed project would cause a significant impact at the City intersection of Sierra Highway at Soledad Canyon Road during the P.M. peak hour.</p>	<p>4.F-2(a): Sierra Highway at Soledad Canyon Road: The project shall pay its fair share (100 percent) to add a second southbound left-turn lane, for a total of five approach lanes and reconfigure the approach lanes as two left-turn lanes, two through lanes, and one right turn lane, so as to mirror the northbound approach. This improvement may require the acquisition of</p>	<p>Less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	additional right-of-way to widen the southbound approach of the north leg. Timing of improvement shall be determined by the City based on B&T District priorities.	
The proposed project would construct a network of collector roads to provide local access and construct an important regional roadway improvement long planned by the County to extend Whites Canyon Road (as Skyline Ranch Road). The provision of access to the proposed project would also require intersection improvements at Skyline Ranch Road at Sierra Highway, which should be designed to accommodate the eventual widening of Sierra Highway.	4.F-2(b): Sierra Highway at Skyline Ranch Road: Prior to the issuance of the first building permit the project shall construct a new intersection for project access; provide one northbound left-turn lane, two northbound through lanes, two southbound through lanes, one eastbound left-turn lane, and two eastbound right-turn lanes; and install a traffic signal. The placement of the new west leg should be of sufficient distance from the Sierra Highway centerline to allow for the eventual addition of a third southbound through lane as identified in the City of Santa Clarita General Plan Circulation Element.	Less than significant.
The proposed project would result in a significant cumulative impact on Highway 14 between the Sand Canyon Road to south of the Sierra Highway interchange. The project's cumulative contribution to this impact (which is projected on this segment of Highway 14 both without and with the project) would occur in the peak travel direction, which is southbound in the A.M. peak hour and northbound in the P.M. peak hour.	4.F-3: In the event the State approves a Caltrans impact fee mitigation program prior to implementation of the proposed project, the applicant shall pay a fair share to fund programmed improvements to Highway 14 that would mitigate the project's contribution to cumulative impacts on the highway. Such improvements may include the addition of HOV lanes, truck lanes, and additional mixed flow lanes to the segments of Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange, that have been identified in the Short Range Plan outlined in the North County Combined Highway Corridors Study.	Due to the speculative nature of the timing of implementation and availability of funding to implement the planned improvements to Highway 14, the reduction of cumulative impacts on Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange to less than significant levels cannot be guaranteed, and as such, cumulative impacts to Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange would remain significant and unavoidable.

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>The Congestion Management Program (CMP) intersections nearest to the project site are the intersection of Sierra Highway at Sand Canyon Road and the intersection of Sierra Highway at Soledad Canyon Road. The proposed project is not anticipated to add 50 or more peak-hour trips to the intersection of Sierra Highway at Sand Canyon Road but is expected to add more than 50 trips to the intersection of Sierra Highway at Soledad Canyon Road. An impact analysis of this intersection indicates that the intersection is forecasted to exceed LOS F prior to the addition of project traffic and that the project would cause a significant impact based on the CMP guidelines.</p>	<p>Please refer to Mitigation 4.F-2(a) above.</p>	<p>Less than significant.</p>
<p>A distribution of project traffic using the regional distribution factors provided in the CMP indicates that the project is not forecast to add 150 or more peak-hour trips on Highway 14 or the I-5. Therefore, based on the CMP criteria, no significant freeway impacts would occur as a result of the proposed project.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>Another component of the CMP transportation impact analysis is a review of transit impacts. The proposed project is anticipated to generate approximately 540 total daily transit trips and approximately 60 peak hour transit trips. This volume of public transit ridership is not expected to have a significant impact on the public transit system. Furthermore, project-generated traffic would not result in delays in transit service, since traffic impacts at the study area intersections are less-than-significant with mitigation.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>In comparing the current highway plan to the proposed project alignment (which has been conditionally approved by the Los Angeles County Department of Public Works and is shown on the Draft Highway Plan), both the current plan and the project alignment would result in similar volumes on the surrounding roadway system. However, the project alignment would carry a higher volume of “through” traffic than the current plan. Overall, the change in alignment would result in little or no change in the surrounding roadway network.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>The main internal circulation would be provided via a circular roadway that intersects Whites Canyon Road at two locations (referred to here as Main Street North and Main Street South). An evaluation of traffic impacts at these internal intersections indicates that each intersection is forecasted to operate at LOS A for both the A.M. and P.M. peak hours using a roundabout design or signalized intersection design.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>Pedestrian access routes to the proposed elementary school on-site would be provided by fully improved streets with full-width sidewalks. Pedestrians crossing Skyline Ranch Road would be able to use the crosswalks or the traffic signal adjacent to the school at Skyline Ranch Road and Main Street South. Compliance with the Caltrans Pedestrian Safety manual would ensure that impacts related to pedestrian safety would be less than significant. In addition, and independent of the proposed project, a traffic study addressing the school site will be required by the County when a detailed site plan for the school is developed by the District.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
G. NOISE		
<p>Construction equipment would be taken to the site using heavy-duty trucks which have a noise level of approximately 91 dBA at 50 feet. There would be no daily movement of heavy-duty construction equipment to and from the site as construction equipment would be taken to the project site at the commencement of grading and removed from the project site at the completion of grading. However, residents and other sensitive receptors along the truck route and future on-site residences that are occupied during the second phase of mass grading would be exposed to this truck traffic noise in those few instances when heavy equipment is brought into and taken from the project site. In those few instances when heavy equipment is brought into and taken from the site, noise levels would exceed thresholds of significance and would result in a significant impact.</p>	<p>4.G-1(a): Construction truck routes and equipment shall, to the extent feasible, avoid residential areas and roadways adjacent to noise sensitive receptors.</p> <p>4.G-1(b): Wherever heavy duty truck traffic associated with project construction utilizes roadways with adjacent noise sensitive receptors, the trucks shall avoid peak hour traffic in order to minimize potential truck idling in proximity to these receptors.</p>	Significant unavoidable.
<p>High noise levels created during grading would be associated with the operation of heavy-duty haul trucks, scrapers, graders, backhoes, front-end loaders, and water trucks. When construction equipment is operating, noise levels would be approximately 86 dBA at a distance of 50 feet from the perimeter of construction. Grading would occur over much of the proposed development area and some offsite areas for infrastructure improvements, with grading occurring within 25 feet of noise sensitive uses. Sensitive receptors within 25 feet of the proposed development area would experience noise levels in excess of 86 dBA and future on-site residences that are occupied during the second phase of grading would experience</p>	<p>4.G-2(a): All construction activities within 300 feet of an occupied single- or multi-family residential lot shall be restricted to between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 6:00 P.M. on Saturday. Construction work shall be prohibited on Sundays, New Year's Day, Independence Day, Thanksgiving Day, Christmas Day, Memorial Day, and Labor Day.</p> <p>4.G-2(b): The construction contractor shall provide at least 72-hour advance notice of the start of construction activities to all noise sensitive uses within 300 feet of on-site and off-site occupied residences. Notification shall be by mail. The announcement shall state specifically where and when construction activities will</p>	Significant unavoidable.

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
noise levels of 70 dBA. In addition, construction of the sewer line replacement within Sierra Highway and the storm drain which extends offsite to the southwest, could temporarily expose sensitive receptors to noise levels up to 86 dBA. These noise levels would exceed thresholds of significance and impacts would be significant.	occur, and provide contact information for filing noise complaints. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction. 4.G-2(c): When construction operations occur within 300 feet of on-site or off-site occupied residences, all feasible measures to reduce construction equipment noise levels at the residences shall be employed. These measures shall include among other things changing the location of stationary construction equipment to increase the distance between the equipment and the receptors, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.	
A materials processing facility would be located in the northeast corner of the development area. Because the nearest noise-sensitive uses are located approximately 3,000 feet to the east and northeast of the materials processing facility site and separated by major ridgelines, noise levels would not exceed thresholds and at these locations and therefore impacts would be less than significant	No mitigation measures are required.	Not applicable; impacts are less than significant.
Noise levels generated during building construction would affect occupants of on-site uses constructed in the project's early development phases. Any on-site location with an uninterrupted line-of-sight to the construction noise sources could periodically be exposed to temporary noise levels that would exceed construction noise threshold, resulting in a significant temporary noise impact. Some off-site residential uses	4.G-2(d): Prior to construction of structures on the residential lots east of existing residences east of Falcon Crest Drive and Bakerton Avenue, temporary acoustic barriers shall be erected along the rear lot lines within 300 feet of the western site boundary. The extent of this requirement, including the height, length, number of properties, etc., shall be determined by an acoustical consultant retained by the applicant with	Less than significant.

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
located along the western site boundary would also experience temporary significant noise impacts during construction.	access to project-related design and construction information. These barriers may be constructed of any solid material, shall be continuous with no gaps, and shall remain in place until building construction on these lots is completed.	
Project construction can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. Ground-borne vibration would be generated primarily during the site clearing, grading, and soils compaction processes. The ground-borne vibration values anticipated for the project would be below the architectural damage threshold as well as the annoyance threshold for all vibration-sensitive receptors. As such, vibration impacts associated with construction would be less than significant.	No mitigation measures are required.	Not applicable; impacts are less than significant.
Proposed single-family residences located 50 feet from Skyline Ranch Road right-of-way central to the project site would experience significant noise level in excess of 60 dBA CNEL. In addition, the eastern portion of the proposed school would experience significant noise impacts. The proposed school would be constructed using design standards to limit noise levels in the classroom. Noise levels along Skyline Ranch Road through the project site would be less than significant for the proposed parks.	4.G-3(a): Prior to construction of any residential development along Skyline Ranch Road a detailed acoustical analysis report prepared by a qualified acoustical consultant shall be submitted to the County for review and approval. For all on-site single family residences that have rear and/or side yard lines within 100 feet from the centerline of the proposed Skyline Ranch Road, the acoustical analysis report shall describe and quantify the noise sources impacting the area and the measures required to meet the 60 dBA CNEL residential noise standard. Based on a preliminary acoustical analysis included in Appendix G of this Draft EIR, the placement of a 6-foot high solid masonry wall is recommended at the locations shown	Less than significant.

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>in Appendix G, Figures 1 through 8, in order to achieve this noise standard.</p> <p>4.G-3(b): Balconies, greater than six (6) feet in depth, are considered exterior living areas and must also meet the exterior noise standard. Therefore, balconies shall either be discouraged from exposure to exterior noise levels greater than the 65 dBA CNEL (residences that are within 50 feet from the edge of the proposed Skyline Ranch Road) standard for single-family residences through architectural or site design, or balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas or other equally effective construction materials to a height specified by a qualified noise consultant.</p> <p>4.G-3(c): All on-site single-family residences within 50 feet of the Skyline Ranch Road right-of-way shall include whole-house air conditioning so that windows facing the roadway may be closed without compromising a comfortable interior living environment.</p>	
<p>Noise levels at noise-sensitive uses along a number of the roadway segments affected by project traffic are already considered unacceptable under the City and State Guidelines and project noise impacts at these locations are considered to be significant under at least one criterion established by the County and the City. Therefore, off-site mobile noise levels would result in significant impacts.</p>	<p>None feasible.</p>	<p>Significant unavoidable.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>In addition, development of the proposed project and the related projects would result in significant cumulative noise impacts at sensitive receptor locations along segments of Sierra Highway and Whites Canyon Road under at least one criterion established by the County and the City.</p>	<p>None feasible.</p>	<p>Significant unavoidable.</p>
<p>The public school and park uses could generate noise levels in excess of the standards set forth in the County Code for single-family residences if proper design consideration and features were not put in place. Therefore, it is accepted that noise impacts on residential uses from the public school and park activities could be significant.</p>	<p>4.G-4(a) Prior to issuance of building permits, a detailed acoustical analysis study shall be prepared by a qualified acoustical consultant for all on-site single family residences that have rear and/or side yard lines within line-of-site of the proposed school and/or park and shall be submitted to the County. This acoustical analysis report shall describe and quantify the noise sources impacting the area. In the event the report shows that noise levels for the residences would exceed applicable standards, measures shall be required to reduce noise to levels that are within applicable standards. Such measures may include:</p> <ul style="list-style-type: none"> • Locate student pick-up/drop-off and parking areas as far away from residences as feasible; • Arrange school buildings such that they will provide shielding between the play field and the residences; or • Provide acoustical walls with sufficient mass, length and height to break the line-of-sight between the residences and the play field. <p>The acoustical analysis report shall be subject to review and approval by the County and shall ensure</p>	<p>Less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>compliance with applicable noise standards in the County Code.</p> <p>4.G-4(b) Prior to completion of plans for the proposed elementary school and public park, a detailed acoustical analysis report shall be prepared by a qualified acoustical consultant in consultation with the Sulfur Springs School District and the County of Los Angeles Department of Parks and Recreation. The requirements set forth in the report shall ensure that on-site single family residences that have rear and/or side yard lines within line-of-site of the proposed school and/or park are not subject to unacceptably high levels of noise (i.e., noise levels in excess of the standards provided in the County Code) from school yard or park activities. The acoustical analysis report, subject to review and approval by the County, shall include requirements relating to the locations of courts and playfields and the materials and heights of property walls as necessary to support compliance with applicable noise standards in the County Code.</p>	
<p>Future residents of Skyline Ranch would generate and would be exposed to point source noise, which contribute to the ambient noise levels experienced in all similarly-developed areas and typically do not exceed the noise standards for the types of land uses proposed on the Skyline Ranch site. Therefore, residential-related point source noise impacts would not be significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
H. AIR QUALITY		
<p>Construction of the project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from demolition and construction activities. For site preparation, regional emissions would exceed the South Coast Air Quality Management District (SCAQMD) daily significance thresholds for PM₁₀, PM_{2.5}, CO, NO_x, and VOC. Therefore, project construction activities would result in a temporary but significant regional air quality impact.</p>	<p>4.H-1(a): Develop and implement a construction management plan, as approved by the County of Los Angeles prior to issuance of a grading permit, which includes the following measures recommended by the South Coast Air Quality Management District (SCAQMD) to implement SCAQMD Rule 403.</p> <ul style="list-style-type: none"> a. Ground cover shall be replaced in disturbed areas as quickly as practicable; b. Soil stabilizers/dust suppressants shall be applied to inactive disturbed areas in sufficient quantity and frequency to maintain a stabilized surface; c. Haul roads and site access roads shall be watered no less than three times daily; d. Disturbed surfaces shall be watered no less than two times daily; e. All stockpiles shall be covered with tarps as soon as practicable; f. Travel speed on unpaved surfaces shall not exceed 15 miles per hour; g. Provide a publicly visible sign and directly notify property owners in the vicinity of a contact person and telephone number to call regarding dust complaints; the contact person shall respond with appropriate corrective actions within 24 hours; h. Prohibit construction vehicle idling in excess of 10 minutes; 	<p>Significant unavoidable.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> i. Stockpiles, haul routes, staging locations, and parking areas shall be located as far as possible from adjacent residential uses; j. Pave or place gravel on all construction access roads at least 100 feet on to the site from the main road; k. Configure construction parking to minimize traffic interference; l. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours); m. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 P.M. and 6:00 A.M. and between 10:00 A.M. and 3:00 P.M.); n. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets: <ul style="list-style-type: none"> • Consolidate truck deliveries • Provide temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site; o. Suspend use of all construction equipment operations during second stage smog alerts. Contact the SCAQMD at 800/242-4022 for daily forecasts; 	

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>p. Use electricity from power poles rather than temporary fossil fuel-powered generators; and</p> <p>q. Use methanol- or natural gas-powered mobile equipment and pile drivers instead of diesel if readily available at competitive prices.</p> <p>4.H-1(b): Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.</p> <p>4.H-1(c): All on-site heavy-duty construction equipment shall be equipped with diesel particulate traps as feasible.</p>	
<p>During site grading project-related localized PM₁₀ and PM_{2.5} concentrations would result in a significant impact. However, project-related construction emissions would not exceed the NO₂ ambient air quality standard or the 1-hour or 8-hour CO ambient air quality standards at any analyzed receptor.</p>	<p>Please refer to Mitigation Measures 4.H-1(a), 4.H-1(b), and 4.H-1(c) above.</p>	<p>Significant unavoidable PM₁₀ and PM_{2.5} localized impacts.</p>
<p>The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. The results of the assessment of diesel particulate emissions indicate that the project would not emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of ten in one million. Therefore, project-related toxic emission impacts would be less than significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

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Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents and also from limited amounts of potentially contaminated soils on site. However, in mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed which would create objectionable odors. Therefore, no impact would occur.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>Operational emissions would be generated by area and mobile sources as a result of normal day-to-day activities on the project site. Area source emissions would be generated during the consumption of natural gas for space and water heating devices, by wood-burning fireplaces, during the operation of gasoline-powered landscape maintenance equipment and the use of consumer products. Mobile source emissions would be generated by the motor vehicles traveling to and from the project site. The project at build out and in full operation would generate total operational emissions that would exceed SCAQMD recommended thresholds for regional CO, VOC, NO_x, PM_{2.5}, and PM₁₀. Since the project emissions would exceed the recommended significance thresholds for operational emissions, air quality impacts would be significant.</p> <p>In addition, implementation of the project would result in an increase in emissions which would contribute to region-wide emissions on a cumulative basis and as such, the project's contribution to cumulative air quality impact is concluded to be significant.</p>	<p>4.H-2(a): Subdivisions and buildings will be required to exceed Title 24 of the California Code of Regulations (also known as the California Building Standards Code) 2005 requirements by 15 percent.</p> <p>4.H-2(b): Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.</p>	<p>Significant unavoidable.</p>

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Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
Single-family residences on the project site would be occupied while later phases of construction activities would be occurring. Combined construction and operational emissions would exceed SCAQMD daily thresholds for CO, NO _x , PM ₁₀ , PM _{2.5} and VOC, as such, significant regional air quality impacts would occur during concurrent construction and operational activities.	Please refer to Mitigation Measures 4.H-1(a), 4.H-1(b), 4.H-1(c), 4.H-2(a), and 4.H-2(b) above.	Significant unavoidable.
Project traffic, during the operational phase of the project, would have the potential to create local area CO impacts. However, the analysis of CO impacts indicates that the project would not have a significant impact upon 1-hour or 8-hour local CO concentrations due to mobile source emissions.	No mitigation measures are required.	Not applicable; impacts are less than significant.
The primary source of potential air toxics associated with project operations include diesel particulates from delivery trucks. Potential localized air toxic impacts from on-site sources of diesel particulate emissions would be minimal since only a limited number of heavy-duty trucks (delivery trucks) would access the project site and the trucks that do visit the site would not idle on the project site for extended periods of time. In addition, the project would result in small amounts of toxics from consumer household products (e.g., detergents, cleaning compounds, glues, polishes, floor finishes, cosmetics, perfume, antiperspirants, rubbing alcohol, room fresheners, car wax, paint and lawn care products). These sources are typical within the urban environment and would contribute small amounts of toxic air pollutants to the project vicinity which would	No mitigation measures are required.	Not applicable; impacts are less than significant.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
be well below any levels that would result in a significant impact on human health.		
Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified as being associated with odors. Therefore, the project would not create adverse odors as discussed above and would have no impact related to objectionable odors.	No mitigation measures are required.	Not applicable; impacts are less than significant.
The determination of Air Quality Management Plan (AQMP) consistency is primarily concerned with the long-term influence of the project on air quality in the Basin. Although the project may cause an exceedance of the localized PM ₁₀ and PM _{2.5} significance threshold, this exceedance would be short-term in nature. This impact would only occur during the grading phase of project construction and would not have a long-term impact on the region's ability to meet State and Federal air quality standards. In addition, the project would be consistent with the goals and policies of the AQMP for control of fugitive dust. Therefore, given that the project would be consistent with AQMP strategies to bring the Basin into PM ₁₀ and PM _{2.5} attainment, the project would be consistent with local air quality plans and policies.	No mitigation measures are required.	Not applicable; impacts are less than significant.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
I. WATER RESOURCES		
<p>The Santa Clarita Water Division (SCWD) of the Castaic Lake Water Agency (CLAWA) can adequately serve the project through existing and planned water supplies, since this project was considered in the 2005 Urban Water Management Plan. In addition, the Water Supply Assessment prepared for the project concluded that sufficient water supplies would be available to serve the proposed development. Therefore, impacts to water supply would be less than significant. However, the reduction in State Water Project supply to CLAWA and Countywide drought conditions and water conservation regulations reinforces the need to conserve water.</p>	<p>4.I-1 All appliances such as showerheads, lavatory faucets and sink faucets shall comply with efficiency standards set forth in Title 20, California Administrative Code Section 1604(f). Title 24 of the California Administrative Code Section 1606(b) prohibits the installation of fixtures unless the manufacturer has certified to the California Energy Conservation compliance with the flow rate standards.</p> <p>4.I-2 Low flush toilets shall be installed as specified in California State Health and Safety Code Section 17921.3 and the County Green Building Ordinance.</p> <p>4.I-3 All common area irrigation areas shall be capable of being operated by a computerized irrigation system which includes an onsite weather station/ET gage capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. All common area irrigation controllers shall also include a rain sensing automatic shutoff.</p> <p>4.I-4 Common area landscaping shall emphasize drought-tolerant vegetation. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed with</p>	<p>Implementation of the above mitigation measures would further reduce less-than-significant impacts to water supply.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>drought-tolerant vegetation shall be gauged to receive irrigation using the minimal requirements.</p> <p>4.I-5 Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in such.</p>	
<p>The proposed new water supply infrastructure associated with the proposed project would supply adequate domestic and fire flow storage for the project. Therefore, impacts related to water supply infrastructure would be less than significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>The overall increase in impervious surfaces associated with the proposed project would not result in a significant reduction in groundwater recharge. The project runoff generated by the increase in impervious surface is estimated to be 284 acre-feet per year (AFY). Most surface runoff enters the Santa Clara River and recharges the Alluvial Aquifer. Given that the increase in impervious surface area is not substantial, the increase in applied water for irrigation, and the fact that runoff will contribute recharge, impacts to groundwater recharge would be less than significant. Therefore, the proposed project would not interfere substantially with groundwater recharge, and impacts would be less than significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
<p>J. WASTEWATER DISPOSAL</p>		
<p>The project is estimated to generate 346,200 gallons of wastewater per day (gpd). Based on the Sewer Area Study Report, flows from the site would equate to 1.41 cubic feet per second (cfs) of wastewater flowing into the Sierra Highway Trunk Sewer. The existing capacity of</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>this trunk sewer is 9.58 cfs. Based on the Sewer Area Study Report, this trunk sewer and other downstream sewers have adequate existing capacity to absorb the proposed project’s estimated wastewater flows but not to accommodate cumulative development in the Mint Canyon area. Therefore, the project would include the construction of a new 24-inch sewer line in Sierra Highway to supplement the existing 21-inch line in Sierra Highway. The replacement line would extend approximately 3,000 feet in Sierra Highway from the SCVSD trunk sewer in Soledad Canyon Road to Sarabande Lane within the City of Santa Clarita.</p> <p>Regarding potential effects on wastewater treatment system capacity, the Santa Clarita Valley Joint Sewerage System (SCVJSS) has an available capacity of approximately 7 mgd to adequately serve the proposed project. Therefore, the project would not have a significant impact on wastewater treatment facilities.</p>		
K. SOLID WASTE DISPOSAL		
<p>During building activities for the project, construction debris such as wood, metal, concrete, and other materials would be generated. Construction of the proposed project would generate up to approximately 8,946 tons of debris, with the recycling/reuse of 50 percent of construction debris 3,131 tons would be disposed of at the County’s Unclassified landfills. The closest Unclassified landfill that can accept construction waste from the project site is Peck Road Gravel Pit. The project’s disposal need would constitute less than 0.04 percent of this landfill’s approximately 7.8 million tons of remaining capacity. Therefore, construction-related</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
impacts on solid waste facilities would be less than significant.		
At full build out, the project would generate solid waste typical of residential uses (i.e., food, yard/garden debris, organic materials, and paper). The project’s 1,704.78 tons of waste would comprise less than 0.002 percent of the total remaining capacity and represents less than 0.05 percent of the solid waste disposed in 2008 for these facilities. Therefore, it is expected that existing landfills would have sufficient capacity to accommodate the project’s solid waste disposal need, and operation of the project would not have a significant impact on solid waste disposal capacity.	No mitigation measures are required.	Not applicable; impacts are less than significant.
The proposed project together with projected growth in the County could result in a cumulatively significant impact on solid waste disposal. If shortages in landfill capacity occur, it is expected that changes in regulations and increases in mitigation requirements and new technologies would occur to address the impact. However, even with such efforts, impacts may remain cumulatively significant.	No mitigation measures are identified.	Cumulatively significant and unavoidable.
L. LAW ENFORCEMENT SERVICES		
The project does not propose any uses which would expose residents to an unusually high level of public safety risks associated with law enforcement services (i.e., earthquakes, fires, etc.). Residents would be exposed to the same level of public safety risks, such as break-ins, car thefts, and domestic disturbances, as existing area residents. Therefore, impacts relating to the	No mitigation measures are required.	Not applicable; impacts are less than significant.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
exposure of public safety risks would be less than significant.		
<p>Project residents would increase emergency calls and the demand for other law enforcement services in the Santa Clarita Valley Sheriff's station service area. The project would be subject to the payment of a Law Enforcement Facilities Fee as specified in Chapter 22.74 of the Los Angeles County Code to fully fund the project's share of capital improvements and reduce the project's impacts on law enforcement infrastructure. Project-generated revenue would be deposited in the County's General Fund, a portion of which is used to address costs associated with other demands for Sheriff's services (i.e., new deputies). The allocation of such revenue to a specific municipal service is determined through the County's budgeting process by the County Board of Supervisors. While general fund revenues have historically supported adequate levels of law enforcement services in the area, if sufficient funding for Sheriff's services is not maintained by the County, a potentially significant impact could occur.</p>	<p>4.L-1(a): Prior to issuance of building permits, the project shall incorporate Crime Prevention Through Environmental Design (CPTED) features into the project, in coordination with and to the satisfaction of the Sheriff's Department. Such features should include, but are not limited to the following:</p> <ul style="list-style-type: none"> • Lighting in parking lots and low-level security lighting; • Provision that doors and windows are visible from the street and between buildings; • Lighting of building address numbers to ensure visibility from the street for emergency response agencies; and • Landscaping that would minimize opportunities for hiding. <p>4.L-1(b): Prior to issuance of building permits, the applicant shall provide the Sheriff's Department with plans indicating the project's street circulation system and building addresses to facilitate emergency response.</p>	Significant unavoidable.
All on-site roadways and emergency access requirements would be reviewed and approved to the satisfaction of the Los Angeles County Department of Public Works, Los Angeles County Fire Department, and the Sheriff's Department. Therefore, no impacts to	No mitigation measures are required.	Not applicable; impacts are less than significant.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
emergency access and/or emergency evacuation plans would occur.		
The project would result in an increase in the residential population and, therefore, would increase demand for California Highway Patrol (CHP) services. This increased demand for CHP services would further extend existing resources for traffic control and incident response if additional staffing and upgrades are not adequately funded in the future. While project residents would generate revenue to the State’s Motor Vehicle Account, the primary source of funding for the CHP, if such funds are not allocated toward additional CHP staffing and facilities in the area, the project’s impacts on CHP services would be significant.	Please refer to Mitigation Measures 4.L-1(a) and 4.L-1(b) above.	Significant unavoidable.
M. FIRE SERVICES AND HAZARDS		
The project’s residents would increase the demand for Los Angeles County Fire Department (LACoFD) staffing, equipment, and facilities. As such, the proposed project would potentially result in deficiencies in fire service. The project would be required to pay fees pursuant to the Los Angeles County Fire Department’s Developer Fee Program, which would be used toward land acquisitions, facility improvements, and partial funding of new equipment. However, while general fund revenues have historically supported adequate levels of fire protection services in the area, if sufficient funding for LACoFD services is not maintained by the County, a potentially significant impact could occur.	<p>4.M-1(a): Prior to issuance of building permits, the applicant shall pay fees pursuant to the Developer Fee Program or make an in-lieu donation, as determined appropriate by the Los Angeles County Fire Department (LACoFD).</p> <p>4.M-1(b): Development of the project shall occur in accordance with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and hydrants.</p> <p>4.M-1(c): Project buildings shall adhere to all applicable State and County Fire and Building Codes.</p> <p>4.M-1(d): The project shall provide adequate emergency access. Access roads shall:</p>	Less than significant.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<ul style="list-style-type: none"> • <i>Provide a minimum width of 20 feet;</i> • extend to within 150 feet of any exterior portion of all structures; • meet the minimum width requirements prescribed by the LACoFD; • be constructed with an all-weather surface; • have a minimum of 10 feet of brush clearance on each side; • have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species; • have a vertical clearance of 13.5 feet when protected tree species are overhanging; and • have a turning radii of no less than 32 feet. <p>4.M-1(e): A turning area satisfactory to the LACoFD shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.</p> <p>4.M-1(f): All fire lanes must be a minimum of 26 feet in width (clear-to-sky) and marked “NO PARKING—FIRE LANE.”</p> <p>4.M-1(g): All access devices and gates for the proposed school shall comply with California Code of Regulations, Title 19, Article 3.05, including providing a minimum paved access width of 26 feet for circulation purposes.</p>	

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>4.M-1(h): Proposed traffic calming measures shall be submitted to the LACoFD for review and approval.</p> <p>4.M-1(i) All fire hydrants shall:</p> <ul style="list-style-type: none"> • Measure 6"x4" x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal; • On-site hydrants shall be installed a minimum 25 feet from a structure or protected by a two- hour rated firewall; • Fire hydrants shall be installed, tested, and accepted prior to construction; • Vehicular access to fire hydrants shall be provided and maintained serviceable throughout construction. 	
<p>The project is located within a Very High Fire Hazard Severity Zone (VHFHSZ). However, the project would be subject to the requirements for VHFHS zones set forth in the Los Angeles County Fire Code. These requirements include the preparation of a Fuel Modification Plan, a landscape plan, and an irrigation plan. Additionally, the project would comply with other applicable requirements including the County Fire Code, Building Code, and California Fire Code regarding site access, fire hydrant spacing, water-storage, building materials, and fire flow.</p>	<p>4.M-2: Prior to the issuance of any grading permit, a Fuel Modification Plan, consistent with the Fuel Modification Plan Guidelines, shall be submitted for review and approval by the Department of Regional Planning and the Forestry Division of the LACoFD to reduce the threat of wildfire. The Fuel Modification Plan shall require that applicant or homeowners association provide and maintain fuel modification and brush clearance zones around each on-site structure. Said plan shall be approved by the Forestry Division prior to completion of final landscape plans.</p> <p>Please also see Mitigation Measures 4.M-1(b), 4.M-1(c), and 4.M-1(d).</p>	<p>Less than significant.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
N. EDUCATION		
<p>Approximately 305 elementary school students within the Sulphur Springs School District (SSSD) would be generated by the proposed project. These students would be accommodated by the proposed SSSD elementary school on-site, which has a proposed capacity of 750 students. In addition, approximately 178 elementary school students generated by the proposed project would be located within the Saugus Union School District (SUSD). Moreover, approximately 160 junior high students and 301 senior high students would be generated by the proposed project. These students would attend Arroyo Seco Junior High School and Saugus High School within the Hart Union High School District, respectively. Under the provisions of SB 50, the payment of developer fees is “deemed to provide full and complete school facilities mitigation” for purposes of CEQA.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
O. LIBRARIES		
<p>Project residents would increase the demand for library services and resources (i.e., items, facility space, and staffing). Since the Canyon Country Jo Anne Darcy Library currently has a deficit of 88,070 items and 21,345 square feet of library space, the project would contribute to this deficit, and would further hinder the library’s efforts to meet its service guidelines. However, the project would be subject to the payment of library impact fees pursuant to Section 22.72 of the Los Angeles County Code. Fees paid would be used to compensate for the project’s increased demand for</p>	<p>No mitigation measures are required with payment of Library Facilities Mitigation fee, as specified in Section 22.72 of the Los Angeles County Code.</p>	<p>Not applicable; impacts are less than significant.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>library resources. The County Public Library has indicated that payment of fees would mitigate the project's impacts on libraries to less than significant.</p>		
P. PARKS		
<p>Based on the Los Angeles County Code (LACC) park requirement formula, the proposed project is required to provide 12.23 net acres of on-site park space that meets Los Angeles Department of Parks and Recreation (LADPR) criteria. The proposed project would provide approximately 18 acres of park space, including a fully improved 10.6-acre public park. Because the 10.6 acres of public park space is less than the 12.23 acres required by LADPR, payment of in-lieu fees would also be required. With the payment of fees and development and conveyance of a fully-improved park to LADPR, impacts related to the provision of parks and recreational facilities would be less than significant.</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>
Q. LAND USE		
<p>The proposed project would create a residential development located adjacent to existing residential development to the west and south. The proposed project would support many regional and local policies regarding development at the project site. It would support policies of the Southern California Association of Governments' Regional Transportation Plan and Growth Visioning, County General Plan, and Santa Clarita Area Plan that are intended to concentrate clustered development in proximity to existing development via density transfer, accommodate</p>	<p>No mitigation measures are required.</p>	<p>Not applicable; impacts are less than significant.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
development in areas least likely to have adverse environmental impacts, improve infrastructure in the area, and direct growth away from environmentally sensitive areas. The proposed development would not affect the distribution of development within and/or adjacent to existing communities and neighborhoods. Therefore, land use impacts would be considered less than significant.		
R. POPULATION, HOUSING AND EMPLOYMENT		
The proposed project is forecast to result in a projected on-site resident population increase of 4,158 at build out. This growth is a relatively small component of the expected growth projected by SCAG. As a result, the population impacts of the proposed project would not cause population growth or accelerate development in an undeveloped area that exceeds adopted growth projections with project occupancy/build out. As such, impacts on population would be less than significant.	No mitigation measures are required.	Not applicable; impacts are less than significant.
The number of housing units within the proposed project site is projected to increase by 1,260 during the 2007 to 2017 period. The housing impacts of the proposed project would not cause housing growth or accelerate development in an undeveloped area that exceeds adopted growth projections with project occupancy/build out. As such, impacts on housing are considered less than significant.	No mitigation measures are required.	Not applicable; impacts are less than significant.
The proposed project is forecast to result in a total employment increase of 62 new jobs. New employment would result from the development of the	No mitigation measures are required.	Not applicable; impacts are less than significant.

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
<p>proposed school and parks. The school is projected to result in an increase of 50 jobs. The park areas would support a small number of employees for various maintenance and operation activities. The employment opportunities generated by the project is negligible. As a result, the employment impacts of the proposed project would not cause employment growth or accelerate development in an undeveloped area that exceeds adopted growth projections with project occupancy/build out. As such, impacts on employment are considered less than significant.</p>		
S. GLOBAL CLIMATE CHANGE		
<p>The proposed project would generate greenhouse gas (GHG) emissions associated with construction and operational activities (i.e., vehicle emissions and energy use). In addition, the proposed project would result in additional water demand. Although the significance of the proposed project’s impacts on global climate change are too speculative to determine, it was conservatively concluded that even with implementation of project features, GHG measures, and mitigation measures, the proposed project’s GHG emissions would represent a cumulatively considerable incremental contribution to significantly cumulative impacts associated with global climate change.</p>	<p>GHG Reduction Measure GCC-1: The builder shall strive to construct at least 10 percent of dwelling units in the proposed project with LIVINGSMART® features so as to achieve a minimum of 25 percent reduction in projected GHG emissions. The builder commits to offer enhanced advertising, education, and, if needed, other incentives to encourage market acceptance of these various energy- and water-conserving options.</p> <p>GHG Reduction Measure GCC-2: The builder shall plant approximately 40 trees per landscaped acre as a means to capture (sequester) carbon dioxide emissions and to provide shade to the buildings, which can decrease the need for air conditioning.</p> <p>GHG Reduction Measure GCC-3: To facilitate the extension of existing bus service to include Skyline Ranch Road, the builder shall work with</p>	<p>Cumulatively significant and unavoidable.</p>

Table ES-1

Summary of Environmental Impacts, Mitigation Measures and Levels of Significance After Mitigation

Environmental Impacts	Mitigation Measures	Level of Significance After Mitigation
	<p>the Santa Clarita Transit District to design and provide bus turnouts and shelters along Skyline Ranch Road.</p> <p>GHG Reduction Measure GCC-4: In order to increase awareness of green building practices and to promote water and energy conservation, the builder will develop and implement a green educational program. The program will include but not necessarily be limited to a pamphlet that educates and promotes conservation practices that homeowners can implement, with specific guidance on landscaping with drought tolerant plants, use of efficient irrigation systems, compact florescent lighting, and other measures that help lower GHG emissions.</p> <p>Also, please see Mitigation Measures 4.H-2(a), 4.H-2(b), 4.I-1, 4.I-2, 4.I-3, 4.I-4 and 4.I-5.</p>	

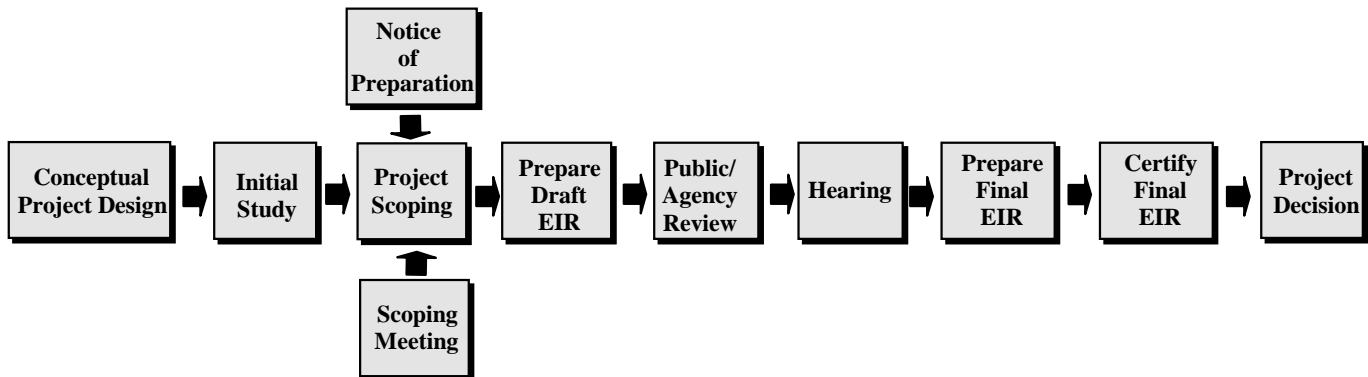
1.0 INTRODUCTION

A. PURPOSE AND OVERVIEW OF THE EIR PROCESS

The County of Los Angeles is the Lead Agency under the California Environmental Quality Act (CEQA) for the Skyline Ranch project. The 2,173-acre Skyline Ranch site is located in the Santa Clarita Valley west of Sierra Highway, north of Highway 14 (Antelope Valley Freeway) and the City of Santa Clarita in unincorporated Los Angeles County. The project applicant proposes to develop approximately 622 acres of the site with 1,260 single-family residential lots with pads ranging in size from 5,775 to 7,350 square feet along with an approximately 11-acre elementary school site, approximately 12 acres (10.3 net) of public parkland to be dedicated to the Los Angeles County Department of Parks and Recreation, and approximately 6 acres of private parkland to be maintained by a homeowners' association. Nearly three quarters of the site, the northern 1,551 acres located in the northern portion of the site, is proposed to remain undeveloped, with 1,355 acres dedicated or designated as natural open space through the proposed establishment of the Skyline Ranch Conservation Area (SRCA). Approximately 166 acres in the northern portion of the site on Cruzan Mesa would remain undeveloped and designated as a Non-Development/Continuing Use Area. Also in the northern portion of the site, approximately 22 acres would be preserved as a Mitigation Exchange Area for 22 acres of preserve area within adjoining recorded Tract 46018, that would be disturbed due to the construction of Skyline Ranch Road.

This Draft EIR is being circulated to responsible and trustee agencies and the public for review and comment.

The CEQA process begins with a determination by the lead agency of whether or not the project is subject to environmental review. If environmental review is required, an Initial Study is prepared to determine whether the project may have a significant environmental effect. If it is determined that the project could result in significant environmental effects, the topical issues (i.e., Traffic, Noise, etc.) that contribute to these effects are identified in the Initial Study and addressed in an EIR. The Initial Study prepared by County of Los Angeles for the proposed Skyline Ranch project determined that the project would require the preparation of an EIR. Currently, the proposed project is at the Draft EIR stage (see Figure 1-1). The Final EIR will be considered for certification by the County of Los Angeles following the public review and comment period and before a final decision is made on the project. Responses to any comments received and any necessary revisions to the Draft EIR will be provided in the Final EIR. A diagram illustrating the CEQA process is shown in Figure 1-1.

Figure 1-1 The EIR Process

B. SCOPE OF THE EIR

This section provides a summary of the issues addressed in this Draft EIR. This Draft EIR was prepared following input from the public, responsible agencies, and affected agencies during the EIR scoping process. The “scoping” of the EIR was conducted utilizing several of the tools available under CEQA. In accordance with Section 15082 of the *State CEQA Guidelines*, a Notice of Preparation (NOP) was circulated to responsible agencies, trustee agencies, and other interested parties on October 25, 2004. The NOP was posted in the Los Angeles County Clerk’s office for 30 days. An Initial Study, prepared in accordance with Section 15063 of the *State CEQA Guidelines*, was distributed by the County of Los Angeles as part of the NOP. Information requested and input provided during the 30-day NOP comment period regarding the scope of the EIR are responded to in this Draft EIR. A copy of the NOP, Initial Study, and written comments received are provided in Appendix A of this document.

A public scoping meeting was held during the 30-day NOP comment period on November 10, 2004, at the Canyon Country Jo Anne Darcy Library located at 18601 Soledad Canyon Road in the City of Santa Clarita, to gather input from the local community regarding the scope of the EIR. A summary of the scoping meeting, comments received during the scoping meeting, a copy of the presentation, and the scoping meeting sign-in sheet are included in Appendix A of this Draft EIR.

The focus of this EIR is to discuss issues determined in the Initial Study to be potentially significant, whereas issues found in the Initial Study to have less-than-significant impacts or no impact, do not require further evaluation. Based on the analysis contained in the Initial Study, input received during the NOP circulation period and the public scoping meeting, and recent legislation (AB 32 and SB 97) and public concern regarding greenhouse gas emissions and global climate change, this Draft EIR analyzes in detail the following environmental issues:

-
- Geotechnical Resources;
 - Hydrology and Water Quality;
 - Biological Resources;
 - Cultural Resources;
 - Visual Qualities;
 - Traffic/Access;
 - Noise;
 - Air Quality;
 - Water Resources;
 - Wastewater Disposal;
 - Solid Waste Disposal;
 - Law Enforcement Services;
 - Fire Services and Hazards;
 - Education;
 - Libraries;
 - Parks;
 - Land Use;
 - Population, Employment and Housing;
 - Global Climate Change.

Chapter 4.0 of this Draft EIR is divided into sections for each of the issues listed above and includes a detailed discussion of the potential impacts of the project. Mitigation measures are proposed to reduce significant impacts, whenever possible, to a less-than-significant level.

In addition to the environmental issues identified above, the EIR also includes all of the sections required by CEQA. Table 1-1, Required EIR Contents, on page 1-4 contains a list of sections required under CEQA, along with a reference to the section(s) in this Draft EIR where these items can be found.

C. EIR ORGANIZATION

The content and format of this Draft EIR are designed to meet the current requirements of CEQA and the *State CEQA Guidelines*. The Draft EIR is organized into the following chapters so the reader can easily obtain information about the project and its specific issues:

- **“Executive Summary,”** presents a summary of the proposed project and alternatives, potential impacts and mitigation measures, and impact conclusions regarding growth inducement and cumulative impacts.
- **Chapter 1.0, “Introduction,”** describes the purpose and use of the EIR, provides a brief overview of the proposed project, and outlines the organization of the EIR.
- **Chapter 2.0, “Project Description,”** describes the project background and objectives, the location and characteristics of the site, features of the project, intended uses of the EIR, and required permits and approvals.

Table 1-1**Required EIR Contents**

Requirement/CEQA Section	Location in EIR
Table of Contents (Section 15122)	Table of Contents
Summary (Section 15123)	Executive Summary
Project Description (Section 15124) and Environmental Setting (Section 15125)	Chapter 2.0
Significant Environmental Impacts (Section 15126.2)	Chapters 4.A-4.R
Unavoidable Significant Environmental Impacts (Section 15126.2)	Chapter 6.0
Mitigation Measures (Section 15126.4)	Chapters 4.A-4.R
Cumulative Impact Analysis Methodology (Section 15130)	Chapter 3.0
Cumulative Impacts (Section 15130)	Chapters 4.A-4.S
Alternatives to the Proposed Project (Section 15126.6)	Chapter 5.0
Growth-Inducing Impacts (Section 15126.2)	Chapter 6.0
Effects Found Not to Be Significant (Section 15128)	Chapter 6.0
List of Preparers (Section 15129)	Chapter 7.0
Organizations and Persons Consulted (Section 15129)	Chapter 7.0

- **Chapter 3.0, “Cumulative Impact Analysis Methodology,”** describes the related projects identified to support the cumulative impact analysis.
- **Chapter 4.0, “Environmental Impact Analysis,”** describes for each environmental issue, the existing conditions and setting before project implementation; methods and assumptions used in impact analysis; thresholds of significance; impacts that would result from the proposed project; and applicable mitigation measures that would eliminate or reduce significant impacts.
- **Chapter 5.0, “Alternatives,”** evaluates the environmental effects of project alternatives, including a No Project/No Development Alternative and a No Project/Reasonably Foreseeable On-site Development Alternative. It also identifies the environmentally superior project alternative.
- **Chapter 6.0, “Other CEQA Considerations,”** includes a discussion of issues required by CEQA that are not covered in other chapters. This includes impacts found not be significant, irreversible environmental changes, growth inducing impacts, significant unavoidable adverse impacts, and potential secondary effects.
- **Chapter 7.0, “List of EIR Preparers and Organizations and Persons Consulted,”** lists the staff members, organizations, and individuals (personal communications) involved in preparing this Draft EIR.
- **Chapter 8.0, “References,”** identifies the documents (printed references) consulted in preparing this Draft EIR.

- **“Appendices,”** present data supporting the analysis or contents of this Draft EIR. Additional documents referenced in this Draft EIR that are not included in the appendices are available at the County of Los Angeles Department of Regional Planning, Impact Analysis Section, 320 West Temple Street, Los Angeles. The appendices include the following:
 - Appendix A: Notice of Preparation, Initial Study, and Comment Letters; Scoping Meeting Materials;
 - Appendix B: Geotechnical Reports (Geolabs-Westlake Village, March 2004, November 2006, April 2007, and August 2008);
 - Appendix C: Hydrological and Water Quality Technical Reports (Drainage Concept/Hydrology/Standard Urban Storm Water Mitigation Plan (SUSMP), Sikand Engineering Associates, March 2009; Flood Plain Analysis, Sikand Engineering Associates, March 2009; Water Quality Technical Report, Novin Rashedi, May 2009; LID Standards Ordinance Exemption Determination, January 7, 2009);
 - Appendix D: Biological Resources Technical Reports (Biological Resources Assessment, Natural Resources Consultants, May 2009 and Technical Memorandum, June 2009; Conceptual Habitat Mitigation and Monitoring Plan, Glenn Lukos Associates, May 5, 2009; On-site Jurisdictional Delineation, Glenn Lukos Associates, May 2009; Off-site Jurisdictional Delineation, Glenn Lukos Associates, May 2009);
 - Appendix E: Cultural and Paleontological Resources Reports (Cultural and Paleontological Resources Assessment, PCR, November 2005; Addendum Report for Off-Site Storm Drain and Channel, PCR, May 2009);
 - Appendix F: Traffic Impact Analysis (Austin-Foust Associates, Inc., October 2008);
 - Appendix G: Noise Modeling Worksheets and Noise Barrier Locations (PCR, April 2008);
 - Appendix H: Air Quality Technical Appendix (PCR, May 2009);
 - Appendix I: Water Resources (Water Resources Technical Report, CH2MHILL and Entrix, Inc., July 2009; Water Supply Assessment, September 11, 2008; Santa Clarita Water Division Correspondence, March 5, 2009);
 - Appendix J: Sewer Area Study Report (Sikand Engineering Associates, July 2008);
 - Appendix K: Global Climate Change (PCR, May 2009).

D. AVAILABILITY OF THE DRAFT EIR

The Draft EIR for the Skyline Ranch project is being distributed directly to numerous agencies, organizations, and interested groups and persons for comment during the formal review period for the Draft EIR. The Draft EIR also is available for review at the following locations:

- County of Los Angeles Department of Regional Planning, Impact Analysis Section, , Room 1348, 320 West Temple Street, Los Angeles, 90012;
- Canyon Country Jo Anne Darcy Library, 18601 Soledad Canyon Road, Santa Clarita, 91351;
- Valencia Library, 23743 West Valencia Boulevard, Santa Clarita, 91355; and
- Newhall Library, 22704 West Ninth Street, Santa Clarita, 91321:

- Los Angeles County Public Library, 7400 E. Imperial Highway, Downey, 90241.

Additional copies of the Draft EIR may be purchased through the Department of Regional Planning in either hard copy or CD-ROM versions. In addition, the Draft EIR is available online at the County of Los Angeles Department of Regional Planning website (<http://www.planning.lacounty.gov/case/all>) Tentative Tract Map No. 060922/Project No. 04-075, Skyline Ranch Project.

The County of Los Angeles will receive public input on the project and Draft EIR at a Public Hearing before the Los Angeles County Regional Planning Commission on September 16, 2009. The Public Meeting will be held at Regional Planning Commission Hearing Room, 320 West Temple Street, Room 150. Comments from the community and interested parties are encouraged prior to the close of public testimony. Information concerning the public review schedule for the Draft EIR and public meetings can be obtained by contacting the County of Los Angeles Department of Regional Planning. Upon completion of the formal public review period, written responses to all comments on environmental issues discussed in the Draft EIR will be prepared and incorporated into the Final EIR.

2.0 PROJECT DESCRIPTION

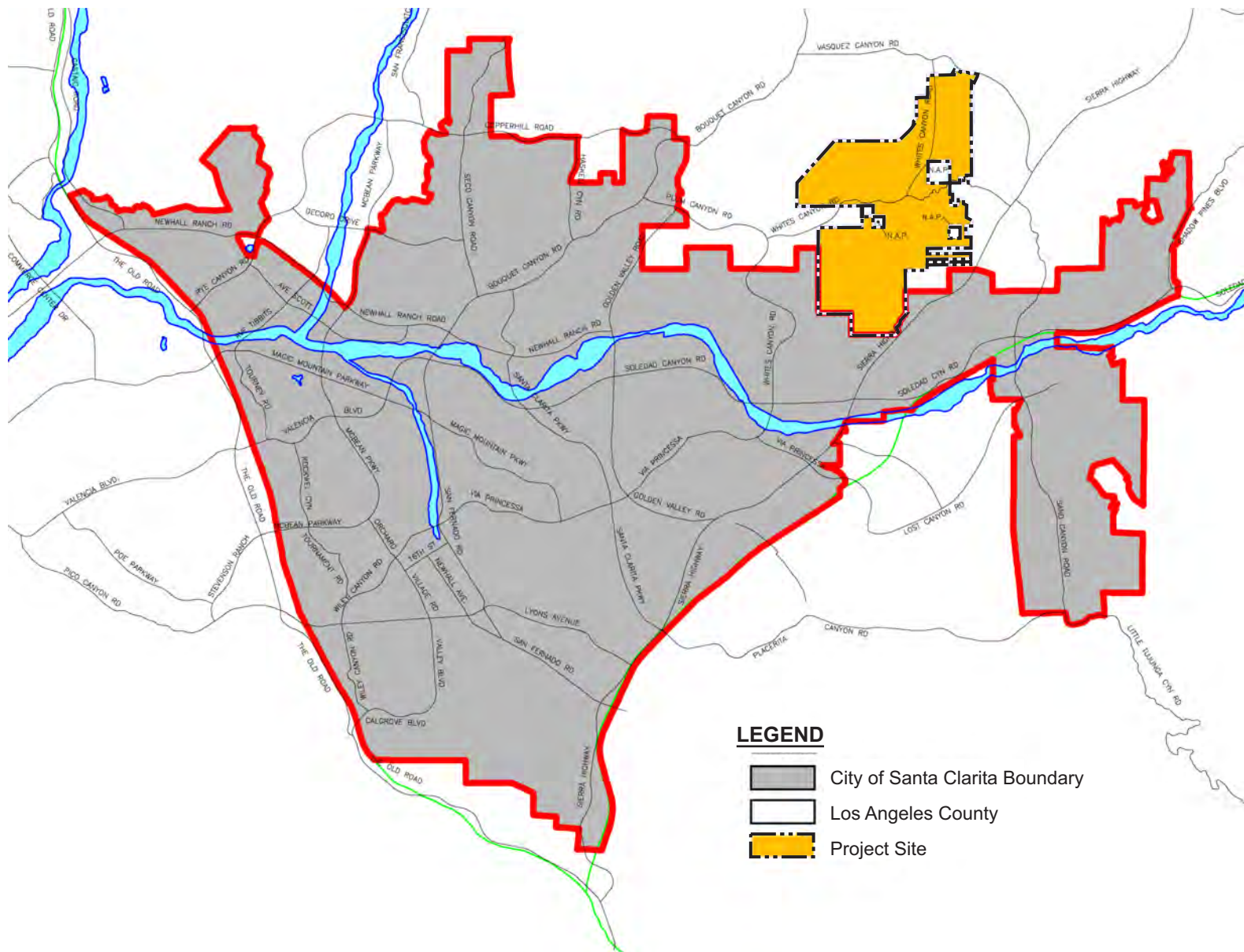
A. PROJECT LOCATION AND BACKGROUND

As shown in Figure 2-1, Regional Location Map, on page 2-2, the 2,173-acre Skyline Ranch site is located in the Santa Clarita Valley north of Highway 14 (Antelope Valley Freeway) and the City of Santa Clarita in unincorporated Los Angeles County. The project site includes various undeveloped parcels west of Sierra Highway between the Santa Clara River and Vasquez Canyon. As illustrated in Figure 2-2, Project Location Map, on page 2-3, the site is roughly defined by Sierra Highway (Mint Canyon) on the east and southeast, residential communities in Santa Clarita on the south and southwest, Plum Canyon Road on the west, Bouquet Canyon Road to the northwest, and Vasquez Canyon Road to the northeast.

The project site has no land uses other than those that occur in the northern portion of the site within the area known as Cruzan Mesa. The northern portion of Cruzan Mesa is currently being leased by a film production company as an outdoor movie location. Portions of Cruzan Mesa have been previously used for cattle grazing and are the site of sizable vernal pools. Remnants of an old landing strip are still present on Cruzan Mesa; based on available historical information, this landing strip had been in operation from at least the late 1950s until the late 1980s. Land ownership of the entire Skyline Ranch site is in private holdings and is comprised of 258 parcels. Of these parcels, 200 lots comprise the Recorded Tract Map No. 44967.

The Santa Clarita Valley Area Plan Land Use Policy Map designates the project site as U1 (Urban 1.1 to 3.3 dwelling unit [du]/ acre), U2 (Urban 3.4 to 6.6 du/acre), U3 (Urban 6.7 to 15 du/acre), N2 (Non-Urban 2, 0.5 to 1.0 du/acre), W (Floodway and Floodplain), and HM (Hillside Management). Within the project site 14.2 acres are designated U1; 33.3 acres are designated U2; 4.4 acres are designated U3; 155.6 acres are designated N2; 6.6 acres are designated W; and 1,959.2 acres are designated HM. In addition, the County of Los Angeles Zoning Code designates the project site for agricultural uses, including 1,757.4 acres as A-2-1 (Heavy Agricultural), 87.6 acres as A-1-1 and 328.2 acres as A-1-10,000 (Light Agricultural). These land use and zoning maps are included in Section 4.Q, Land Use, of this EIR (see Figure 4.Q-1, Existing Land Use Designations, on page 4.Q-8, and Figure 4.Q-2, Existing Zoning, on page 4.Q-10).

As described in more detail below, approximately 360 acres of undeveloped land within the northern portion of the project site has been subdivided into 200 residential lots as part of Recorded Tract Map No. 44967. However, as further described below, this area is not contemplated for development as part of the proposed project.



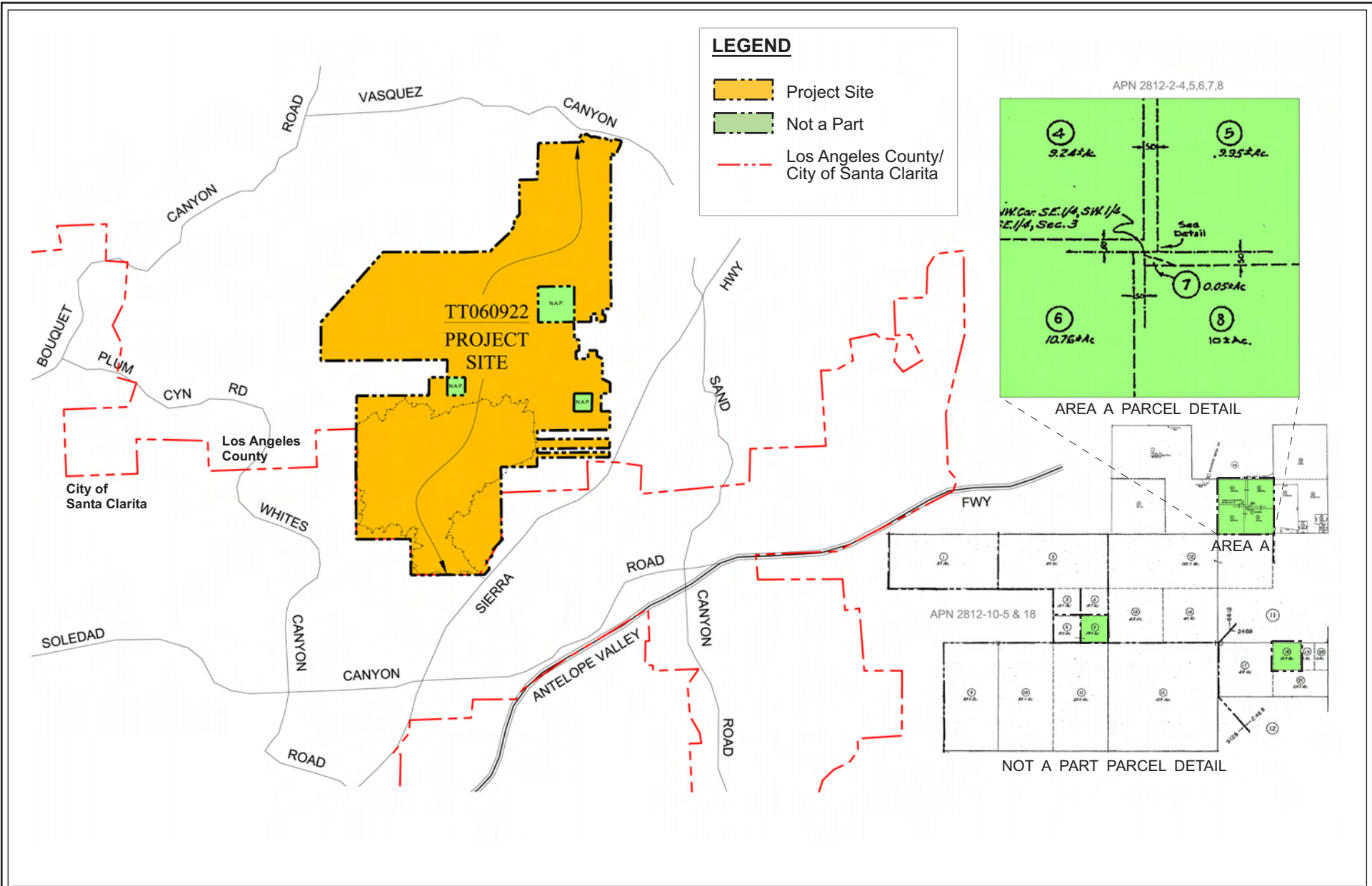
LEGEND

- City of Santa Clarita Boundary
- Los Angeles County
- Project Site



Figure 2-1
Regional Location Map

Source: Sikand Engineering, 2007



Not to Scale

Source: Sikand Engineering, 2007

Figure 2-2
Project Location Map

Also within the project boundary, and shown on Figure 2-2, are seven parcels (or 60 acres) under private ownership, which are not a part of the proposed project. These include five vacant parcels and two parcels with one single-family unit each. These parcels are outside of the proposed development area and access to these parcels would not be affected by the proposed project.

In October 2007, the vast majority of the Skyline Ranch project site was burned as a result of the over 38,000 acre Buckweed (Agua Dulce) Fire. The discussions of environmental setting and existing conditions in this EIR are primarily based on conditions that existed prior to the fire around the time the Notice of Preparation for the EIR was prepared. Consideration of these pre-fire conditions ensures that the full extent of potential impacts for several topics, most notably biological resources, are accounted for. This approach is in general accordance with the approach taken by resource agencies and recognizes that the habitats on site are adapted to fire and would continue to regenerate overtime.

B. PROJECT OBJECTIVES

Section 15124(b) of the *State CEQA Guidelines* requires that an Environmental Impact Report (EIR) include a statement of the objectives, including the underlying purpose of the project. Presented below are the objectives of the proposed project:

1. Land Use Planning Objectives

- Develop in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers.
- Cluster development within the site to preserve significant biotic resource areas and other natural open space while reducing landform alteration and avoiding a scenic ridgeline.
- Provide development and transitional land use patterns that are compatible with surrounding communities and land uses.
- Increase the supply of housing to serve existing demand and future needs associated with forecasted population growth in the Santa Clarita Valley.
- Provide sites for a public elementary school and a public park to serve residents of the project and others in nearby communities.

- Create a pedestrian friendly environment which encourages pedestrian access between neighborhoods, parks, and a public elementary school.

2. Mobility Objectives

- Provide a major regional roadway improvement that will also serve the site, consistent with the alignment being proposed in the County's Draft Highway Plan.
- Provide a safe, walkable community, through the use of enhanced landscaped sidewalks and paseos segregated from vehicle traffic.
- Enhance pedestrian safety through the use of innovative traffic calming techniques, which may include roundabouts, designed to slow traffic while providing continual traffic flow.
- Provide bike lanes and an extension of existing bus service along Skyline Ranch Road to facilitate the use of alternative transportation.

3. Park and Recreation Objectives

- Provide on-site recreational opportunities, including an improved public park, private passive neighborhood and pocket parks, and hiking trails convenient and accessible to residents.
- Support extension of the County Trail System (Mint Canyon Trail) by dedicating an easement in the northern portion of the site to the County from Vasquez Canyon Road to the Plum Canyon Fire Road and southwesterly to a lookout point (approximately 2.2 miles).

4. Resource Conservation Objectives

- Avoid development in regionally significant biotic resource areas located on Cruzan Mesa by designating a 166-acre portion of the site as a Non-Development/Continuing Use Area.
- Preserve other significant biotic resources in the northern portion of the site through establishment of one or more voluntary conservation easements, land dedications, or land set asides over a 1,355-acre area to be known as the Skyline Ranch Conservation Area (SRCA).

- Promote water conservation through use of drought-tolerant, fire-retardant, and native plants.
- Promote energy reduction, sustainable building practices, health enhancement, and water conservation into housing design, construction, and operation to reduce greenhouse gas emissions, while also reducing the operating and maintenance costs of housing.
- Provide landscaping along the perimeter of the site with a mix of native, drought-tolerant, low-fuel, and non-invasive plant species to serve as buffer between improved areas of the site and adjacent natural open space in order to protect sensitive biotic resources.

C. PROJECT CHARACTERISTICS

The project applicant proposes to develop approximately 622 acres of the site with 1,260 single-family residential lots with pads ranging in size from 5,775 to 7,350 square feet, an approximately 11-acre elementary school site, approximately 12 acres of fully improved public parkland to be dedicated to the Los Angeles County Department of Parks and Recreation, and approximately 6 acres of private parkland to be managed by a homeowners' association. Development is proposed for the southern portion of the property where slopes of 25 percent or less predominate. As further described below, nearly three quarters of the site (the northern 1,551 acres) is proposed to remain undeveloped, with approximately 1,355 acres dedicated or designated as natural open space through establishment of the Skyline Ranch Conservation Area (SRCA). The SRCA would be managed, as appropriate, to preserve the natural open space. Approximately 166 acres in the northern portion of the site on the Cruzan Mesa, would remain undeveloped and designated as a Non-Development/Continuing Use Area. Also, within the northern portion of the site approximately 22 acres would be preserved as a Mitigation Exchange Area for 22 acres of preserve area within adjacent recorded Tract 46018, that would be disturbed due to the construction of Skyline Ranch Road. These three areas would preserve nearly all of the undeveloped areas of the site and simultaneously provide approximately 80 percent of the lands being proposed by the County for establishment of the Cruzan Mesa Vernal Pools Significant Ecological Area (SEA). Figure 2-3, Aerial View—Development and Conservation Areas, on page 2-7 presents an aerial view showing the southern portion of the site proposed for development and the northern portion of the site that includes the proposed SRCA and other open space areas. Also shown on Figure 2-3 is a proposed trail that would extend the existing Mint Canyon Trail from Vasquez Canyon Road to the Plum Canyon Fire Road along an existing dirt path and southwesterly towards a lookout point. The proposed trail extension would run a total distance of approximately 2.2 miles within portions of the SRCA and Non-Development/Continuing Use Area.

LEGEND

-  Proposed Development Area
-  Skyline Ranch Conservation Area
-  Additional Off-Site Disturbed Areas
-  Non-Development / Continuing Use Area
-  Open Space
-  Mitigation Exchange Area
-  Project Site
-  Proposed County Trail

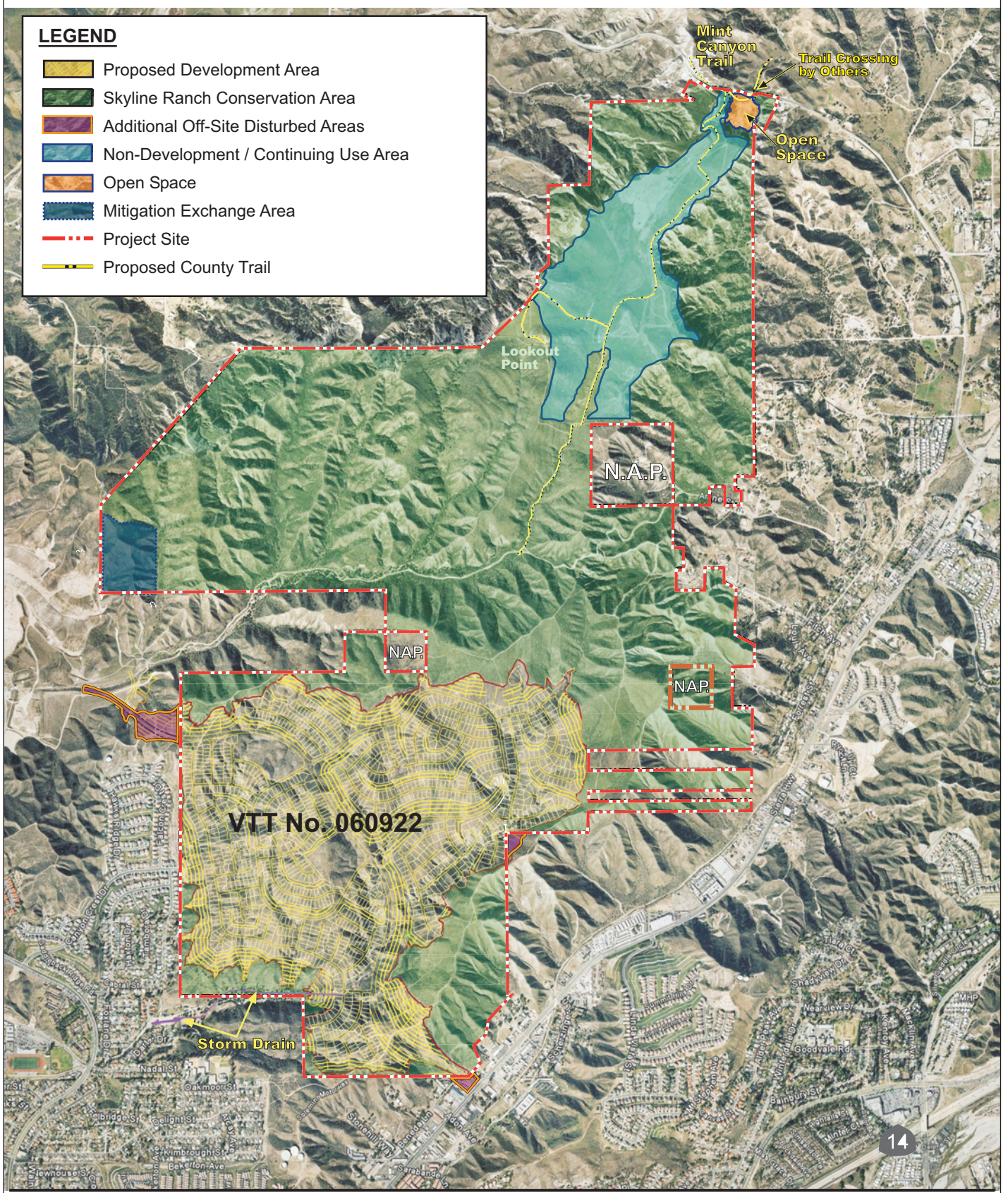


Figure 2-3
Aerial View - Development
and Conservation Areas

The Vesting Tentative Tract Map No. 060922 (Figure 2-4, Vesting Tentative Tract Map No. 060922, on page 2-9), subdivides the development area of the project property into 1,313 lots, including 1,260 residential lots, 10 lots for park areas, 1 lot for a school site, 13 debris basin lots, 4 water tank/booster pump station lots, and 25 open space lots.¹ Primary access to the tract is provided by the extension of Whites Canyon Road from Plum Canyon to the southeast through the project interior ultimately connecting to Sierra Highway. A detail of the proposed entry and other offsite improvements is shown on Figure 2-5, Proposed Entry and Other Off-Site Improvements, on page 2-10. These include cul-de-sac improvements at Canyon Crest and Bookham Drive and a cul-de-sac and hammerhead turnaround at Beneda Lane; a 78-inch storm drain and trapezoid channel that extends southwest approximately 1,300 feet off-site and discharges into an existing County flood control channel parallel to Goodvale Road and storm drains within Bookham Drive and Bakerton Avenue that would connect to the on-site storm drain system; proposed water lines within Sierra Highway; and downsizing an existing debris basin at the easterly terminus of Foxlane Drive.

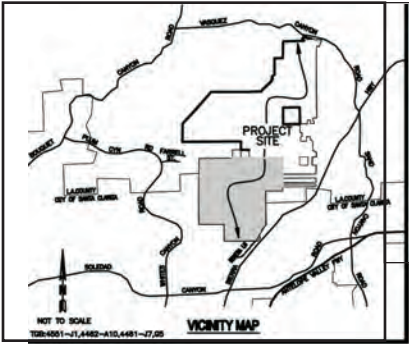
Table 2-1, Skyline Ranch Project Land Use Summary, on page 2-11 provides a breakdown of the proposed project's land uses. The primary components of the project are described in more detail below.

1. Proposed Land Uses and Improvements

a. Residential Land Uses

The 1,260 single-family homes would be characterized by a traditional lot orientation at net densities ranging from 3.0 to 4.0 dwelling units per acre on lots with pads ranging in size from 5,775 to 7,350 square feet. All lots are proposed to be located along public streets. There would be a mix of housing types with three to six bedrooms. Homes would be one or two stories and would range in size from 2,400 square feet to 4,700 square feet. An illustrative conceptual site plan of the proposed residential development is depicted in Figure 2-6, Skyline Ranch - Conceptual Site Plan, on page 2-12.

¹ *The number and size of lots within Vesting Tentative Tract Map No. 060922 may be subject to change; however such changes would not increase the number of residential lots, decrease the amount of open space or parks, or alter the overall footprint of the approximate 622 acre area proposed for development. In addition, the location of the proposed 11-acre school site may be subject to change within the development area based on the determination of the Sulphur Springs School District, Office of the State Architect, and County of Los Angeles; however the size of the site to be conveyed to the District would remain the same.*



DATA SUMMARY:

ACRES(GROSS)	2,173.25 AC
EXISTING ZONING	A-2-1, A-1-10,000, A-1-1
PROPOSED ZONING	A-2-1, A-1-10,000, A-1-1
PROPOSED GENERAL PLAN(SCVAGP)	U1, U2, U3, N2, W, & H&M
EXISTING GENERAL PLAN(SCVAGP)	U1, U2, U3, N2, W, & H&M
EXISTING LAND USE	VACANT/RECORDED TR. NO. 44887
PROPOSED LAND USE	RESIDENTIAL SCHOOL, PARK, OPEN SPACE
LOT SUMMARY:	
SINGLE FAMILY LOTS	1 TO 1260
SCHOOL SITE	1261
PARKS	1262 TO 1271
OPEN SPACE LOTS	1272 TO 1296
DEBRIS BASIN LOTS	1297 TO 1309
WATER TANK / BOOSTER PUMP STA LOTS	1310 TO 1313
TOTAL LOTS	1313

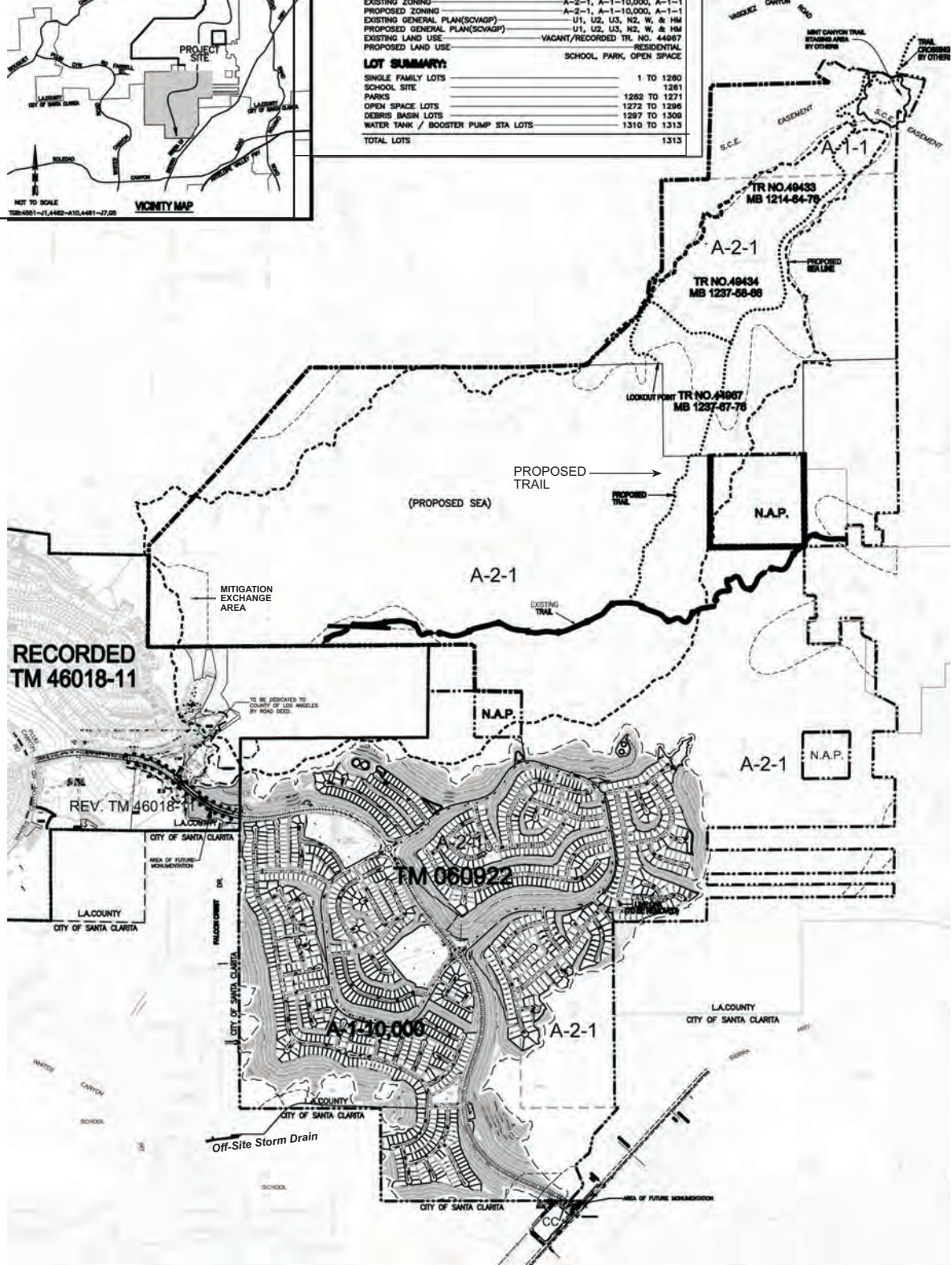
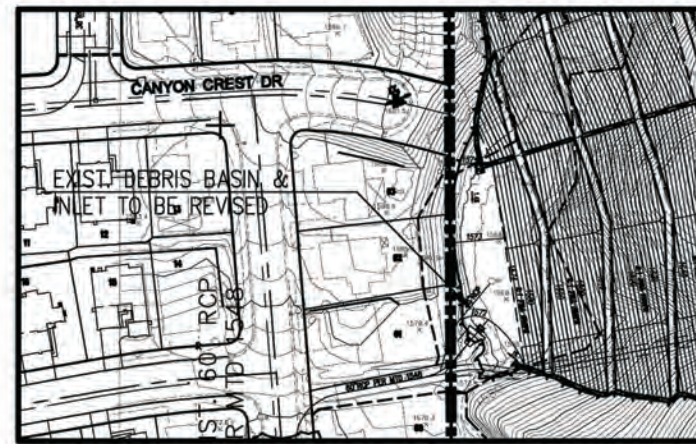
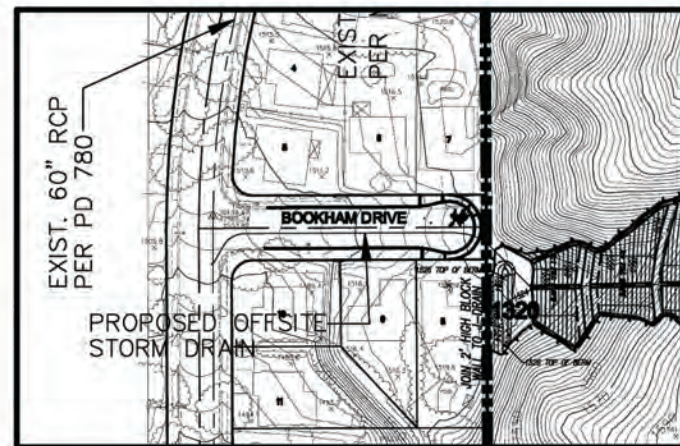


Figure 2-4
Vesting Tentative Tract Map No. 060922

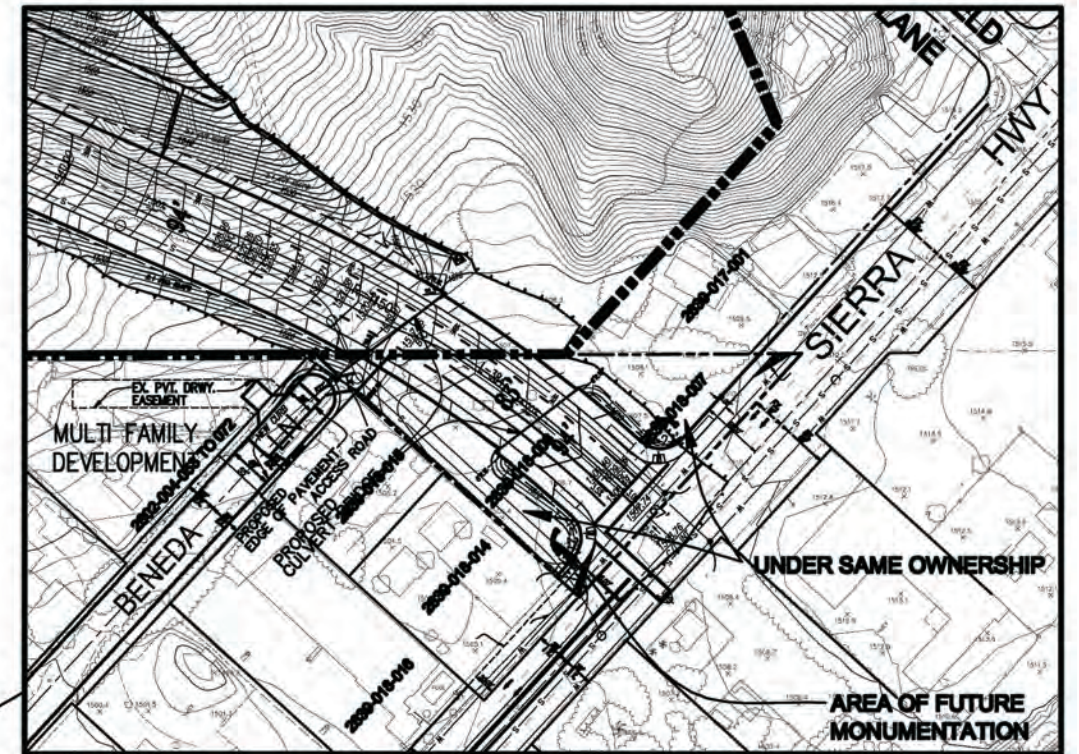
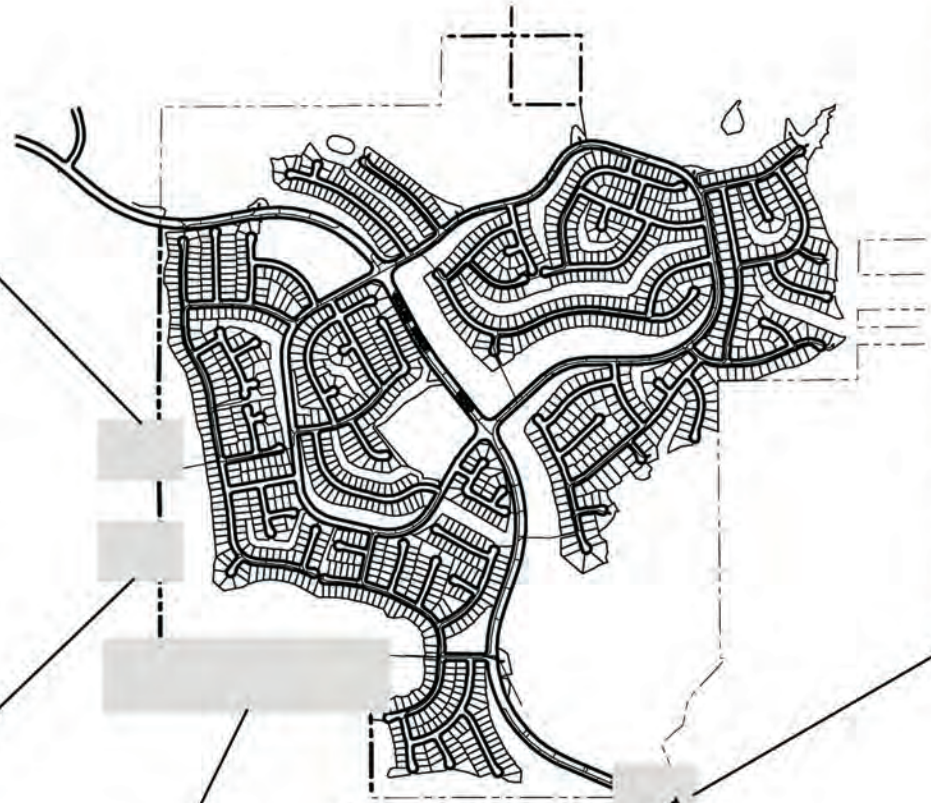
Source: Sikand Engineering, 2009



CANYON CREST DR. EX. TURNAROUND



BOOKHAM DR. PROP. TURNAROUND



PROP. SKYLINE RANCH ROAD/SIERRA HWY. INT.

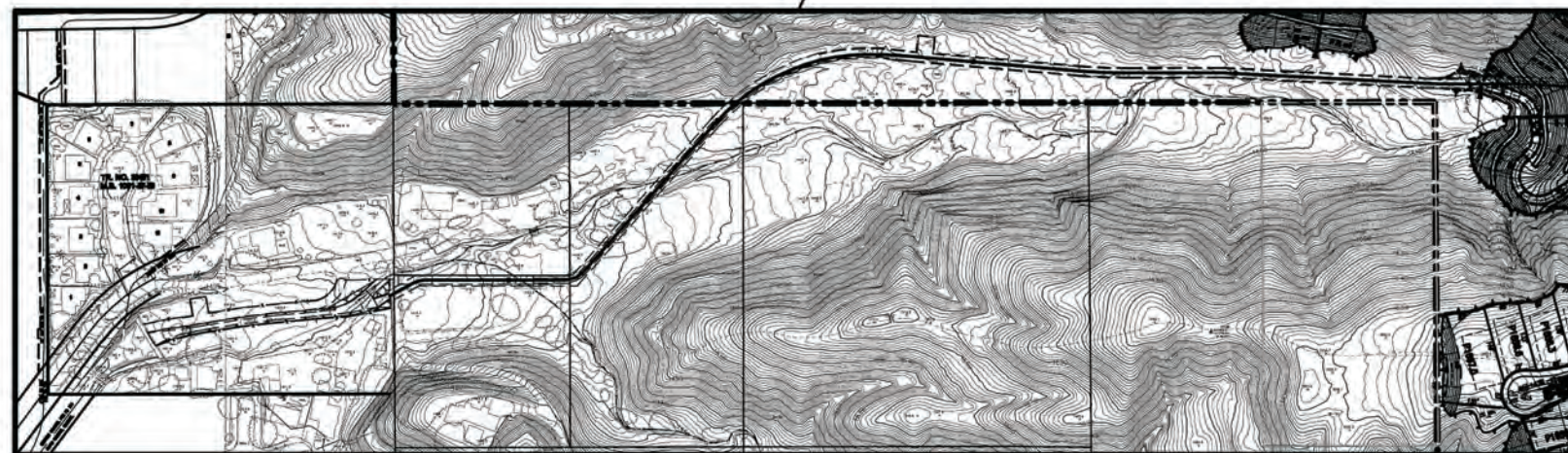


Table 2-1

**Skyline Ranch Project
Land Use Summary**

DEVELOPMENT AREA

Residential Lots

Number of Single Family Lots	1,260
Total Area of Pads/Side Lot Slopes	11,582,604 s.f. (265.9 acres)
Percent of Total Site	12.2%
Range of Pad Sizes	5,775 s.f. to 7,350 s.f.
Average Pad Area	9,253 s.f.
Range of Pad Widths	55 feet – 70 feet
Average Pad Depths	105 feet

Common Area – Roads (Private)

Road Rights-of-Way	5,074,740 s.f. (116.5 acres)
Percent of Total Site	5.4%
Range of Road R-O-W Widths	58 feet to 94 feet
Paved Road Area/Bike Lanes	3,007,884 s.f. (69.0 acres)
Sidewalks	935,044 s.f. (21.5 acres)
Parkways	1,132,560 s.f. (26.0 acres)

Common Area

Landscaped Slopes	8,746,848 s.f. (200.8 acres)
Debris Basin Lots	304,920 s.f. (7.0 acres)
Water Tank Lots	91,476 s.f. (2.1 acres)
School	505,296 s.f. (11.6 acres)
Parks	778,417 s.f. (17.9 acres)
Percent of Total Site	11.0%

Total Development Area

621.8 acres

Percent of Total Site

28.6%

OPEN SPACE AREA

Open Space (All natural/undeveloped)

67,579,855 s.f.

Total Open Space Area

(1,551.4 acres)

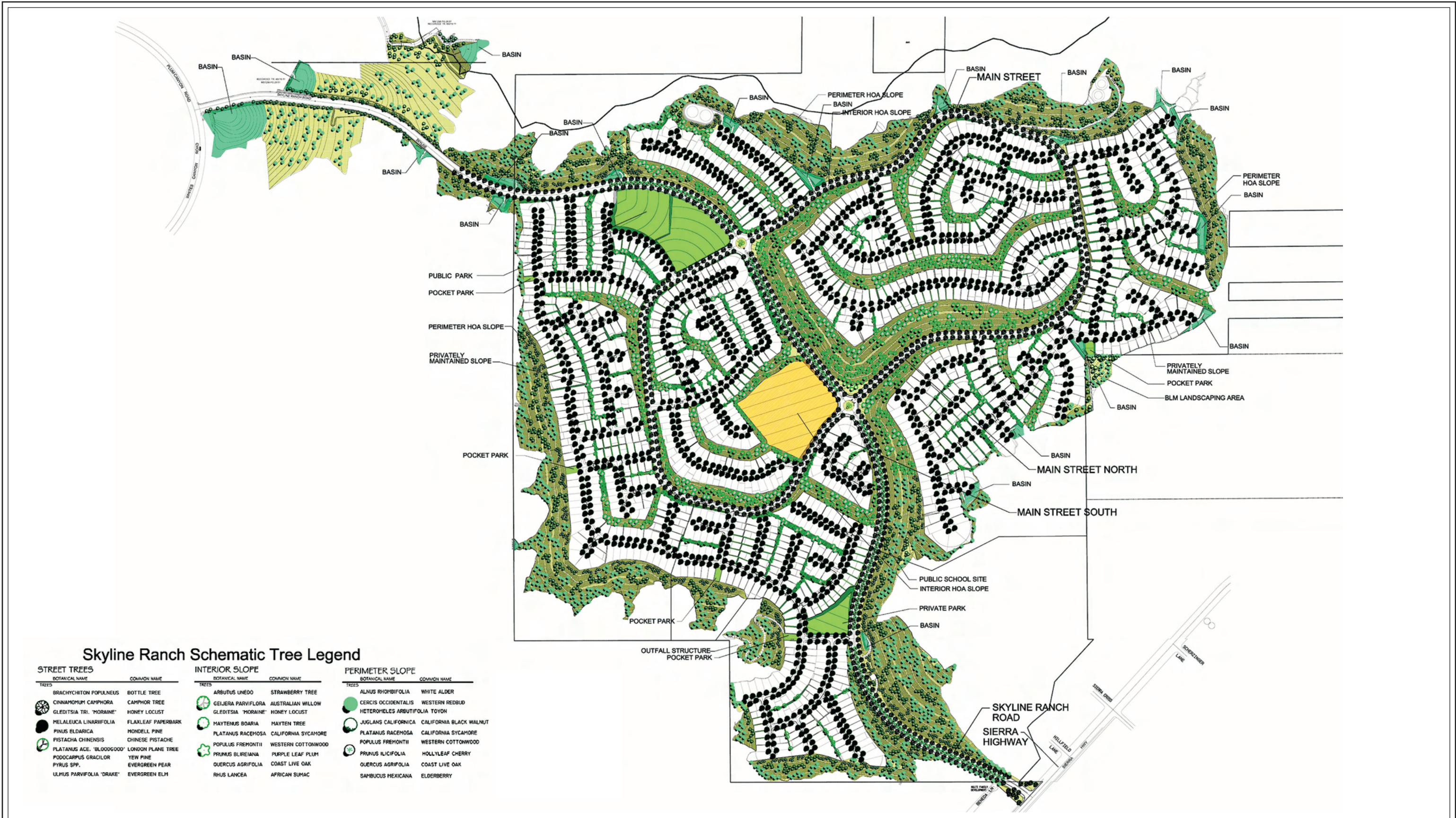
Percent of Total Site

71.4%

Total Site Area**2,173.3 acres**

Note: Total site area does not include off-site areas to the west (29.5 acres) and south (1.4 acres) associated with the extension of Whites Canyon Road to Sierra Highway, 2 acres of manufactured slope/drainage area to the east, or 0.88 acres (approximately 1,300 linear feet) to the southwest required for the 78-inch storm drain and related improvements.

Source: Sikand Engineering, 2009.



Source: LA Group, Inc., 2007.

Figure 2-6
Skyline Ranch - Conceptual Site Plan

As further described in Section 4.Q, Land Use, the proposed project includes a proposed density transfer of 200 residential units from recorded Tract Map No. 44967, which is located within the proposed northern open space area of the site. Additional density would also be transferred from other areas of the site designated for Urban, Floodway, and Non-Urban uses.

The transfer of urban density within the project site is considered appropriate and supportive of County policies by concentrating development proximate to urban areas, preserving regionally significant biotic resources and open space proposed to be incorporated into a County SEA, avoiding a major ridgeline and areas prone to flooding, and substantially reducing grading and associated impacts that would otherwise be required to serve more remote areas with urban infrastructure.

The preliminary landscape design concept for the project, also shown on Figure 2-6, is intended to create an aesthetically pleasing and highly livable residential environment. This would be achieved through a combination of streetscape elements, enhanced landscaped pedestrian circulation routes (such as paseos and parkways), parks, and common area landscaping. Along the perimeter of the site, landscaping would consist of a mix of native, drought-tolerant, low-fuel, and non-invasive plant species that would provide a transition between natural open space areas and improved areas of the site while supporting biological resource, aesthetic, and fire safety priorities. Within the residential community, landscaping would be provided along the streets and manufactured slope areas.

b. Elementary School Site

An approximately 11 acre parcel of land on the site is proposed to allow for the construction of an elementary school by the Sulphur Springs School District (District). As proposed, the school site would be developed, operated, and maintained under a contemplated agreement between the District and the applicant. The school site would be located to the west of the proposed intersection of Skyline Ranch Road and Main Street (see Figure 2-6). The elementary school is intended to accommodate up to 750 K-6 students. The specific design of the school facilities and ultimate location within the development area would be subject to Title 5 of the California Code of Regulations, which contains standards for school site selection, site planning, and construction of school facilities within the State of California. Once developed, plans for the school would also be subject to environmental review by the District, California Department of Toxic Substances Control, and other State and local agencies, as well as final review and approval by the Division of the State Architect.

c. Recreation Areas

An approximately 12 acre site is proposed for an improved public park in the northwestern residential portion of the site. This public park, which would be fully improved as part of the project and then dedicated to the County of Los Angeles and operated and maintained by the County Department of Parks and Recreation, is intended to serve the recreational needs of the new residential community. A conceptual park plan has been conditionally approved by the County of Los Angeles Department of Parks and Recreation. As shown on Figure 2-7, Proposed Public Park Plan, on page 2-15, the proposed park would include areas for active and passive recreation such as a multipurpose ballfield, a basketball court, volleyball court, children's play area, picnic areas, a community gathering area, seating and lawn areas, and a meandering pathway. The park would also include restrooms and a parking lot.

In addition to the public park, a number of smaller private parks and recreational amenities are proposed. An approximately 2.5-acre private park for passive recreation is proposed in the southern residential portion of the site along Skyline Ranch Road, and eight small pocket parks, totaling approximately 3.7 acres, are proposed within the residential development area. As shown on Figure 2-8, Proposed Parks and Trails Locations, on page 2-16, recreational amenities also include approximately two miles of hiking trails along the western, northern, and eastern perimeters of the development area, approximately one mile of paseos, and approximately eight miles of bike lanes. The trail along the western perimeter of the project site connects to the adjacent single family residential area. The trail along the northern perimeter includes two lookout points. The trail along the eastern perimeter also serves as fire access and connects to vacant land to the east. There are several paseos located within landscaped slope areas that provide access to the parks from residential areas. Bike lanes are proposed along Skyline Ranch Road, Main Street North, and Main Street South. All proposed trails, paseos, and bike lanes are subject to County approval.

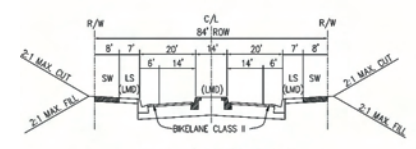
d. Infrastructure

(1) Arterial/Collector Roadways

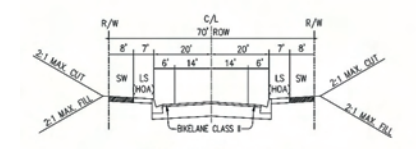
The project would construct a network of collector roads to provide local access to land uses associated with the proposed project. Development of the project as proposed would also provide a secondary highway improvement that would extend Whites Canyon Road to Sierra Highway. This roadway improvement would be consistent with plans shown on the County of Los Angeles Draft Highway Plan, a part of the Draft General Plan (September 2008). This Draft General Plan is currently available for public review, with final approval anticipated by



Figure 2-7
Proposed Public Park Plan



TYPICAL 84' STREET SECTION
SKYLINE RANCH ROAD (2-LANES W/ MEDIAN)
SECONDARY HIGHWAY, WITH BIKE LANES AND NO PARKING
FROM SIERRA HWY TO BENSON EXTENSION
"CITY ALTERNATE"



TYPICAL 70' STREET SECTION
NORTH & SOUTH LOOPS
"CITY ALTERNATE"

- LEGEND**
- PASEO
 - BIKE LANE
 - SIDEWALK
 - PARK/LANDSCAPE AREA
 - ENTRY
 - HIKING TRAIL
 - PEDESTRIAN AND/OR BIKE CROSSING
 - STAIR



No scale

Source: Sikand Engineering, 2009

Figure 2-8
Proposed Parks and Trails Locations

December 2009.² The existing Los Angeles County Highway Plan currently shows an extension of Whites Canyon Road being routed through the property's undeveloped area with a connection to Vasquez Canyon Road. The Plan also shows a future roadway segment for Cruzan Mesa Road between Whites Canyon Road and Sierra Highway. Issues associated with constructing these roadways as shown in the Highway Plan have been under consideration by the County due to the amount of grading that would be required and the impact the proposed alignments would have on sensitive biological resource areas. Consequently, the County is proposing a change to the Highway Plan that would realign Whites Canyon Road to connect with Sierra Highway instead of Vasquez Canyon Road with Cruzan Mesa Road eliminated as part of this change. With this proposal, no change or new access to Vasquez Canyon Road would result. The roadway improvement proposed by the project is in keeping with the County's preferred alignment and shown on the Draft Highway Plan, where Whites Canyon Road would be extended from Plum Canyon on the west (through Tract Map No. 46018) to the southeast and through the project site as Skyline Ranch Road, ultimately connecting (through property owned by the applicant in the City of Santa Clarita) to Sierra Highway just north of Adon Avenue. The realignment of Whites Canyon Road, between Plum Canyon Road and Sierra Highway, was conditionally approved as Skyline Ranch Road by the Los Angeles County Department of Public Works on July 19, 2006. It is expected that the extension of Whites Canyon Road/Skyline Ranch Road, will lead to an amendment to the Los Angeles County Highway Plan upon approval of the County's Draft General Plan.

Construction of Skyline Ranch Road as proposed could deny access to a portion of recorded Tract Map 46018-11 located to the west of the Skyline Ranch site, as the Tract Map was to be served by Farrell Road, as set forth in the County's Highway Plan at the time of Tract Map approval. To maintain full access to Tract Map 46018-11 with construction of Skyline Ranch Road, it is proposed that a portion of Farrell Road be vacated and a new road added to connect Skyline Ranch Road to the Tract Map, as shown on Figure 2-9, Skyline Ranch Road Realignment, on page 2-18. The off-site area required for grading and construction of the connecting roadway falls within areas of disturbance previously evaluated for Tracts 46018-11 and 46018-12. While the grading required to support the construction of the connecting roadway would be undertaken as part of the proposed project, in the event the uses approved under recorded Tract Map 46018-11 are not constructed first, funding and construction of the roadway would be undertaken by the applicant as part of the proposed project.³ The construction of Skyline Ranch Road would impact 21.6 acres of a preserve area established for recorded Tract 46018. Therefore a 21.6 acre Mitigation Exchange Area would be established as part of the proposed project to ensure a preserve area is retained.

² *The Draft General Plan, including the Draft Highway Plan is available for public review at: <http://planning.lacounty.gov/generalplan#anc-download>*

³ *The approved tract map was evaluated in a 1988 certified Final EIR, Project No. 85-628. In the event Tract Map 46018-11 is revised, this roadway might not be necessary.*

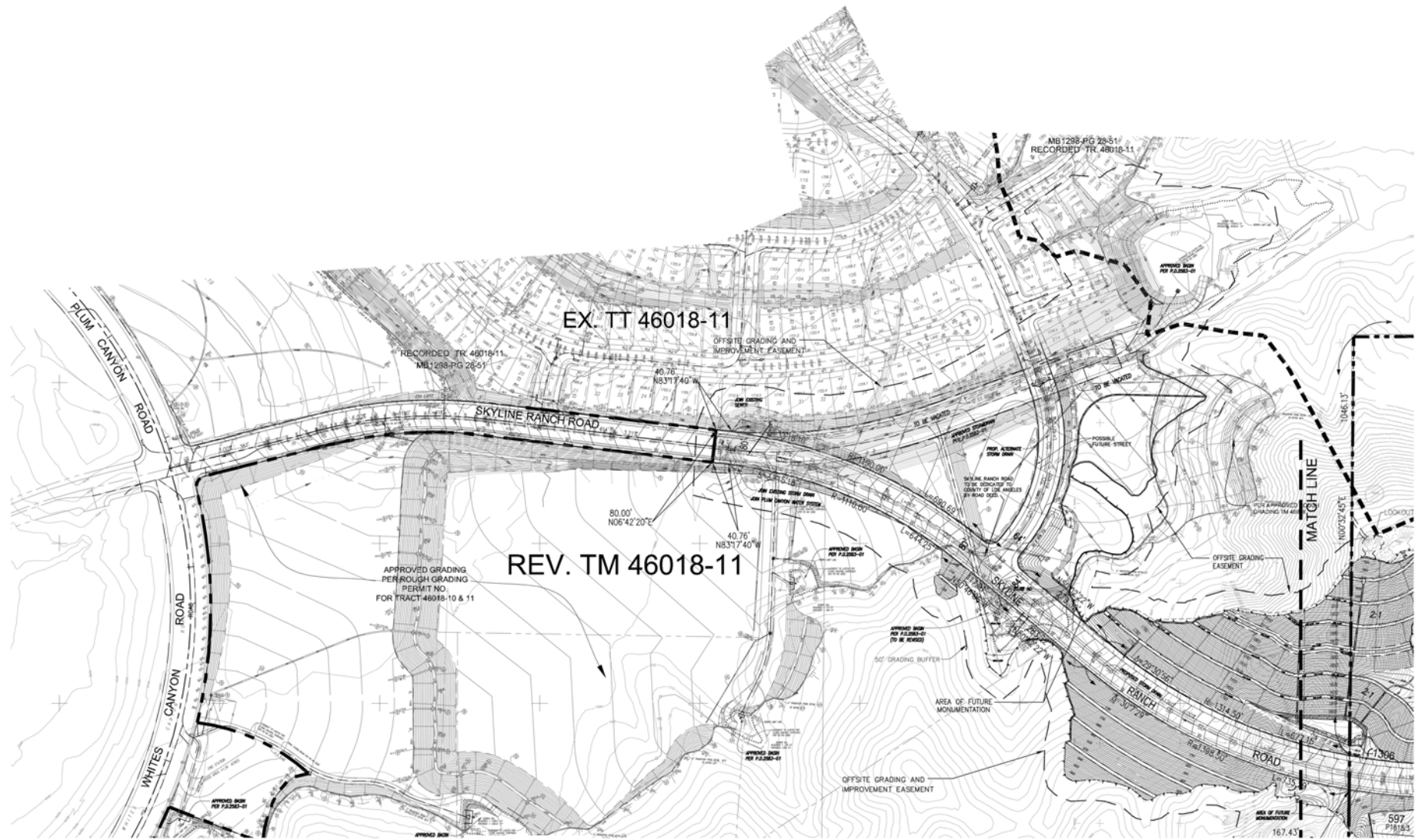


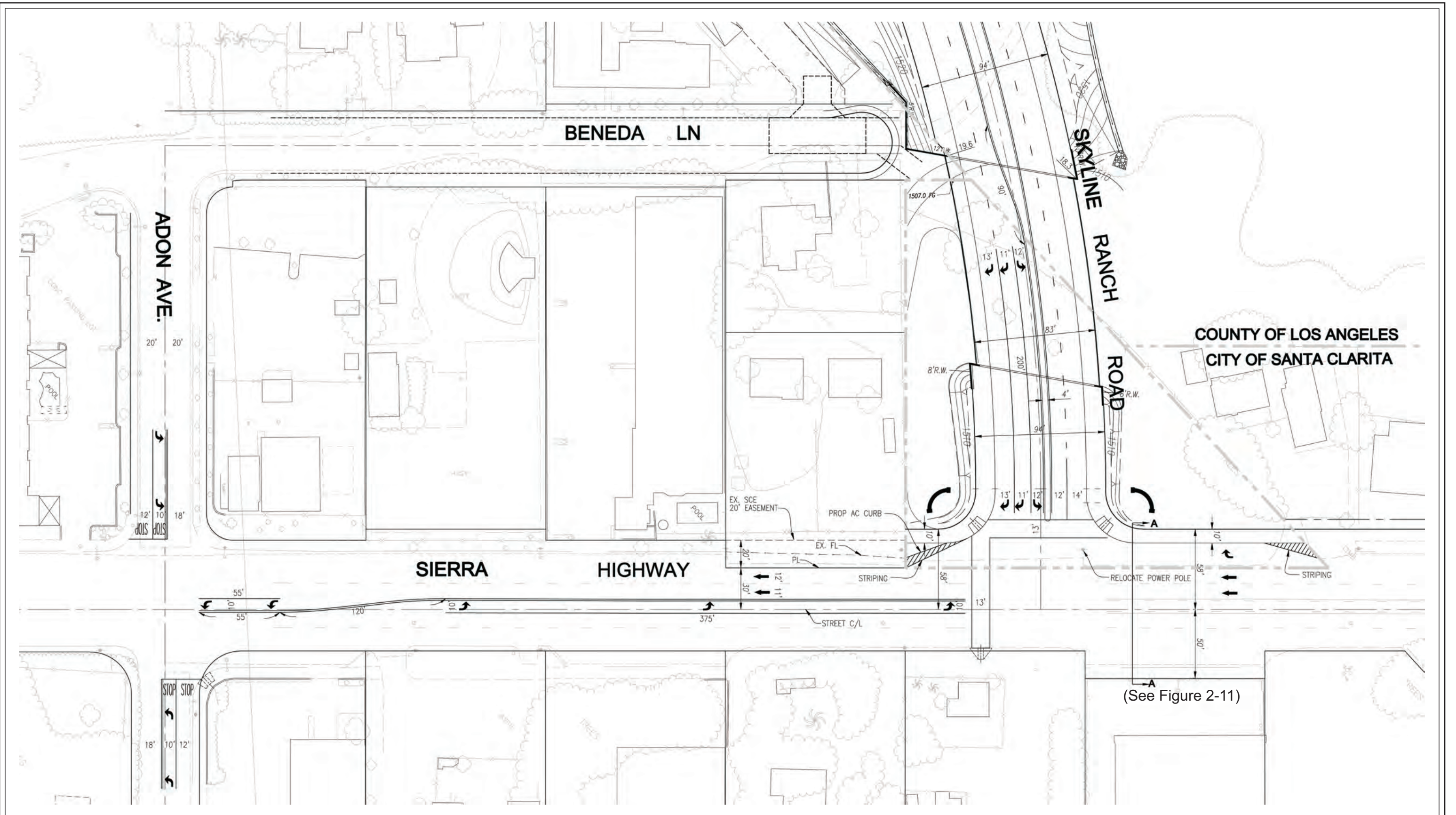
Figure 2-9
Skyline Ranch Road Realignment
(Off-Site)

Both on- and off-site grading would be required to provide for the extension of Whites Canyon Road to the west through the development area of the site to connect with Sierra Highway to the south. Off-site grading would occur west of the development area, within Tract Map No. 46018. Approximately 535,000 cubic yards of cut and 37,000 cubic yards of fill would be required off-site to extend Whites Canyon Road to the project site. Off-site and south of the development area, within approximately 1.37 acres owned by the applicant, approximately 6,500 cubic yards of fill would be required off-site in order to provide access to the site from Sierra Highway. Overall on- and off-site grading quantities associated with the extension of Whites Canyon Road is approximately 6.4 million cubic yards (or 32 percent of all grading required for the project).

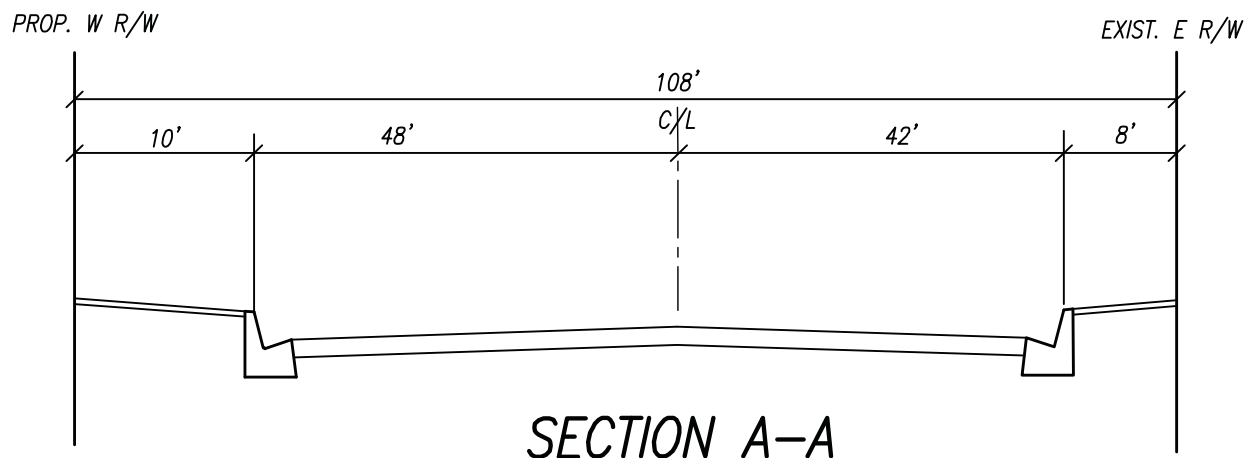
In order to provide access to the project site at Skyline Ranch Road, Sierra Highway is proposed to be widened from the existing two northbound and two southbound through lane configuration by approximately 28 feet at the project entrance and within existing right-of-way to provide one northbound left-turn lane, two northbound through lanes, two southbound through lanes, one eastbound left-turn lane, two eastbound right-turn lanes, and a traffic signal. A proposed striping plan is shown on Figure 2-10, Sierra Highway Striping Plan, on page 2-20. A cross-section of Sierra Highway at this location is shown on Figure 2-11, Sierra Highway at Skyline Ranch Road Cross Section, on page 2-21.

Development of the proposed entrance would include an 83-foot right-of-way at Skyline Ranch Road, as shown on Figure 2-12, Skyline Ranch Road Bridge Entrance Cross Section, on page 2-22. In addition, construction of the entrance would require a cul-de-sac and hammerhead turnaround at the northeasterly terminus of Beneda Lane to provide adequate separation from Skyline Ranch Road.

As illustrated in Figure 2-13, Conceptual Rendering of the Skyline Ranch Road Cross Section, on page 2-23, and Figure 2-14, Conceptual Rendering the Skyline Ranch Road and Interior Loop Road Cross Sections, on page 2-24, the extension of Whites Canyon Road through the project site is planned for two travel lanes in each direction. Through most of the site the travel lanes would be separated by a center median containing landscaped parkways of variable width within a 94-foot right-of-way. North of the public park, for approximately 100 feet, Skyline Ranch Road would narrow to an 80-foot right-of-way with two travel lanes in each direction and no center median. As shown on Figure 2-15, Conceptual Rendering of Roundabout Street Cross Section, on page 2-25, a roundabout is proposed for the intersection of Skyline Ranch Road with Main Street North and Main Street South with two-lane approaches each direction on Skyline Ranch Road and one-lane approaches each direction on Main Street. The roundabout would include an approximate 50-foot radius landscaped central island in the center and a paved median and walkway on Skyline Ranch Road. Local roadways would extend off Whites Canyon Road within a 70-, 64-, 60- or 58-foot right-of-way, as shown in



(See Figure 2-11)



SECTION A-A

FUTURE 108' R.O.W. SECTION AT INTERSECTION
 (See Figure 2-10)



Figure 2-11
 Sierra Highway at
 Skyline Ranch Road
 Cross Section

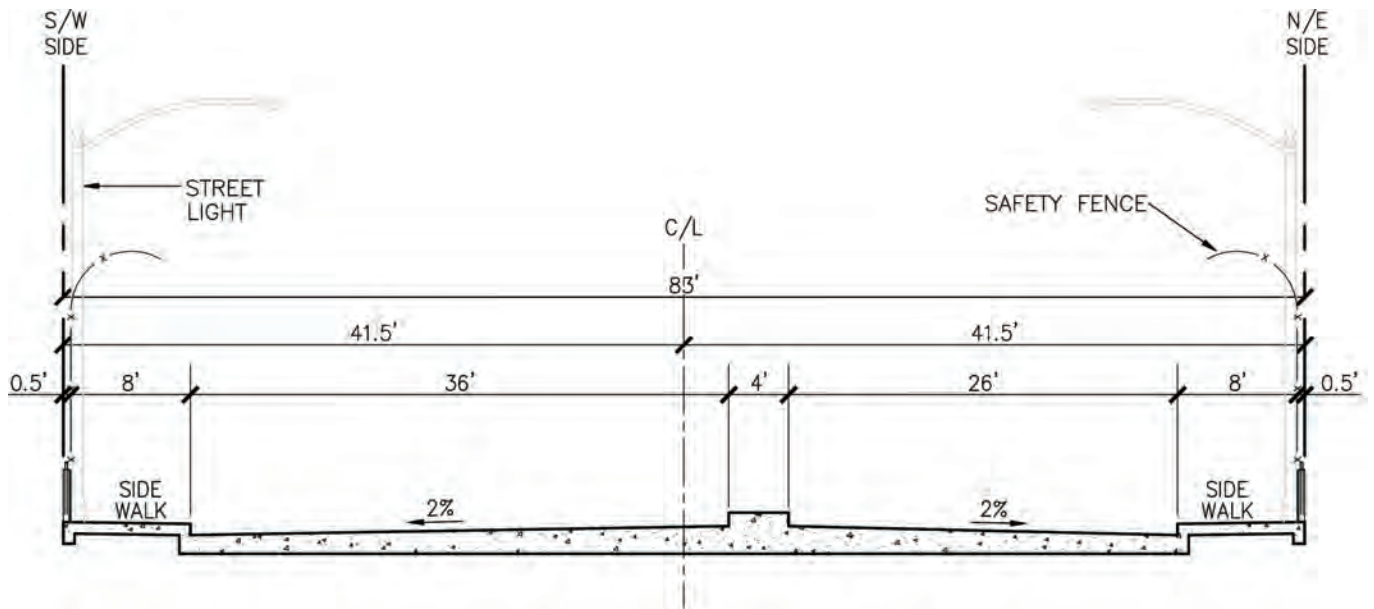
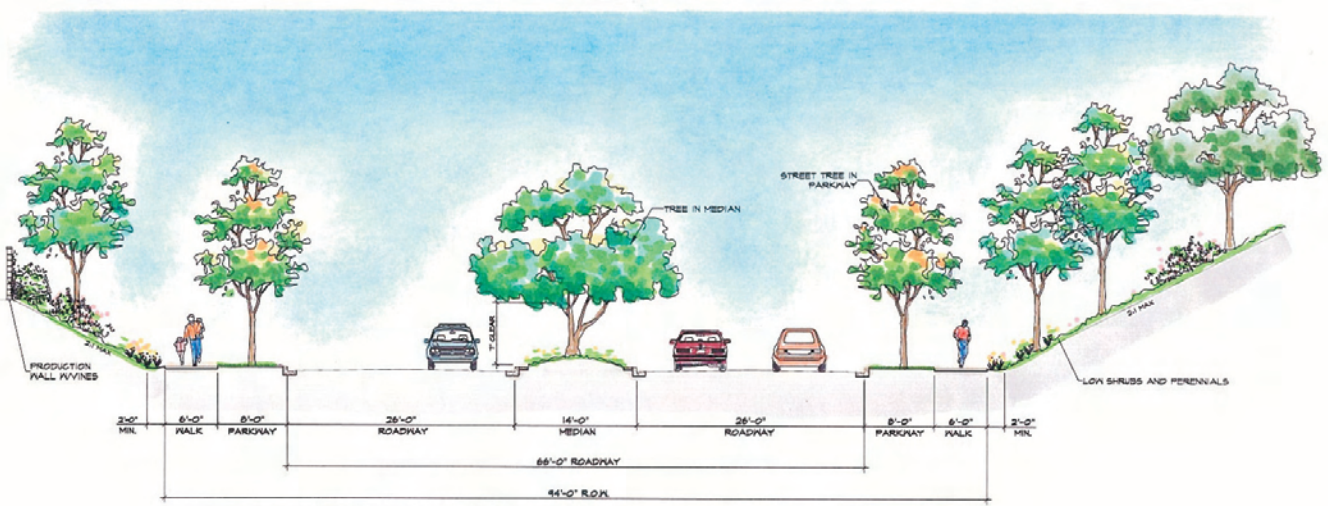


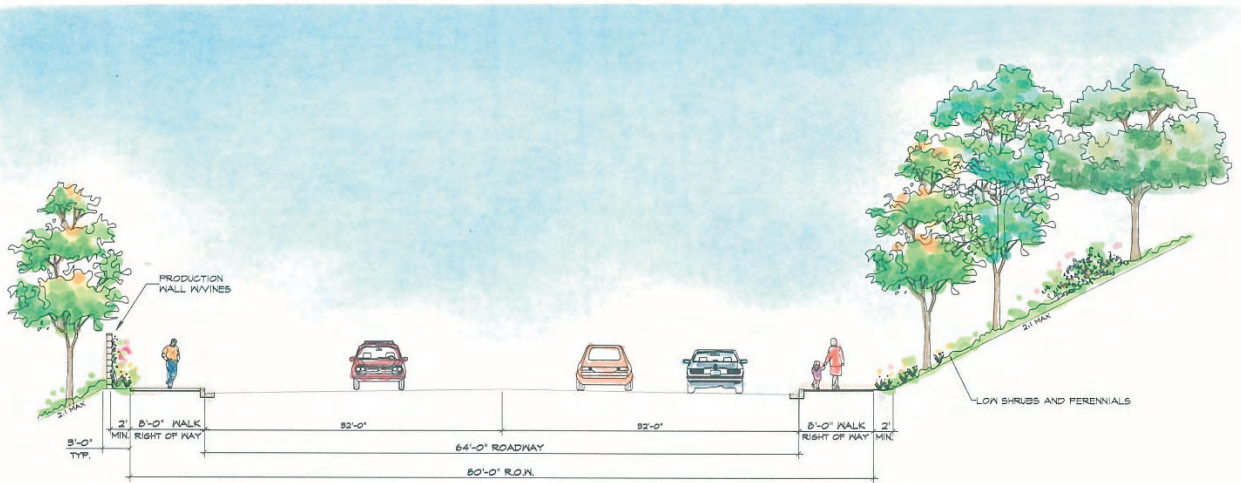
Figure 2-12
Skyline Ranch Road
Bridge Entrance Cross Section



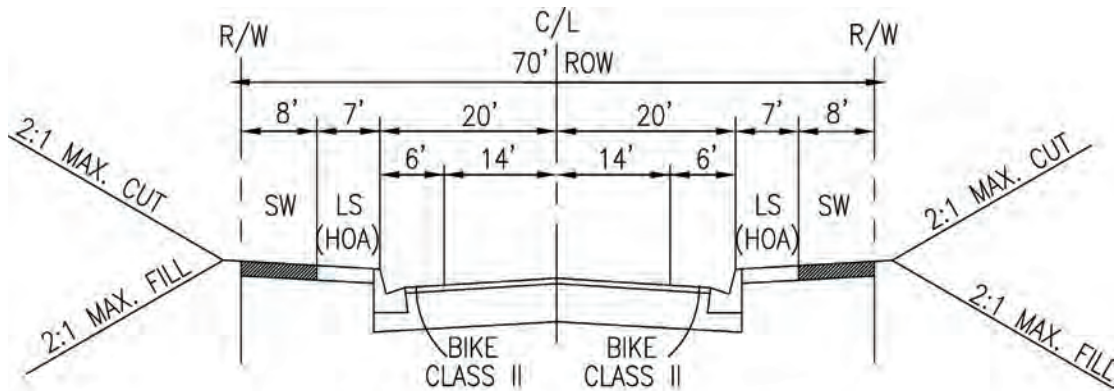
SKYLINE RANCH ROAD - 94' R.O.W. SECONDARY HIGHWAY
 FROM SIERRA HIGHWAY TO THE NORTHERLY END OF THE PUBLIC PARK SITE



Figure 2-13
 Conceptual Rendering of
 the Skyline Ranch Road Cross Section



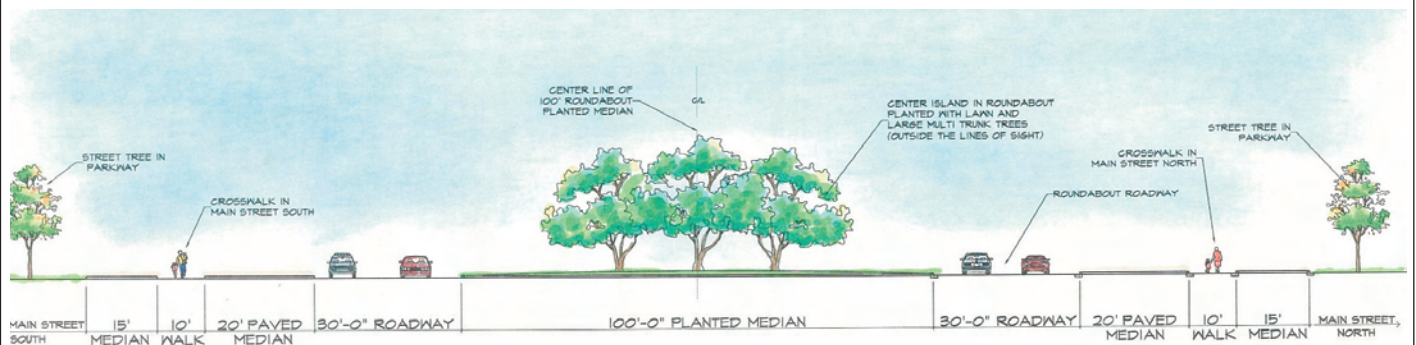
SKYLINE RANCH ROAD - 80' R.O.W. STREET
 FROM THE NORTHERLY END OF THE PUBLIC PARK SITE TO WHITES CANYON ROAD



TYPICAL 70' STREET SECTION
 NORTH & SOUTH LOOPS
 "CITY ALTERNATE"



Figure 2-14
 Conceptual Rendering of
 the Skyline Ranch Road and
 Interior Loop Road Cross Sections



ROUNDABOUT STREET SECTION
 SKYLINE RANCH ROAD AT MAIN STREET NORTH AND SOUTH



Figure 2-15
 Conceptual Rendering of
 Roundabout Street
 Cross Section

Figures 2-14, 2-16, 2-17, and 2-18 on pages 2-24, 2-27, 2-28, and 2-29, respectively. All roadways within the project site would be constructed to urban or rural standards as defined by the County of Los Angeles Department of Public Works.

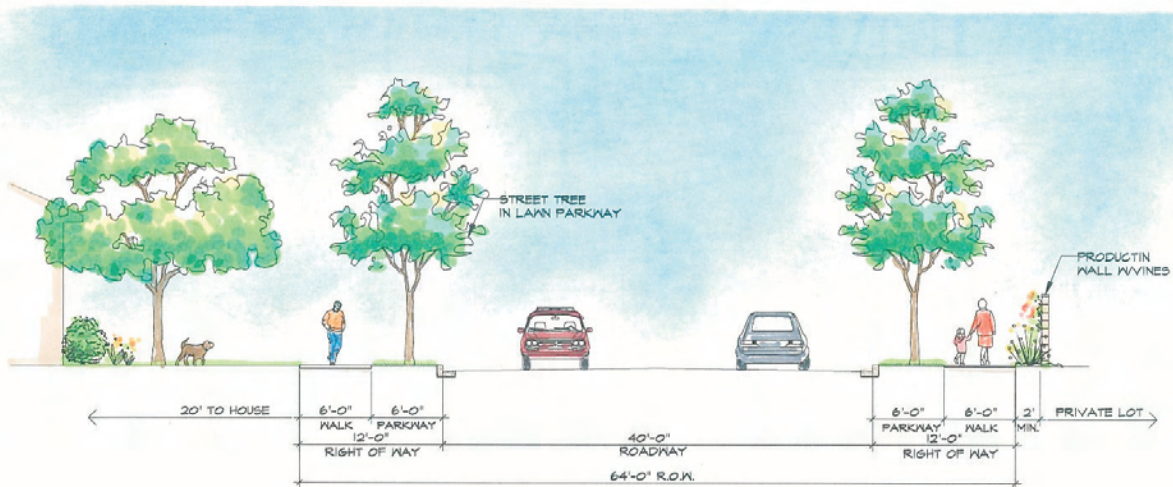
(2) Drainage

As proposed, on-site surface run-off would be intercepted by curb, debris, and/or desilting inlets and conveyed to a network of storm drains that lead to a series of treatment structures, prior to discharge into a proposed 78-inch storm drain and concrete-lined trapezoid channel that would extend approximately 3,300 linear feet, of which 1,300 feet would extend offsite to the southwest. The proposed storm drain and channel would connect with an existing County Department of Public Works flood control channel. The construction of this facility would take approximately six months and would occur during the second phase of grading. Development of the storm drain would require a flood control easement from the County Department of Public Works. In addition, an easement of approximately 800 linear feet and total area of 16,000 square feet would be required from one property owner located to the southwest. Surface water runoff from the site would also be collected by storm drains within Bookham Drive and Bakerton Avenue to the west. Energy dissipaters, such as rip rap, would be placed at the discharge points of each storm drain outlet. In addition, within and adjacent to the project site, 18 desilting basins would be constructed or rebuilt and placed to reduce downstream flow rates and debris volumes. The proposed storm drain system and the general locations of the desilting basins are included in Section 4.B, Hydrology and Water Quality, of this EIR (see Figure 4.B-3, Proposed Storm Drain and Desilting Basin Map, on page 4.B-21).

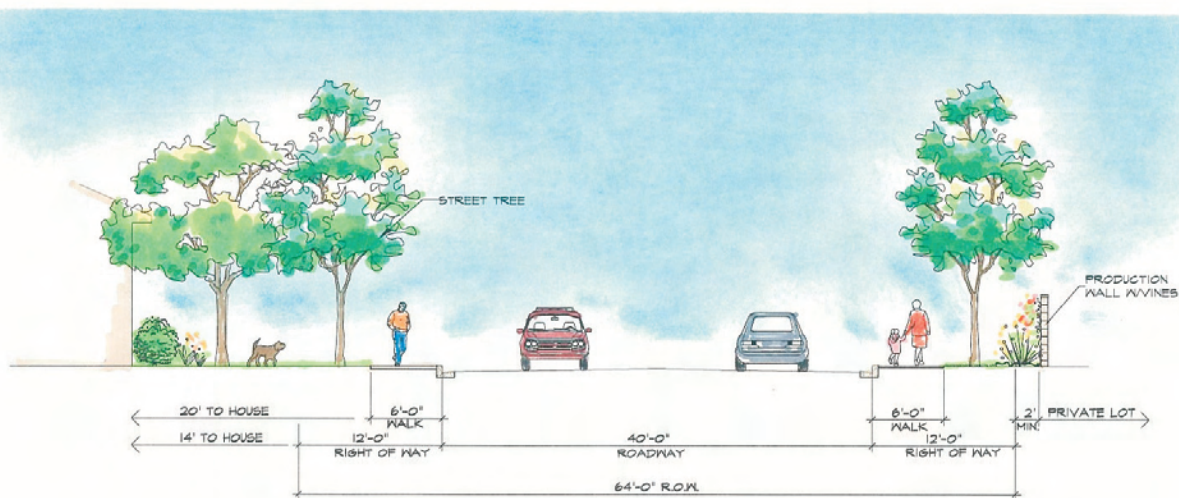
Because the proposed project entrance at Skyline Ranch Road and Sierra Highway is located within a flood zone, and in order to reduce runoff on to Sierra Highway, the proposed drainage and flood control features at the project entrance include a bridge over a series of culverts and catch basins which would allow water from Sierra Highway to flow under Skyline Ranch Road. As preliminarily designed, these features would minimize the potential for the project to contribute to downstream and upstream flooding during a 50-year storm event.

(3) Potable Water

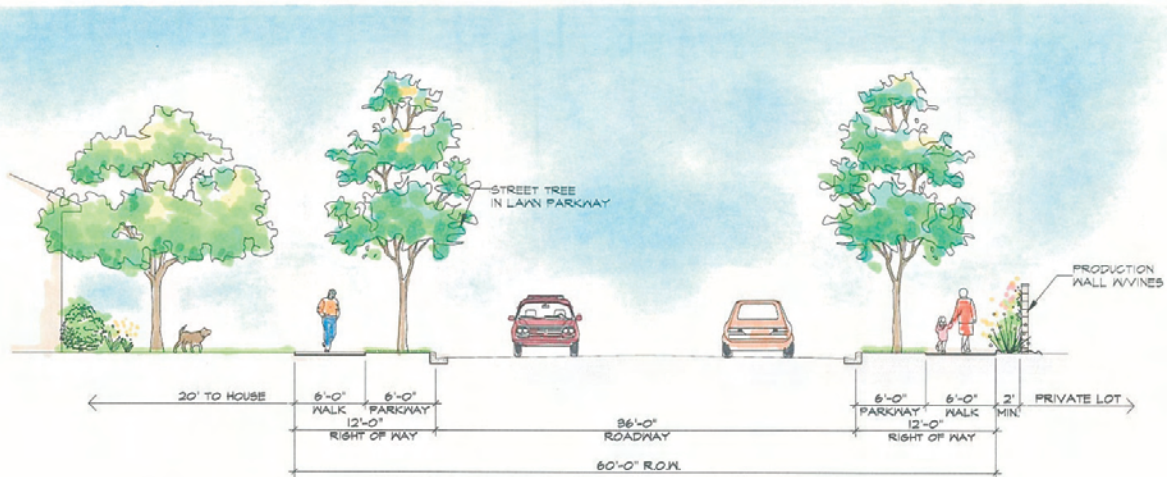
The Santa Clarita Water Division (SCWD) of Castaic Lake Water Agency (CLWA) would provide water service to the Skyline Ranch project. SCWD water supply infrastructure is the closest to the project site and, therefore, the SCWD has the ability to more readily serve the proposed project. In 1999, CLWA purchased SCWD. After the purchase, Section 15.1 was added to the CLWA Law (Act 9099b of the California Water Code Uncodified Acts) to clarify SCWD's ability to provide retail water service. Section 15.1 authorizes SCWD to exercise retail water authority within a specified area (SCWD service area square). The SCWD service area square overlaps with portions of Newhall County Water District's (NCWD) boundaries. Within



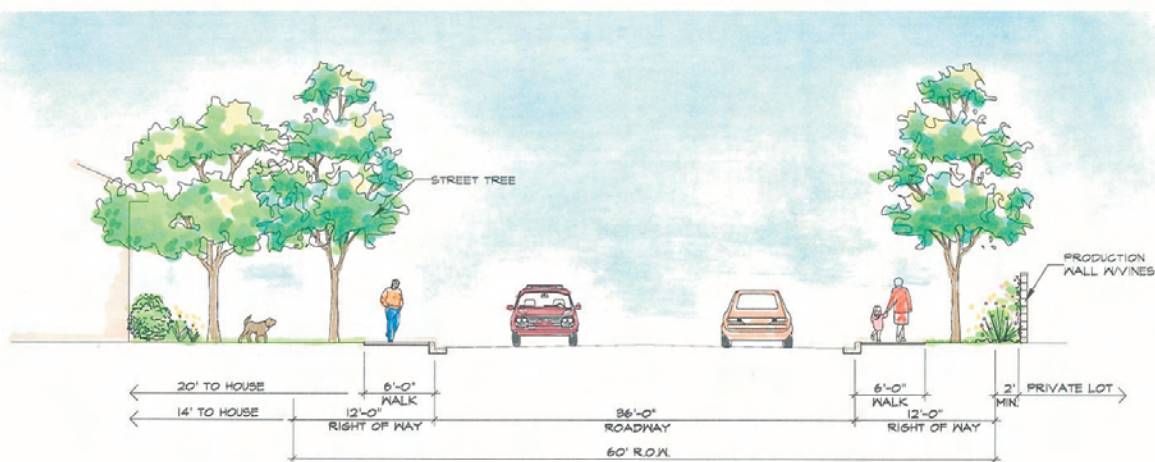
TYPICAL INTERIOR STREET - 64' R.O.W. LOCAL STREET



TYPICAL ALTERNATE INTERIOR STREET - 64' R.O.W. LOCAL STREET



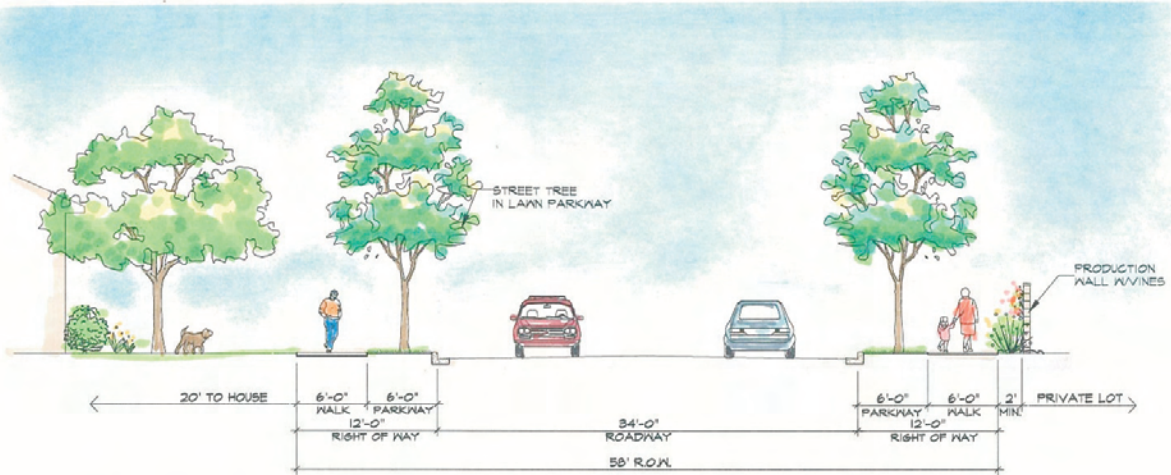
TYPICAL INTERIOR STREET - 60' R.O.W. LOCAL STREET



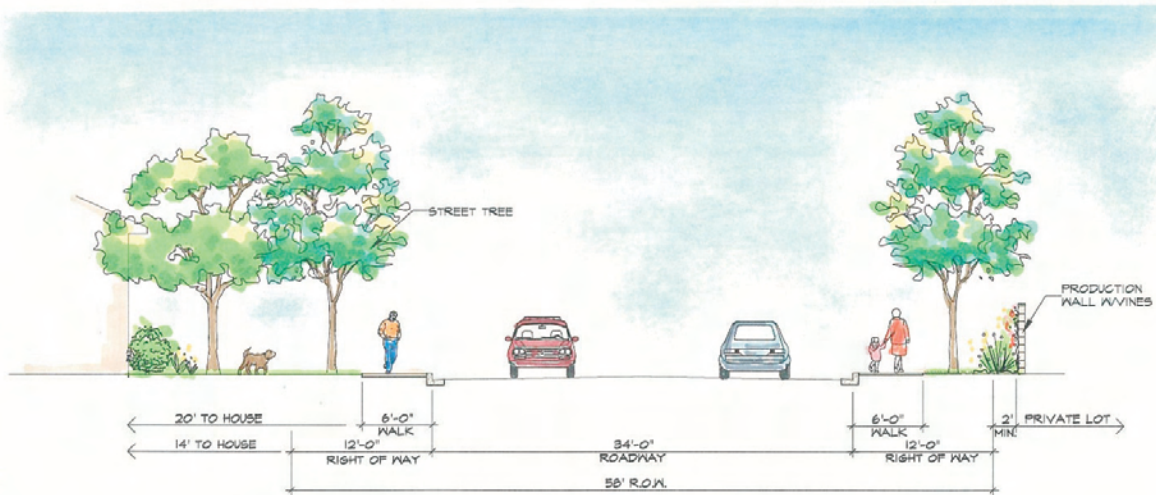
TYPICAL ALTERNATE INTERIOR STREET - 60' R.O.W. LOCAL STREET



Figure 2-17
 Conceptual Rendering of
 Interior Local Street (60' R.O.W.)
 Cross Sections



TYPICAL INTERIOR STREET - 58' R.O.W. LOCAL STREET



TYPICAL ALTERNATE INTERIOR STREET - 58' R.O.W. LOCAL STREET



Figure 2-18
 Conceptual Rendering of
 Interior Local Street (58' R.O.W.)
 Cross Sections

the overlap area, NCWD has the exclusive authority to provide water service, unless it consents to SCWD providing service. The project site is located within the overlap area. NCWD has consented to SCWD serving the project by entering into a Memorandum of Understanding (MOU) with CLWA on September 19, 2005. Accordingly, SCWD is authorized to serve the proposed project pursuant to Section 15.1 of CLWA Law, Water Code Section 12944.7, and the MOU.

In order to provide sufficient amounts of water and adequate water pressure to the area proposed for development, three water storage tanks and two water booster/pump stations are proposed on four lots. The water tanks would include a two-million gallon tank in the northwest portion of the developed area and two one-million gallon tanks in the northeastern portion of the developed area. All water tanks would consist of an aboveground welded steel tank supported by reinforced concrete ring footings. The tank would be designed and constructed to meet American Water Works Association (AWWA), National Sanitary Foundation (NSF) and other industry standards for domestic water storage. A total of four million gallons of storage capacity would be available to meet the emergency and fire flow storage capacity requirements necessary to support the project upon completion. The project would have two on-site water pressure zones, an 1842 zone and a 2117 zone that would each serve approximately half the development. The location of the water storage tanks, water booster stations, water pressure zones, and water lines are included in Section 4.I, Water Resources, of this EIR (see Figure 4.I-2). Potable water would be conveyed to on-site uses via a network of 6- to 16-inch pipes that would be located primarily beneath the planned roadway alignments. The proposed system would connect to existing 8- and 10-inch pipelines located in Sierra Highway. In addition, a new 16-inch pipeline would be provided as part of the project to connect the existing SCWD Deane water tank to the on-site infrastructure via Sierra Highway.

(4) Wastewater

Wastewater generated by the proposed project would be conveyed to and treated to a tertiary level at Santa Clarita Valley Joint Sewerage System, which is operated by the County Sanitation Districts of Los Angeles County (CSD). Collection and conveyance would occur by gravity flow within a network of 8-, 10-, and 12-inch pipes placed beneath on-site roadways. The sewer collector lines serving the site would connect to an existing 21-inch City sewer within Sierra Highway. In addition, to address future development within the Mint Canyon area, the project would ultimately include the construction of a new 24-inch sewer line to supplement the existing 21-inch line in Sierra Highway. The additional line would extend approximately 3,000 feet in Sierra Highway from the CSD trunk sewer in Soledad Canyon Road to Sarabande Lane within the City of Santa Clarita. Refer to Section 4.J, Wastewater Disposal, of this EIR for a more detailed discussion of project wastewater generation, collection and treatment.

(5) Grading

Grading and associated earthwork would require the movement of approximately 20.8 million cubic yards of earth (cut/fill) on the southern 622 acres of the 2,173-acre site, with approximately 33.7 acres of grading occurring on immediately adjacent properties to the west, east, south, and southwest. Of the overall grading quantity, approximately 32 percent (or 6.4 million cubic yards) would be associated with the proposed public improvement to extend Whites Canyon Road to Sierra Highway, both on- and off-site. Within the 622-acre portion of the property, mass grading and remedial grading would take place for major roads and infrastructure, to establish drainage patterns, and to create building pads for the various land uses within the project. Mass and remedial grading would occur over an approximate 24 month period in three phases.

The overall grading and earthwork proposal includes approximately 33.7 acres of off-site grading on adjacent areas to the west, east, south, and southwest. Most of this off-site grading, 29.5 acres located west of the development area and 1.4 acres located to the south, is associated with the extension of Whites Canyon Road from Plum Canyon Road to Sierra Highway and would require approximately 535,000 cubic yards of cut and 37,000 cubic yards of fill. For approximately two acres of this off-site area, located east of the development area, a Right-Of-Way (ROW) Grant has been issued by the Bureau of Land Management (BLM) to allow for construction of a water diversion structure and manufactured slope area after infilling on federally-owned land managed by the BLM. Approximately 65,000 cubic yards of fill, with a maximum fill depth of 100 feet, would be placed on this BLM property to support the water diversion structure and associated slope area. The construction of the off-site portion of the proposed storm drain (approximately 0.88 acres) to the southwest would require approximately 16,000 cubic yards of grading.

A materials processing facility is proposed to be located in the northeast corner of the development area and away from existing residential areas (approximately 3,000 feet to the east and northeast and separated by major ridgelines). The facility would process approximately 68,000 cubic yards of excavated soil for use as base material for concrete and asphalt. During grading, excavated materials would be stockpiled and then used as needed during construction for streets and as cover for utility trenching. The material would be excavated, sorted, then crushed or sifted, and stockpiled on site. This would reduce the need to truck in base material to the project site. Operation of the facility would commence after the first phase of grading and end prior to final phase of occupancy for an overall duration of approximately 24 months. The facility would process a maximum of 300 cubic yards per day. The materials processing facility would be located adjacent to the final phase of development and sited at a sufficient distance to minimize noise and vibration effects on adjacent residences as further described in Section 4.G, Noise.

e. Construction Phasing and Schedule

Construction of the proposed project is anticipated to occur incrementally through 2017, with completion of a first phase of construction expected in 2011. No specific time frames have been established for succeeding phases of development. The overall grading operation would begin the first quarter of 2010 and would include clearing/grubbing, sub-drain construction, erosion control, and finish grading, all of which is anticipated to take approximately 24 months with three phases. As discussed above, a total quantity of approximately 20.8 million cubic yards of earth would occur on the southern 622 acres of the 2,173-acre site and immediately adjacent properties to the west, east, and south.

Other site preparation activities include sewers, water, streets, dry utilities, entry monumentation, and landscaping/irrigation. It is preliminarily estimated that site improvements would be completed in segments after grading is complete to accommodate and serve the current phase or succeeding phase of development. Construction of storm drains, sewers, water, and streets, respectively, are expected to start in a sequential manner after site grading begins. Completion of the storm drains would coincide with conclusion of grading activities. Sewer, water and street improvements, respectively, are expected to be completed in a staggered finish after the site is graded. Construction of dry utilities and entry monumentation would start well after grading is concluded with completion expected shortly after streets are in place. The last site improvements undertaken are common area landscaping and irrigation. These improvements would generally be started after all utilities (wet and dry) are in place and functional.

2. Proposed Open Space

As further described below, roughly 1,551 acres concentrated in the northern portion of the project site is proposed to remain undeveloped. Approximately 1,355 acres of this area, representing 62 percent of the project site, would be dedicated or designated as natural open space and managed through the proposed establishment of the Skyline Ranch Conservation Area (SRCA). Approximately 166 acres of land in the northern area, referred to as the Non-Development/Continuing Use Area, would remain undeveloped. No change to currently allowed uses within this area is proposed; however, as part of the density transfer approval for the proposed project, a Declaration of Restrictions (or similar recorded land use restriction) in favor of the County of Los Angeles would be placed on use of the land to prevent commercial, residential, institutional, recreational, or industrial structures from being built in the future. In addition, approximately 21.6 acres within the northern portion of the site would be preserved as replacement habitat for 21.6 acres of preserve area within recorded Tract 46018 that would be disturbed due to the proposed construction of Skyline Ranch Road. The 21.6-acre "Mitigation Exchange Area" for the adjacent tract would be established separately from the SRCA through an agreement between the applicant, Shapell-Monteverde Partnership (owner of recorded Tract 46018), the Army Corps of Engineers, and the County of Los Angeles. The remainder of the

undeveloped northern area, approximately 9 acres, would be designated as open space without conservation easements or restrictions.

A substantial portion of the area to remain undeveloped is the subject of a proposed Significant Ecological Area (proposed Cruzan Mesa Vernal Pools SEA) designation as part of the current Los Angeles County General Plan update. As further described in Section 4.C, Biological Resources, this area includes mesas, canyons, interior slopes, and a seasonally flowing wash. As proposed by the County, the Cruzan Mesa Vernal Pools SEA would encompass 958 acres within and adjacent to the northern areas of the project site. The SEA designation has been proposed by the County in large part due to the presence of two vernal pools: the Cruzan Mesa vernal pool complex and the smaller Plum Canyon vernal pool. Vernal pools are regionally unique biotic communities that support a variety of special-status plant and animal species. The Cruzan Mesa and Plum Canyon vernal pools support the federally and state endangered California Orcutt grass, as well as the federally threatened spreading navarretia and vernal pool fairy shrimp. The vernal pools also provide potential habitat for several additional non-agency listed special status species. In addition to the vernal pools, the proposed Cruzan Mesa SEA supports coastal sage scrub and holly-leaved cherry scrub, both of which are considered sensitive/declining vegetation communities by the California Department of Fish and Game. All areas of the project site within the County's proposed Cruzan Mesa Vernal Pools SEA are proposed as open space and would fall either within the proposed SRCA, the Non-Development/Continuing Use Area, or Mitigation Exchange Area for recorded Tract 46018. The proposed SRCA and Non-Development/Continuing Use Area are described below.

The Skyline Ranch Conservation Area (SRCA)

The proposed project would, through one or more voluntary conservation easements, land dedications, or land set asides establish the SRCA, which would cover approximately 1,355 acres concentrated within the northern area of the Skyline Ranch property. The SRCA area includes habitat types such as coastal sage scrub, coastal sage chaparral scrub, chaparral, holly-leaved cherry scrub, and small areas of southern willow scrub. This area also includes the Plum Canyon vernal pool and four smaller pools on the southern portion of the Cruzan Mesa. The SRCA would be managed by an as yet undetermined agency, non-profit organization, conservation-oriented entity, or other entity approved by the County of Los Angeles with experience in the area of natural resource conservation. The SRCA would have associated with it an on-going maintenance and management program to insure the long-term persistence of the area's biotic resources. Direct and indirect degradation of habitat would be prevented in part through steep topography that separates the SRCA from the proposed development area and through the prohibition or restriction of uses within the SRCA. The SRCA would include signage where appropriate to discourage off-road vehicles, domestic pets, and other activities harmful to natural lands. Following project approval, any continued use of lands within the proposed SRCA for activities, such as film-making, would be subject to approval by the SRCA habitat manager and

restricted to uses that are not incompatible with the resource conservation objectives of the SRCA. As described in Section 4.C, Biological Resources, of this EIR, conservation of these 1,355 acres would be sufficient to provide in-kind mitigation for impacts to coastal sage scrub, coastal sage-chaparral scrub, and holly-leaved cherry scrub resulting from the proposed project. The SRCA would also support the additional planting of 7.27 acres of sycamore riparian woodland within Plum Canyon.

Non-Development/Continuing Use Area

Approximately 166 acres of the northern area would remain undeveloped with restrictions placed on use of the land to prevent buildings from being established within this area. This Non-Development/Continuing Use Area includes most of the Cruzan Mesa, including a large, bisected vernal pool and its associated watershed. As described in Section 4.C, Biological Resources, the vast majority of this 166-acre area supports non-native grasslands, disturbed areas, and disturbed coastal sage scrub. As such, this area does not provide in-kind conservation mitigation for impacts to any vegetation community that would result from the proposed project. A Declaration of Restrictions (or similar, recorded land use restriction) would be placed over the 166-acre area to prevent buildings from being established within this area. Filming and film-making activities which have historically occurred within the area may continue.

D. INTENDED USES OF THE EIR

The purpose of this Draft EIR is to assist the County of Los Angeles, as the Lead Agency under CEQA, in the decision-making process for the project. In accordance with CEQA (Public Resources Code, §21002.1), the intended uses of this Draft EIR are to identify the significant environmental impacts resulting from implementation of the proposed project, to indicate the manner in which these significant effects can be mitigated or avoided, and to identify alternatives to the proposed project. This Draft EIR is a Project EIR as defined by the *State CEQA Guidelines* (§15161).

A series of approvals, entitlements, and permits would be required for project implementation from the County of Los Angeles, City of Santa Clarita and various other public agencies. Discretionary approvals associated with the proposed project may include, but are not limited to the following:

1. County of Los Angeles

- Vesting Tentative Tract Map approval (for the development of 1260 residential lots) pursuant to Subdivision Code Subsections 21.38.010 through 21.38.080;

- Conditional Use Permit for Density-Controlled Development pursuant to Zoning Code Subsection 22.56.205 and Hillside Management Areas pursuant to Zoning Code Subsection 22.56.215;
- Oak Tree Permit (for removal of one oak tree) pursuant to Zoning Code Subsections 22.56.2050 through 22.56.2260;
- Approval to construct a 70-foot non-standard right-of-way within a local interior street;
- Other approvals, subsequent to discretionary approval, including those from the following agencies:
 - County Sanitation Districts of Los Angeles County (Sewer Line Connection Permit);
 - Los Angeles County Department of Public Works (Building Permit, Grading Permit, Improvement Plan Permit, General Municipal Separate Storm Sewer System Permit, Flood Control Easement);
 - Los Angeles County Fire Department (Approval of Alternative cul-de-sac/turnaround on Beneda Lane).

2. Other Agencies

- U.S. Army Corps of Engineers (Permit under Section 404 of the Clean Water Act for impacts to Waters of the U.S.);
- U.S. Department of Homeland Security, Federal Emergency Management Agency (Design Approval);
- U.S. Department of the Interior, Bureau of Land Management (Right-of-Way Grant);
- California Department of Fish and Game (Streambed Alteration Agreement under Section 1602 of the State Fish and Game Code for impacts to jurisdictional streambed and associated riparian habitat);
- California Department of Transportation;
- Regional Water Quality Control Board (Los Angeles Region):
 - NPDES General Construction Activity Storm Water Permit;
 - RWQCB General Municipal Separate Storm Sewer System Permit;
 - Water Quality Certification under Section 401 of the Clean Water Act for impacts to Waters of the State;

- South Coast Air Quality Management District;
- Castaic Lake Water Agency (Water Service Agreement);
- City of Santa Clarita (Encroachment Permit, Approval of Alternative cul-de-sac/turnaround on Beneda Lane, Interim Offer of Dedication).

3.0 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

Both CEQA and the *State CEQA Guidelines* require that cumulative impacts be analyzed in an EIR. As set forth in *State CEQA Guidelines* Section 15130(b), the discussion of cumulative impacts must reflect the severity of the impacts, as well as the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. Further, the discussion is intended to be guided by the standards of practicality and reasonableness. As stated in Public Resources Code Section 21083(b), “a project may have a significant effect on the environment if the possible effects of a project are individually limited but cumulatively considerable.”

Cumulative impacts are anticipated impacts of the project along with reasonably foreseeable growth. According to *State CEQA Guidelines* Section 15130(b)(1), reasonably foreseeable growth may be based on either of the following:

- A list of past, present, and probable future projects producing related or cumulative impacts including, if appropriate, those projects outside the control of the agency; or
- A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental planning document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact.

According to Section 15355 of the *State CEQA Guidelines*:

“‘Cumulative impacts’ refer to two or more individual effects which, when considered together, are considerable and which compound or increase other environmental impacts.

- (a) The individual effects may be changes resulting from a single project or a number of separate projects.
- (b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.”

In addition, according to *State CEQA Guidelines* Section 15130(a)(1):

“As defined in Section 15355, a ‘cumulative impact’ consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.”

Furthermore, as stated in the *State CEQA Guidelines*, Section 15064(i)(5) it should be noted that:

“The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project’s incremental effects are cumulatively considerable.”

The cumulative discussion in an EIR focuses on whether the impacts of the project under review are cumulatively considerable within the context of impacts caused by other past, present, or future projects. Cumulative study areas are defined based on an analysis of the geographical scope relevant to each particular environmental issue. Therefore, the cumulative study area for individual environmental impact issues may vary along with the methodology used. For example, a cumulative visual impact generally could only affect the area within the view of the project site, while a cumulative air quality impact could affect the entire South Coast Air Basin. The cumulative study areas, methodology used and the projected growth, whether determined through growth forecasts or related projects, are established as relevant in the respective cumulative impact discussions for each issue area contained within Chapter 4.0, Environmental Impact Analysis.

A listing of related projects in the vicinity of the project site has been determined by a review of the County’s record of filed projects, information obtained from the County Department of Public Works, Traffic and Lighting Division, the Impact Analysis Section, and a summary provided by the City of Santa Clarita Planning Department. Table 3-1 on page 3-3 lists each of the related projects reasonably expected to be in place by the project’s build out time frame of 2017. The location of each related project is illustrated in Figure 3-1 on page 3-6. As shown in the table, there are a total of 48 related projects considered in the cumulative impact analyses for most of the Chapter 4 Sections. Their relation or contribution to impacts with the proposed project was primarily based on the type of development being proposed and the location of the projects in relation to the surrounding street system.

Table 3-1**List of Related Projects**

PROJECT	DESCRIPTION	STATUS
Projects in Unincorporated Los Angeles County		
TT 46018 (S&S)	1,298 Single-Family DU 1,202 Condominium units 150 TSF Commercial	Under Construction
TR 52763 (S&S)	11 Single-Family DU	Pending
TR 31803	498 Single-Family DU	Under Construction
CP 99226/TR 52990	63 Single-Family DU	Approved
TR 46353	110 Multi-Family DU	Approved
TR 54372	74 Single-Family DU	Pending
TR 52790	75 Single-Family DU	Under Construction
TR 060259 (Park Place)	492 Single-Family DU and 34 acre Park	Pending
TT 43589 / 98-046	91 Single-Family DU	Pending
TR 52829	95 Single-Family DU	Approved
TT 47760 (Copper Hill @ Haskell)	480 Single-Family DU 1 Elementary School	Pending
TR 060999	44 Single-Family DU	Pending
TR 47573 / 03-386	75 Single-Family DU	Pending
TR 52193	62 Single-Family DU	Pending
TR 52194	126 Single-Family DU	Pending
TR 52785	26 Single-Family DU	Pending
TR 52192	141 Single-Family DU	Pending
TR 45123	10 Single-Family DU	Pending
TR 066202	31 Single-Family DU	Pending
TR 52938/45023 (Fair Oaks Ranch)	752 Multi-Family DU	Pending
TR 52833 (Canyon Park)	71 Single-Family DU	Pending
TR 063483	171 Multi-Family DU	Pending
West Creek/West Hills/TR 52455	1,248 Single-Family Units 1,297 Multi-Family Units 180 TSF Commercial	Pending
Tesoro Phase 2/TR 051644	714 Single-Family DU	Pending

Table 3-1 (Continued)**List of Related Projects**

PROJECT	DESCRIPTION	STATUS
Projects in the City of Santa Clarita		
02-232 (Rodgers Development)	34 TSF Retail	Under Construction
TR 49621 (Wes Thompson)	365 Single-Family DU	Approved
TR 52355	63 Single-Family DU	Approved
Sand Canyon Gateway /TR 53074	24 Single-Family DU	Approved
Mattson Project	14 TSF Church and 2 TSF Daycare	Approved
TR 62252	300 Multi-Family DU	Approved
TR 60536	68 Multi-Family DU	Approved
02-063 (Montezuma)	174 Single-Family DU	Pending
VTTM 53425 (Riverpark incl. Cross Valley Connector between Soledad Cyn Rd and Bouquet Cyn Rd)	432 Single-Family DU 657 Multi-Family DU 16 TSF Retail Commercial	Approved
TR 060258 (The Keystone incl. Golden Valley Rd between Plum Cyn Rd and the Cross Valley Connector)	312 Single-Family DU 187 Multi-Family DU 1,200 Student Middle School YMCA	Approved
TR 51599-Partial (Partial Whittaker Bermite incl Via Princessa gap closure)	622 Single-Family DU 834 Multi-Family DU 1,456 TSF Commercial 224.4 Acres Open Space ^a	Pending
Canyon Country Education Center	8,000 Students 15 TSF Commercial	Approved
TT 062322 (Soledad Village)	407 Multi-Family DU 8 TSF Commercial Retail	Approved
Vista Canyon Ranch	75 Single-Family DU 825 Condominium Units 300 Multi-Family Units 150 TSF Commercial Retail 250 TSF Commercial Office 150 TSF Medical Office 200 Room Hotel 12 acre Park ^b	Pending
MC 04-358	180 Multi-Family DU 10 TSF Commercial Retail	Pending
TR 61811	167 Single-Family DU	Pending
TR 53419	111 Multi-Family DU	Pending

Table 3-1 (Continued)**List of Related Projects**

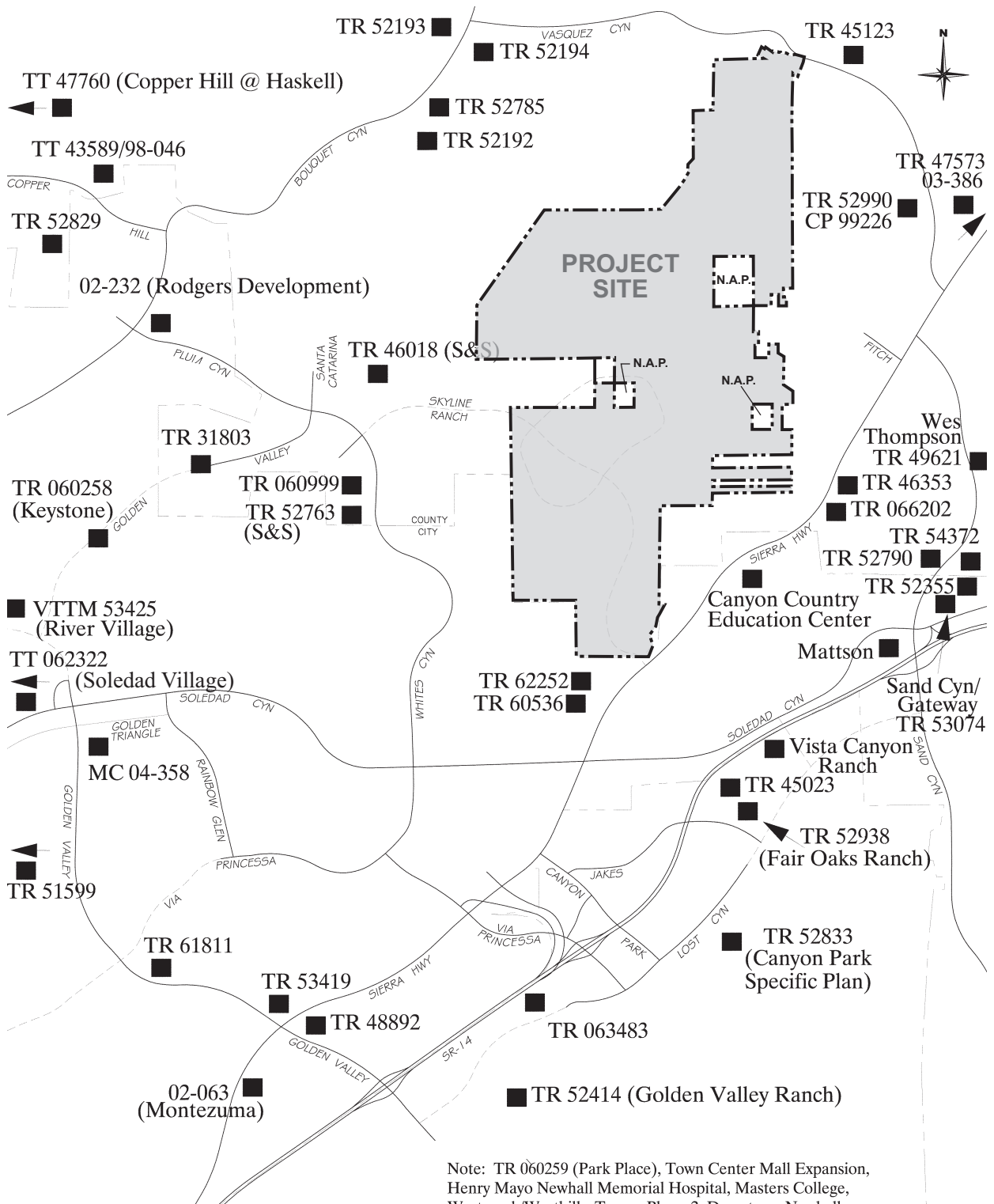
PROJECT	DESCRIPTION	STATUS
TR 48892	148 Single-Family DU	Pending
TR 52414 (Golden Valley Ranch)	498 Single-Family DU 619 TSF Commercial	Pending
Town Center Mall Expansion	490 TSF Commercial Retail	Pending
Henry Mayo Newhall Memorial Hospital Master Plan	127 TSF net new Hospital 200 TSF net new Medical Office	Approved
The Masters College Master Plan	600 Students 54 Condominium Units	Pending
Downtown Newhall Specific Plan	75 net new Single-Family DU 650 net new Multi-Family DU 245 TSF net new Commercial Retail 55 TSF net new Commercial Office	Approved
North Newhall Specific Plan	13 net new Single-Family DU 641 net new Multi-Family DU 17 TSF net new Commercial Retail 150 TSF net new Commercial Office 345 TSF net new Industrial Park 1,350 Student Elementary School 90 Room Hotel ^b	Pending

Notes: DU=Dwelling Unit, TSF=Thousand Square Feet

^a *The entire project proposed under TR 51599 includes 1,244 Single-Family DU; 1,667 Multi-Family DU; 2,911 TSF Commercial; and 448.7 Acres Open Space. However, approximately half of this proposed project is included in the SCVCTM Interim Year horizon and therefore is the basis for the cumulative analysis used in the Traffic Impact Analysis and other applicable sections of this EIR.*

^b *Included in the SCVCTM Interim Year horizon.*

*Sources: Los Angeles County Subdivision Activity Map (As of July 2007);
Los Angeles County Development Monitoring System (December 2006);
Santa Clarita Subdivision Activity Map (As of March 2005 for the City of Santa Clarita and June 30, 2004 for Unincorporated Los Angeles County Areas);
Westside Santa Clarita Valley Roadway Phasing Analysis;
Sterling Industrial – VPM 060030 Traffic Impact Analysis;
Northlake Phase I Traffic Impact Analysis;
City of Santa Clarita Planning Division;
Downtown Newhall Specific Plan;
Draft North Newhall Specific Plan Land Use Matrix;
Henry Mayo Newhall Memorial Hospital Master Plan Traffic Impact Analysis;
Town Center Mall Expansion Traffic Impact Analysis; and
Masters College Master Plan Traffic Impact Analysis.*



Note: TR 060259 (Park Place), Town Center Mall Expansion, Henry Mayo Newhall Memorial Hospital, Masters College, Westcreek/Westhills, Tesoro Phase 2, Downtown Newhall Specific Plan, and North Newhall Specific Plan related projects are located outside of graphic area.

LEGEND

- Related Project Location
- - - Future Roadway



No Scale Provided

Figure 3-1
Related Projects Location Map

It is noted that cumulative impacts analyzed in this EIR (impacts from related projects in conjunction with the proposed project) represents a “worst-case” scenario for the following reasons:

- Not all of the related projects will be approved and/or built. Further, it also is likely that all of the related projects will not be constructed, opened, or occupied until after the proposed project had been built and occupied.

Impact projections for related projects would likely be, or have been, subject to unspecified mitigation measures, which would reduce potential impacts.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

In May 2004, an Initial Study was prepared for the proposed project (refer to Appendix A). Based on the findings of the Initial Study, the County determined that an EIR would be required for the project. The County used the Initial Study, agency and public input received during the NOP comment period and the public scoping meeting, and recent legislation (AB 32 and SB 97) and public concern regarding greenhouse gas emissions and global climate change, to determine the scope of the evaluation for the Draft EIR. The following 19 environmental issues are evaluated in this Draft EIR:

- Section 4.A: Geotechnical Resources;
- Section 4.B: Hydrology and Water Quality;
- Section 4.C: Biological Resources;
- Section 4.D: Cultural and Paleontological Resources;
- Section 4.E: Visual Qualities;
- Section 4.F: Traffic/Access;
- Section 4.G: Noise;
- Section 4.H: Air Quality;
- Section 4.I: Water Resources;
- Section 4.J: Wastewater Disposal;
- Section 4.K: Solid Waste Disposal;
- Section 4.L: Law Enforcement Services;
- Section 4.M: Fire Services and Hazards;
- Section 4.N: Education;
- Section 4.O: Libraries;
- Section 4.P: Parks;
- Section 4.Q: Land Use;
- Section 4.R: Population, Housing and Employment;
- Section 4.S: Global Climate Change.

Sections 4.A through 4.S provide detailed discussions of environmental setting (existing conditions), impacts associated with the proposed project, cumulative impacts, mitigation measures designed to reduce significant impacts and levels of significance after mitigation.

To assist the reader in comparing information about the various environmental issues, each section in this chapter contains the following information:

- Introduction;
- Existing Conditions;
 - Regulatory Framework;
 - Environmental Setting;
- Project Impacts;
 - Thresholds of Significance;
 - Methodology;
 - Impact Analysis;
- Mitigation Measures;
- Cumulative Impacts;
- Level of Significance After Mitigation.

In addition to the analyses provided in this chapter, the Executive Summary includes a table that summarizes and compares all of the impacts by environmental issue.

For each impact identified in this Draft EIR, a statement of the level of significance of the impact is provided. Impacts are categorized in one of the following categories:

- A designation of *no impact* is given when no adverse changes in the environment are expected.
- A *less than significant impact* would cause no substantial adverse change in the environment.
- A *significant impact* would have a substantial adverse impact on the environment, but could be reduced to a less than significant level with incorporation of mitigation measure(s).
- A *significant unavoidable impact* would cause a substantial adverse effect on the environment and no feasible mitigation measures would be available to reduce the impact to a less than significant level.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

A. GEOTECHNICAL RESOURCES

1. INTRODUCTION

The following section is based on information and analysis provided by Geolabs of Westlake Village in the Geotechnical Investigation of Vesting Tentative Tract No. 060922 dated March 6, 2004, as supplemented by submittals to the County dated August 23, 2004, January 3, 2005, November 16, 2006, April 13, 2007, and August 28, 2008. The geotechnical investigation focused on identifying the major geologic and geotechnical elements of the project site, which could have an adverse effect on the proposed development. The investigation included review of existing literature on geologic mapping for the area, sample borings, and excavation of exploratory test pits for the recordation of geologic data such as strike and dip of bedding, joints, shears, and lithology. The investigation reports have been reviewed and conditionally approved by the Los Angeles County Department of Public Works Geotechnical and Materials Engineering Division in September 2008. A complete copy of the geotechnical and supplemental reports and review sheets indicating conditions of approval are included in Appendix B, Geotechnical Reports of this Draft EIR.

2. EXISTING CONDITIONS

a. Regulatory Framework

The Alquist-Priolo Geologic Hazards Zone Act (California Public Resources Code Sections 2621-2630) was enacted by the State of California in 1972 to address the hazard and damage caused by surface fault rupture during an earthquake. The Act has been amended ten times and renamed the Alquist-Priolo Earthquake Fault Zoning Act, effective January 1, 1994. The Act requires the State Geologist to establish “earthquake fault zones” along known active faults in the state. Cities and counties that include earthquake fault zones are required to regulate development projects within these zones.

The Seismic Hazard Mapping Act of 1990 (California Public Resources Code Sections 2690-2699.6) was enacted, in part, to address seismic hazards not included in the Alquist-Priolo Act, including strong ground shaking, landslides, and liquefaction. Under this Act, the State Geologist is assigned the responsibility of identifying and mapping seismic hazards zones.

The California Geologic Survey (CGS) also provides guidance with regard to seismic hazards. The CGS's *Special Publications 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California* provides guidance for evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigation.

The California Seismic Safety Commission was established by the Seismic Safety Commission Act (California Government Code Sections 8870-8870.95) in 1975, and the California Earthquake Hazards Reduction Act (California Government Code Sections 8871-8871.5) was signed into law on October 2, 1985. This statute requires the Seismic Safety Commission to prepare and administer a program setting forth priorities, funding sources, amounts, schedules, and other resources needed to reduce statewide earthquake hazards significantly by the year 2001. Until 1997, the California Seismic Safety Commission had presented the program required by the California Earthquake Hazards Reduction Act in a series of five-year Plans, titled California at Risk. In November 1997, the Commission released the latest version of the Plan with new format and updated information. Titled The California Earthquake Loss Reduction Plan, it incorporates lessons learned from the Loma Prieta (1989), Northridge (1994), and Kobe, Japan (1995) earthquakes. This version of the Plan fulfills several needs: 1) it continues to be the Commission's policy statement about what needs to be done to reduce earthquake risk over the long term; 2) it serves as the State's strategic plan, guiding the executive and legislative branches in overall implementation strategies and priorities for seismic safety; and 3) it complies with the Federal Emergency Management Agency's (FEMA's) National Hazards Mitigation Strategy and is the State's hazard mitigation plan required for federal mitigation funding after earthquakes. The Plan emphasizes the importance of upgrading existing vulnerable structures, better design of new construction, and increased preparedness in all areas as the most cost-effective methods of reducing loss and improving recovery from earthquakes.

In addition, at the County level, General Plan Land Use Element Appendix B provides Hillside Management/Performance Review procedures for development projects in hillside areas. As such, this appendix elaborates on policies for urban and non-urban hillside management areas and gives specific guidance for reviewing development proposals. Among other elements, it specifies a method for calculating densities and identifies findings required for approval of hillside development. These findings address public safety, resource protection, suitability for development, and quality of design.

b. Environmental Setting

(1) Geology

The project site is located within the Geomorphic Province of the Transverse Range of southern California within the Mint Canyon Quadrangle in the unincorporated Los Angeles

County. The topography of the quadrangle is dominated by irregular, badland to mountainous, brush-covered terrain. More specifically, the project site is dominated by a broad east-west trending ridge located between Plum Canyon to the north and Whites Canyon to the south. The northern boundary of the development footprint traverses the numerous rounded peaks and saddles of this ridgeline. The northerly flank of this ridge is moderately to steeply incised, with slopes averaging 250 feet in height from the ridgetop to Plum Canyon below.

The southerly flank of the ridge is notably more subdued, with numerous southerly to southwesterly draining canyons, typically paralleling the rounded ridgespurs. The lower portions of the site, such as the canyon bottoms along the Whites Canyon drainage exhibit steeper, more rugged terrain indicative of recent and active erosional processes (stream rejuvenation). Total relief from the major ridgeline to the lower reaches of Whites Canyon is approximately 650 feet.

Directly north of the proposed development footprint, the natural terrain consists of southerly-draining canyons which are tributary to Plum Canyon. These canyons are separated by north-south trending ridgelines, with heights as great as 300 feet. Within the northeasterly corner of the project site that would remain undeveloped, the topography is dominated by the Cruzan Mesa. This erosional terrace, or mesa, is flanked by tall, steep slopes to the north, east, and west that range in height from 150 to 300 feet and with gradients ranging from 3:1 to nearly vertical. The mesa's surface is concave-shaped, directing drainage to closed depressions in its central portion. Heavy flows that exceed the capacity of the depressions or "ponds" enter a drainage along the mesa's southern boundary that is tributary to the Plum Canyon drainage.

The easterly side of the mesa generally consists of semicircular, concave, erosional escarpments, separated by narrow ridges. The uppermost portions of these escarpments are locally vertical, and expose laterally-supported sandstone and siltstone of the Mint Canyon Formation. Along the westerly margin of the mesa, landslides and slope instability are more prevalent where strength discontinuities such as faults and fractures are present in the steep terrain.

Geologic influences on topography are evident in some portions of the site in the form of strike ridges (ridgelines conforming to the strike of hard, resistant beds), topographic reversals associated with landsliding, and geologic contacts.

Regional geologic maps of the Mint Canyon Quadrangle indicate that bedding of both the Saugus and Mint Canyon formations dip gently to the west and southwest through the site. The Quaternary-age Saugus Formation, which is comprised of poorly lithified, nonmarine sandstone and conglomerate, underlies the majority of the project site. The lowermost 20 to 50 feet of this formation typically consists of a massively bedded cobble to boulder conglomerate, which is exposed along White Canyon and in its tributary canyons. Lesser sandy siltstone and red sandy claystone (possibly paleosols) have been observed in outcrop and borings in the westerly portion

of the site, which corresponds to the upper (younger) portion of the formation. These units appear poorly to massively bedded and in a dense condition. The red clayey beds encountered in this formation typically require removal and recompaction where exposed at grade due to their expansion potential. These beds also strongly influence the site stability on account of their lower shear strength.

The Miocene-age Mint Canyon Formation exposed on the project site is primarily comprised of non-marine sandstone and conglomerate with poor to moderate cementation. The conglomerate units are typically massively bedded, but occasionally well-defined bedding can be observed within the finer-grained sandstone sections.

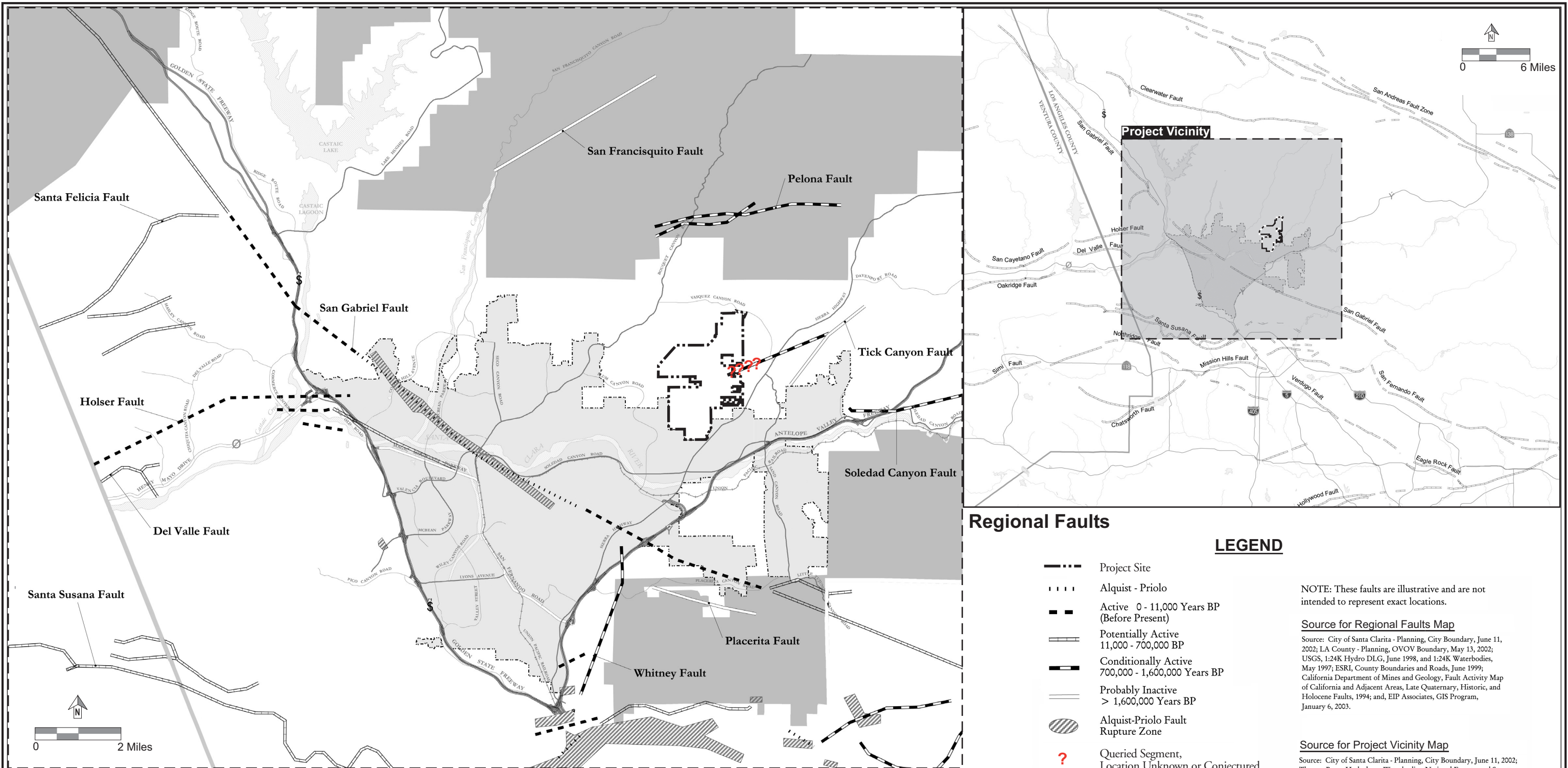
The upper portion of this formation consists of a white, light gray, or greenish gray conglomerate, which is commonly discernible from the overlying light orange-brown to tan Saugus Formation basal conglomerate. In addition, the conglomerates and sandstones of the Mint Canyon Formation typically exhibit better sorting and less silt and clay content than those of the Saugus Formation. Fine-grained siltstone and claystone within the Mint Canyon Formation are relatively rare on the project site.

(2) Faulting and Seismicity

(a) Faults

No known active or potentially active faults pass through the project site. In addition, the project site is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, the potential for ground rupture is considered to be very low. However, the property is situated within the seismically active southern California region, and ground shaking is likely to occur due to earthquakes caused by movement along nearby faults. Ground shaking is typically the main cause of structural damage and personal injury from earthquake events in southern California. Figure 4.A-1, Regional and Vicinity Faults, on page 4.A-5 depicts the general alignment of regional faults in northern Los Angeles County and in relation to the project site. The nearest active faults to the project site are the San Gabriel fault, located approximately 4.3 miles to the west/south of the site, and the Holser fault, located approximately 5.0 miles to the west of the site. The San Andreas fault is located approximately 14.4 miles east/northeast.

As indicated on Figure 4.A-1, nearby Potentially Active faults (i.e., 11,000 – 700,000 years before present [BP]) include segments of the San Gabriel fault, the Santa Felicia fault, and the Del Valle fault. Nearby Conditionally Active faults (i.e., 700,000 – 1,600,000 years BP) include a segment of the Tick Canyon fault, the Soledad Canyon fault, and the Pelona fault. A segment of the Tick Canyon fault has been mapped across Sierra Highway and may project into the site, as indicated by the queried segment on Figure 4.A-1.



Faults Within the Project Vicinity



Figure 4.A-1
Regional and Vicinity Faults

Source: Santa Clarita Valley General Plan Technical Background Report, 2004

(b) Liquefaction

Liquefaction is a phenomenon in which loose, saturated, granular soils temporarily behave similarly to a fluid when subjected to high intensity ground shaking. Liquefaction occurs when three general conditions exist: (1) shallow groundwater, (2) low-density silty or fine sandy soils, and (3) high intensity ground motion. Generally, the project site is not exposed to shallow groundwater. Some of the surficial soils contain dry and loose silty sand.

Portions of Whites Canyon and a tributary that extend within the site boundaries have been delineated as Seismic Hazard Zones where liquefaction hazards may exist, according to the Official Map of Seismic Hazards for the Mint Canyon Quadrangle. These canyons contain very coarse-grained alluvial deposits in a generally matrix-supported condition. Groundwater is known to be present at depth, near the alluvial-bedrock contact, and as such, the potential for liquefaction exists on site. Figure 4.A-2, Liquefaction Areas on the Project Site, on page 4.A-7 identifies the location of potential liquefaction areas on the project site.

(c) Dry Seismic Settlement

Seismically-induced settlement occurs during seismic ground shaking due to coarse-grained soils above the groundwater table settling into a tighter packing configuration. The seismic settlement below the groundwater is related to pore pressure changes during liquefaction. The project site contains surficial materials of low relative density, such as alluvial, colluvial, landslide debris, and terrace deposits that are subject to such conditions.

(d) Landslides

Numerous small- to moderate-size landslides have been identified on the site. Figure 4.A-3, Landslide Areas on and Adjacent to the Project Site, on page 4.A-8 identifies the location of landslide areas on the project site. Information shown on this figure is based on geologic mapping and exploration performed by the geotechnical consultant. The majority of these landslides appear to have occurred in the direction of the prevailing dip of the Saugus Formation. Due to the generally shallow dips, some of the landslides may have occurred in a rotational fashion, as large-scale slumps. The scarps of the larger landslides appear to have been filled with slopewash, but topographic breaks or benches at the heads of the landslides remain discernible.

A discussion of earthquake-induced landslides is provided under Impact Analysis Subsection (c), Landslides.

----- Project Boundary

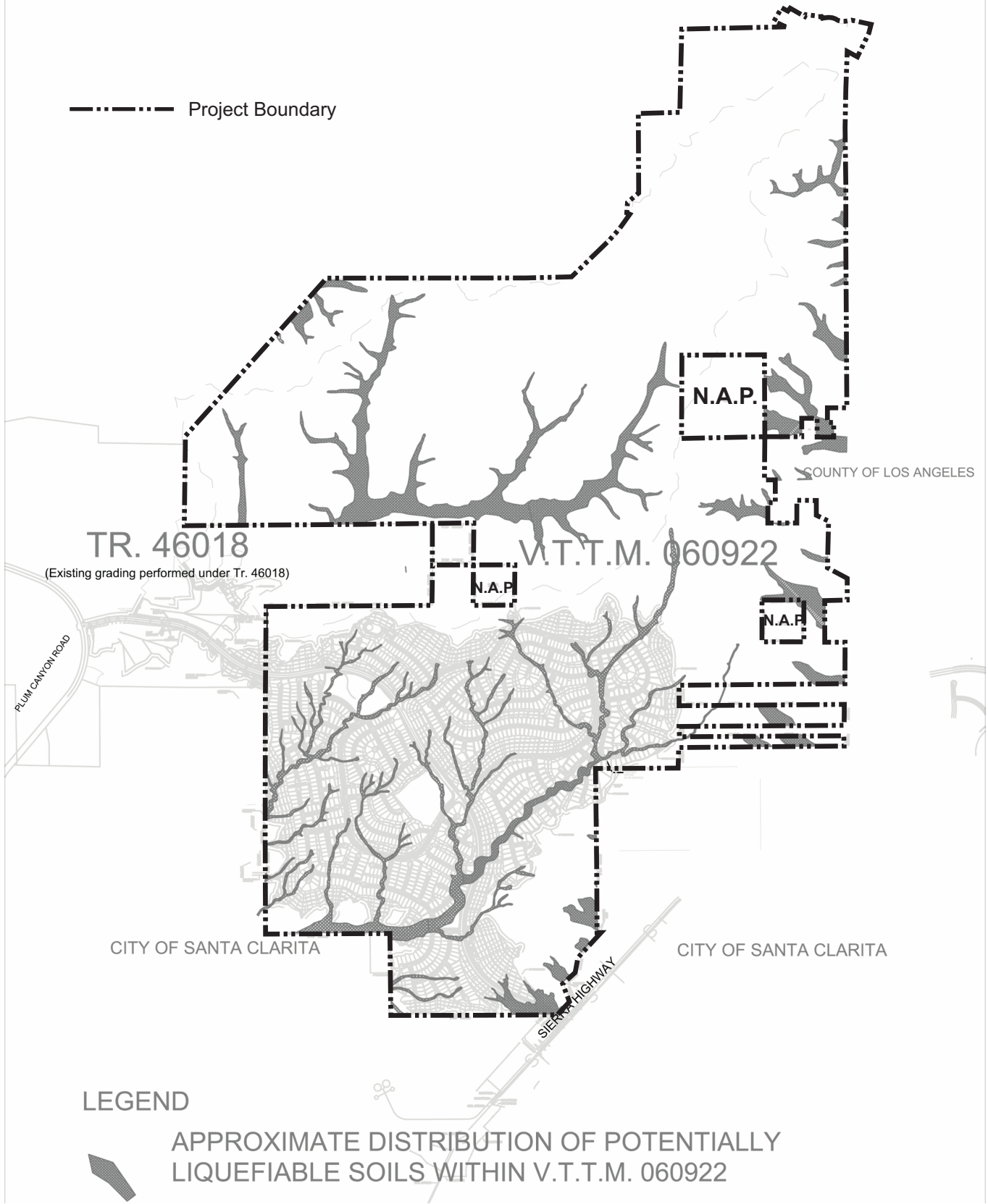
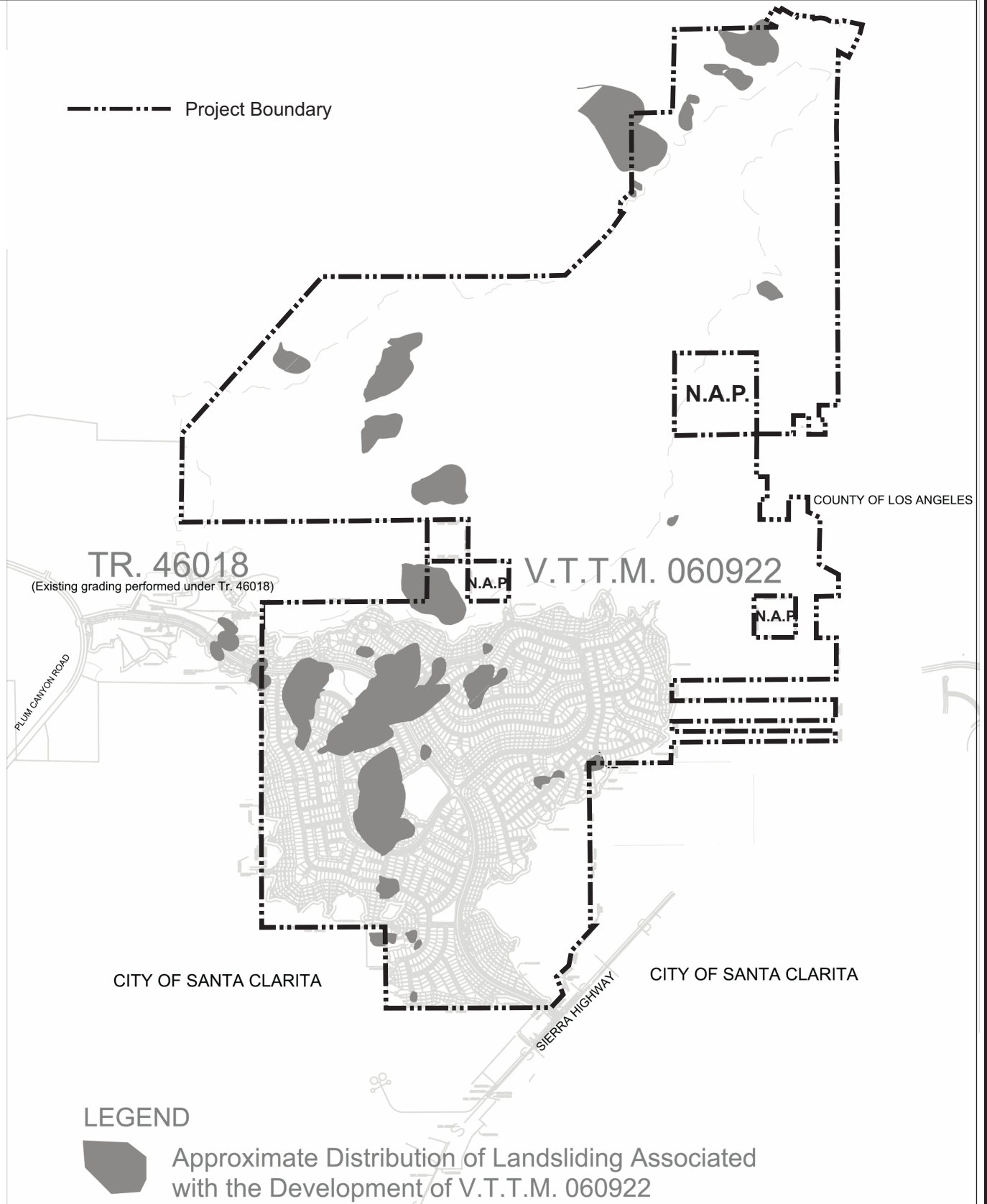


Figure 4.A-2
Liquefaction Areas on the Project Site

Source: Geolabs-Westlake Village, 2009

----- Project Boundary



Source: Geolabs-Westlake Village, 2009

Figure 4.A-3
Landslide Areas on and
Adjacent to the Project Site

(3) Soils

(a) Fill Soils

Localized undocumented fills were observed in association with existing dozer roads and an abandoned house site in the southwest corner of the site. Field observations indicate that these soils are typically less than five feet in thickness.

(b) Deposits

Alluvium. Alluvium deposits have been mapped within the major canyon bottoms that traverse the site. In general, alluvial materials consist of interbedded sand, gravel, cobbles, and boulders with only sparse to minor silt and clay content. A notable concentration of oversize boulders was observed within the vast majority of canyons (ranging from 1 foot to 6 feet in diameter). These boulders are typically subangular to subrounded, crystalline, and very hard (granitic or gneissic composition). The depth of these materials within the smaller southerly-draining canyon was found to be relatively thin (i.e., less than 20 feet). Bedrock outcroppings were identified along many of the canyon bottoms.

Within Whites Canyon, the alluvial deposits are very coarse-grained, consisting of gravels, cobbles, and boulders within a poorly sorted sand matrix. Deposits may also be clast-supported (i.e., boulders and cobbles in contact with one another). The maximum depth of these alluvial soils is anticipated to be on the order of 30 feet.

Colluvial/Slopewash. Colluvial and slopewash deposits were identified within the smaller tributary canyons. These soils are generally located in the subdued topography and are generated from the weathering of the underlying formations, as well as from down-slope creep processes. These materials are typically less than five feet in thickness and consist of gravelly to cobble-rich silty and clayey sands in a dry and slightly loose to slightly dense condition.

Terrace Deposits. Terrace deposits have been mapped adjacent to Whites Canyon, locally capping the relatively flatter portions of the higher terrain. These remnant deposits generally consist of reddish brown clayey sand to silty sand with occasional lenses of gravels and cobbles. Their depths typically range from 10 to 15 feet.

Expansive Soils. The vast majority of the soils on the project site are within the very low and low expansion index ranges. However, expansive lithologies were identified within the westerly portion of the project site within the Saugus Formation. These expansive beds typically consist of reddish brown sandy clay (paleosol).

3. PROJECT IMPACTS

a. Thresholds of Significance

The thresholds provided in Appendix G of the *State CEQA Guidelines* are used as the basis for determining significant environmental impacts. Accordingly, a project may be deemed to have a significant impact on geology and soils if it would result in any of the following:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to California Geological Survey Special Publication 42);
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction; and/or
 - Landslides.
- Result in substantial soil erosion or the loss of topsoil.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

b. Methodology

An assessment of grading, site design, and seismicity was performed to identify potential impacts associated with geology and soils. As indicated above, the analysis is based on a Geotechnical Investigation and supplemental reports, which were prepared by Geolabs of Westlake Village and are included as Appendix B of this Draft EIR. The investigations were conducted based on review of existing documentation, field investigations (subsurface exploration), and laboratory testing. Although the August 28, 2008 Addendum was prepared for the August 2008 Tentative Tract Map, Geolabs conducted a review of the current (February 2009) Tentative Tract Map for the purpose of identifying subsequent changes between these two maps and confirming or revising specific lot numbers identified in the Impact Analysis section below. As determined by Geolabs, modifications from the August 2008 Tentative Tract Map to

the February 2009 Tentative Tract Map consist of minor changes including shifting of lot lines, modification of cul-de-sacs, pad grade adjustments, shifting of engineered slopes and associated terrace drains, and removal of a large riprap pad and small basin. Previous geotechnical investigation of the proposed development remains applicable and no additional analysis is warranted in light of these changes.

c. Impact Analysis

(1) Faulting and Seismicity

(a) Seismic Ground Shaking

As with all of southern California, the proposed project would be exposed to strong seismic ground shaking in the event of an earthquake along any of major faults in the vicinity. Strong ground shaking can result in serious damage to structures; personal injuries, including loss of life; damage to property; and economic and social dislocations. The proposed project would result in the construction and occupancy of residential uses and public facilities, therefore, has the inherent potential to expose persons to ground shaking-related hazards. However, the project would be required to conform with Uniform Building Code (UBC) standards, which include design requirements to reduce the potential for significant damage to structures resulting from strong seismic ground shaking. The UBC and County of Los Angeles building standards and procedures, including those associated with hillside management, would be enforced through review of plans and inspection of structures during construction. By complying with the UBC and County of Los Angeles standards and procedures, project impacts related to ground shaking would be less than significant.

(b) Liquefaction/Dry Seismic Settlement

As mentioned above, portions of Whites Canyon and a tributary canyon, which extend on-site and are within the development envelope, have been delineated as Seismic Hazard Zones, where liquefaction hazards may exist. These canyons contain very coarse-grained alluvial deposits in a generally matrix-supported condition. Without proper mitigation, placement of structures in this or any other area of the site containing alluvial materials could result in a potentially significant impact due to liquefaction. Mitigation to address potentially significant impacts due to liquefaction is provided below in Subsection 4, Mitigation Measures.

As previously described, seismically-induced settlement occurs during seismic ground shaking due to coarse-grained soils above the groundwater table settling into a tighter packing configuration. The seismic settlement below the groundwater is related to pore pressure changes during liquefaction. The project site contains surficial materials of low relative density, such as

alluvial, colluvial, landslide debris, and terrace deposits, which are subject to such conditions. Without proper mitigation, placement of structures in this or any other area of the site containing surficial materials of low relative density could result in a potentially significant impact due to seismically-induced settlement. Mitigation to address potentially significant impacts due to settlement is provided below in Subsection 4, Mitigation Measures.

(c) Landslides

Much of the sloping terrain on the site has been delineated a Seismic Hazard Zone with the potential for earthquake-induced landslides. Without proper mitigation, placement of structures in areas identified as having potential for landslides would be considered a significant impact with potential for damage to structures; personal injuries, including loss of life; damage to property; and economic and social dislocations. Mitigation in the form of removals and recompaction of such landslide debris and alluvial deposits is recommended below in Subsection 4, Mitigation Measures.

(2) Soils

(a) Slope Stability

The project site would be graded to provide for major roads and infrastructure, establish drainage patterns and for creation of building pads for the various land uses within the project. Remedial grading in the form of buttress and stability fills would also be required for graded slopes that expose unfavorable geologic conditions or unsuitable soils. Approximately 20,800,000 cubic yards of soil would be graded within the southern 622 acres of the site, and on 33.7 acres of adjacent property to the east, west, south, and southwest. Approximately 32 percent of the grading (6.4 million cubic yards) would be associated with the proposed public improvement to extend Whites Canyon Road from Plum Canyon Road, through the site to connect with Sierra Highway.

Most of the off-site grading to the west and south is associated with the extension of Whites Canyon Road and would require approximately 535,000 cubic yards of cut and 37,000 cubic yards of fill. For approximately 2 acres, located east of the development area, approximately 65,000 cubic yards of fill would be placed with a maximum fill depth of 100 feet.

Figure 4.A-4, Proposed Cut and Fill Map, on page 4.A-13 presents an illustration of the cut and fill locations which are expected to be balanced as part of the overall grading operations.

Areas Exposed to Ascending Natural Slopes. Geologic mapping of the site indicates that surficial instability of the natural slopes commonly occurs at gradients of 1.25:1 or steeper

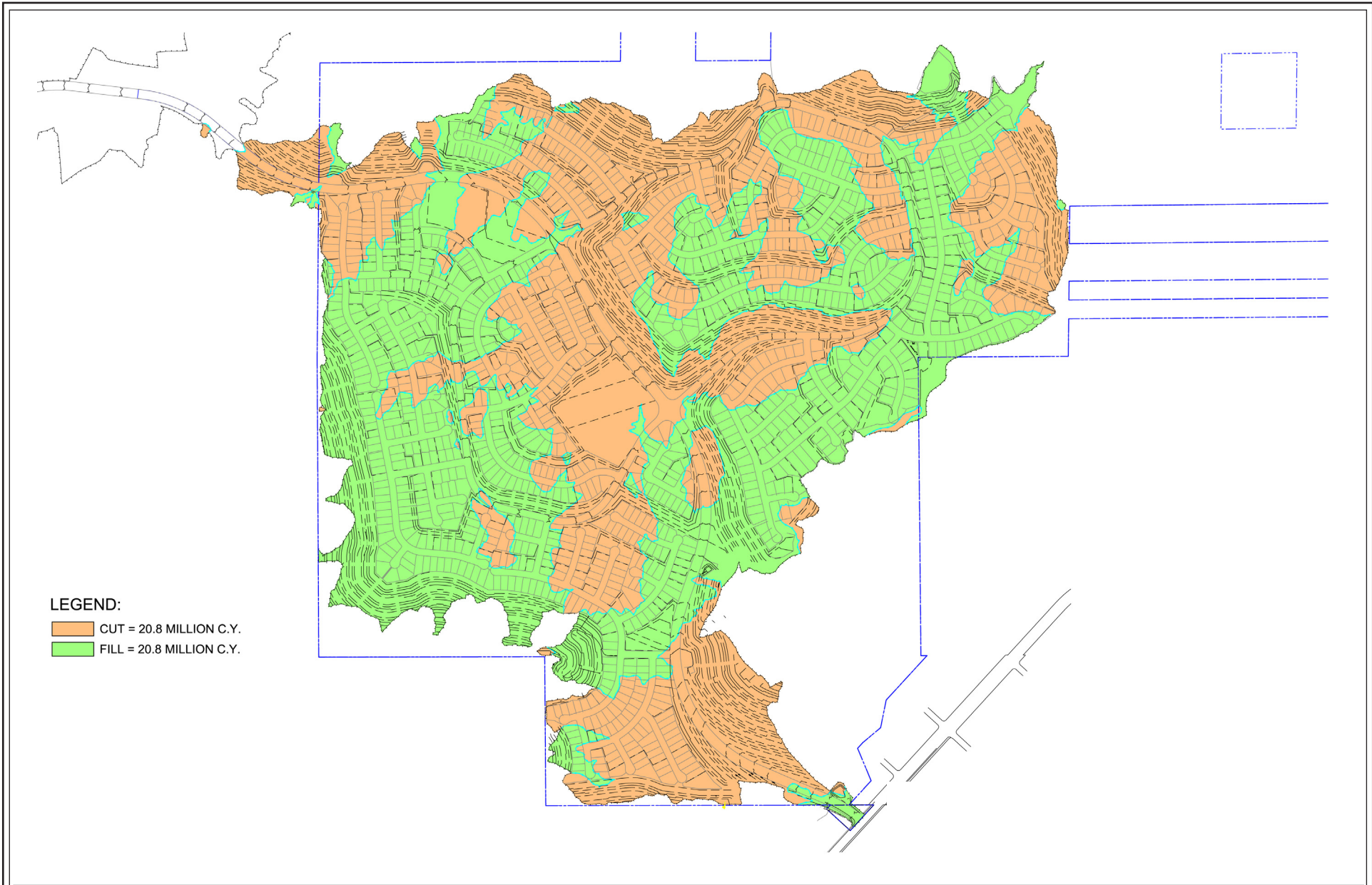


Figure 4.A-4
Proposed Cut and Fill Map

within thin, sandy surficial soil in the form of shallow isolated soil slips. The most common occurrences of such features are along the sides of steeply incised canyons such as Whites Canyon. In addition, review of the Tentative Tract Map indicates that a few lots would be exposed to ascending natural slope conditions. These areas are discussed below.

Easterly Daylight Fill of “Unnamed Main” Canyon. Several residential lots (i.e., lots 690-692, 698, 702-705, 709, 725, and 873-880, along the lower eastern portion of the project site would be located at the toe of a natural slope ranging in height from 10 to 100 feet. These improvements have the potential to be exposed to surficial instability and debris flow hazard. Therefore, without proper mitigation, placement of structures in this area of the site would result in a potentially significant impact. Mitigation in the form of drainage ditches, impact walls, and slope design is recommended below in Subsection 4, Mitigation Measures. The proposed storm drain system would convey such material along with water to the nearby debris basins designated as lots 1307, 1308, and 1309.

Slopes on the Northwesternmost Portion of the Development Area. Several residential lots (i.e., lots 1233 through 1238) near the northwestern corner of the proposed development area are situated below a tall, ascending natural slope. These lots would have the potential to be exposed to surficial instability and debris flow hazard, and as such, without proper mitigation, placement of these lots in this area of the site would result in a potentially significant impact. The incorporation of berms and drainage swales into the proposed storm drain system, as recommended below in Subsection 4, Mitigation Measures, would protect these lots from potential debris flow hazard by conveying debris and sediment to the debris basin designated as lot 1305.

(b) Soil Rippability and Oversized Materials

Grading for the proposed project is estimated to involve approximately 20.8 million cubic yards of cut and fill. Cut and fill areas on the development portion of the project site are shown on Figure 4.A-4. The precise earthwork balance is typically determined during the grading operations. Minor adjustments in pad elevations can generally be made to avoid the need for importation or exportation of soils. Within cut areas, the soils would be rippable with standard heavy equipment. However, since deep cuts are planned within the Saugus and Mint Canyon Formations, hard, crystalline cobbles and boulders within the conglomerate beds are expected to be encountered and may be difficult to excavate. Although this is a less than significant impact, overexcavation where these materials are anticipated may be considered. Oversized materials encountered in cut areas are expected to create difficult conditions as they are not expected to break down with normal grading equipment or operations. Therefore, it is expected that much of these materials would be placed in canyons within the grading area as windrows in accordance with traditional rock disposal methods and in compliance with applicable regulations. In addition to such rock disposal measures, a sizable amount of oversized rock is expected to remain toward the later part of grading. These materials would be handled through such means

as use as rip-rap, placement and covering in canyons within the graded area, or crushing for use as base. No oversized rock is anticipated for export. Based on the above, excavation of oversized materials is not anticipated to significantly impact geological and soils conditions on the project site.

(c) Expansive Soils

As previously mentioned, the vast majority of the soils on the project site are within the very low and low expansion index ranges. However, expansive lithologies were identified within the westerly portion of the project site within the Saugus Formation. Therefore, without proper mitigation, placement of structures in this area of the site would result in a potential significant impact relative to expansive soils, creating substantial risks to life or property.

(d) Soil Erosion

The on-site soils and bedrock formations are predominantly sandy in nature but contain some fines. Extensive excavation and grading of the project site and off-site areas would result in the movement of approximately 20.8 million cubic yards of on-site earth materials. Consequently, soil erosion may potentially result from project development. Standard measures implemented in the grading plans to reduce erosion include berms, paved interceptor drains, paved terrace drains, downdrains, and other drainage structures to capture surface flows and convey them to appropriate basins or storm drain inlets. Such elements are required by the applicable Building Code and are commonly finalized through the plan check process.

Compliance with applicable Best Management Practices, required erosion control plans, and other regulatory requirements will be mandatory by the governing agencies. Such measures have proven to reduce undue soil erosion on projects in the nearby vicinity with similar soils types. Ultimately, the proper planting and landscaping (accompanied by diligent maintenance) of the slopes provides the most effective erosion control. However, a more specific mitigation measure is identified below to ensure that impacts associated with soil erosion are reduced to less-than-significant levels.

4. MITIGATION MEASURES

Prior to issuance of grading or building permits, the following mitigation measures shall be revised as necessary to support an equivalent or greater level of environmental protection based on a design-level geotechnical investigation completed to the satisfaction of the County of Los Angeles Department of Public Works:

a. Liquefaction/Dry Seismic Settlement

- 4.A-1** *The following materials are considered unsuitable and shall be removed and recompacted in the grading of the site: existing fill soils, colluvial deposits and slopewash, alluvial deposits, landslide debris, and terrace deposits. Their removal and recompaction mitigate the potential for seismic settlement.*

b. Landslides

- 4.A-2** *Landslides (or portions thereof) that remain in place and are not removed and recompacted following the grading of the project site shall be designated as Restricted Use Areas, in accordance with Los Angeles County Department of Public Works (LACDPW) requirements. Landslides designated as Restricted Use Areas and landslides that are removed and recompacted are identified in the Geotechnical Investigations prepared by Geolabs-Westlake Village (dated March, 6, 2004, August 23, 2004, January 3, 2005, November 16, 2006, April 13, 2007, and August 28, 2008).*

c. Slope Stability

- 4.A-3(a)** *Interior slopes with daylighted bedding conditions shall be analyzed for appropriate buttress design. Tall cut slopes in the southerly portion of the site are anticipated to expose friable, uncemented bedrock zones and large cobbles and boulders. Several of these slopes require stabilization in order to mitigate the potential for raveling and dislocation of cobbles and boulders. All stability fills and buttresses shall be provided with backdrains and shall incorporate the generalized stability fill key dimensions for the “refacing” of planned cuts slopes.*
- 4.A-3(b)** *Fill caps for cut/fill lots shall be constructed to provide uniform foundational support for future structures. Shallow cut lots and cut/fill lots shall be provided with a minimum 5-foot cap of compacted fill. Cut/fill lots underlain by 10 feet or less of compacted fill on the fill portion of the lot shall have the cut portion overexcavated a minimum of 5 feet below finish grade and replaced with compacted fill, thus providing a fill cap with a minimum 5-foot fill thickness. For those transition lots with 10 to 20 feet of fill on the fill side, the cut side shall be provided with a minimum 7-foot-thick fill cap. For those transition lots with in excess of 20 feet of fill on the fill side, the cut side shall be provided with a minimum 10-foot-thick fill cap. Fill caps shall extend a minimum of 5 feet beyond the perimeter footings.*

Where the backslope is 3:1 or steeper, the last bench prior to reaching the undercut shall be at least 15 feet in width. The 15-foot-wide bench is intended

to reduce the steep dip of the fill-bedrock contact commonly created during undercutting.

- 4.A-3(c)** *All vegetation, trash debris, or other deleterious material shall be stripped from the area to be graded. These materials shall be removed from the site and deposited at a local landfill or recycled on site. Soils bearing sparse grasses may be thoroughly mixed with at least ten parts clean soil and incorporated into the engineered fill. Other materials shall be removed from the site.*
- 4.A-3(d)** *Fill slopes, which toe onto sloping ground, shall be founded in bedrock, below the compressible surface soils. The key shall be at least 20 feet wide and 3 feet deep (measured on the downslope side). The bottom of the key shall be graded so that there is at least 1 foot of fall across its width (toward the upslope side). The key shall be located in front of the toe of slope (as shown on the plan) so that the outside limit of the key lies at or beyond a 1:1 projection from the planned toe of the slope.*
- 4.A-3(e)** *Fill-over-cut slopes shall have the fill founded on a 20-foot-wide bench cut into the bedrock or, where bedrock is not present in the cut portion of the slope, on a key cut below the toe of the slope. The 20-foot bench shall be graded to provide at least 1 foot of fall toward its upslope side. If keyed below the toe of slope, then the key shall be at least 20 feet wide, 3 feet deep (below the toe), and tilted (at least 1 foot) into the slope. The cut portion of the slope shall be exposed (and observed by a representative of a qualified geotechnical firm) prior to constructing the fill portion of the slope.*
- 4.A-3(f)** *Exposed surfaces shall be scarified, moistened, or air-dried, as appropriate, and compacted to 90 percent of the material's maximum dry density prior to placement of fill.*
- 4.A-3(g)** *Where the ground slopes steeper than 5:1 (horizontal:vertical), the fill shall be properly benched into bedrock.*
- 4.A-3(h)** *All fill slopes shall utilize mixed soils [sand with some proportion of fines; i.e., clayey sand] in the outer 20 feet of the fill slope in order to minimize the potential for surficial slope deterioration.*
- 4.A-3(i)** *Fill materials shall be placed in thin lifts, watered to near the material's optimum moisture content (or to near two percent over optimum moisture content and compacted to the applicable level of relative compaction prior to placing the next lift).*
- 4.A-3(j)** *The 90 percent relative compaction standard applies to the face of fill slopes. This may be achieved by overfilling the constructed slope and trimming to a*

compacted finished surface, rolling the slope face with a sheepsfoot, or any method that achieves the desired product.

- 4.A-3(k)** *All retaining walls constructed within the project site shall be constructed in accordance with the Los Angeles County Building Code requirements and a design-level geotechnical investigation .*
- 4.A-3(l)** *Backfill for retaining walls shall be properly compacted. An impervious cap shall be provided at the top of the backfill to retard infiltration of water.*
- 4.A-(m)** *Slope setbacks set forth in the Los Angeles County Building Code shall be applied to residences and appurtenant structures. Structures situated within the setback area shall require special foundation design, which might include deepening footings, pile/caisson construction, and/or consideration of creep loads.*
- 4.A-3(n)** *Backfill for utility trench excavations shall be compacted to at least 90 percent relative compaction. Where installed in sloping areas, the backfill shall be properly keyed and benched.*
- 4.A-3(o)** *Those lots exposed to ascending natural slope conditions shall be provided with drainage ditches or swales, berms or impact walls, and/or small slopes descending from the pads to the natural slopes, to provide protection from potential debris flow hazard.*

d. Expansive Soils

- 4.A-4** *Expansive lithologies shall be overexcavated where encountered within lots and streets in order to mitigate the potential for differential expansion. The depth of such overexcavation shall range between 7 and 10 feet.*

f. Soil Erosion

- 4.A-5** *During grading, soils containing significant fines content (cohesive soils) shall be preferentially placed in the outer five feet of fill slopes. In addition, the required 90 percent relative compaction standard shall be applied to the outer face of fill slopes in order to reduce the amount of infiltration and erosion. Cut slopes exposing erodible bedrock formations shall require stabilization with engineered fill.*

5. CUMULATIVE PROJECT IMPACTS

Many geologic hazards, such as unstable soils, ground shaking, liquefaction, and lateral spreading, are site specific in nature and do not contribute to cumulative impacts. A potential geologic impact of the project that can be cumulative in nature is land subsidence. However, the proposed project would not involve activities (i.e., permanent extraction of groundwater or oil resources) that would be capable of causing regional land subsidence and, therefore, would not contribute to any cumulative impacts of that nature. As such, the proposed project would not result in any cumulatively significant geologic impacts. In addition, the project is situated on bedrock well outside the influence of any potential subsidence related to groundwater pumping from shallow alluvial aquifers to the southwest in the Santa Clarita Valley.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

From a geotechnical viewpoint, the proposed project could be safely developed as proposed, provided that: (1) the mitigation measures identified above and standard engineering practices are implemented during preparation of the grading plan, rough grading, and construction of the project components, including the residential dwelling units, school, park facilities, and supporting infrastructure; and (2) all materials unsuitable for support of grading, building construction, and other proposed improvements would be removed and recompacted in accordance with applicable building codes. The above mitigation measures, which include but not limited to the installation of buttresses, where necessary, construction of fill caps, foundation in bedrock, erection of retaining walls, deeper footings, construction of piles/caissons, would ensure on-site slope stability. As such, with implementation of the recommended mitigation measures and compliance with the Uniform Building Code (UBC), Los Angeles County Building Code, and the Los Angeles County General Plan Hillside Management/Performance Review Procedures, significant geotechnical impacts would not occur as a result of the proposed project.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

B. HYDROLOGY AND WATER QUALITY

1. INTRODUCTION

This section describes applicable regulations and existing conditions relating to hydrology and water quality, and evaluates the potential for the proposed project to cause impacts associated with flooding, erosion, siltation, and degradation of water quality. Information in this section is largely based on the Drainage Concept/Hydrology/ Standard Urban Storm Water Mitigation Plan (SUSMP) (Sikand Engineering Associates, March 2009); Flood Plain Analysis (Sikand Engineering Associates, March 2009); and Water Quality Technical Report (Novin Rashedi, March 2007, Revised May 2009). These reports are included as Appendix C, Hydrology and Water Quality Technical Reports of this Draft EIR.¹

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) The Clean Water Act

The Clean Water Act (CWA) of 1972 established the basic structure for regulating discharges of pollutants into the waters of the United States (U.S.). The CWA prohibits the discharge of pollutants to waters of the U.S. from any point source, unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. In 1987, the CWA was amended to add Section 402(p), requiring the Environmental Protection Agency (EPA) to regulate the permitting of storm water discharges by municipal and industrial facilities and construction activities under the NPDES permit program. The EPA published final regulations directed at municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more, and storm water discharges associated with industrial activities, including construction activities, on November 16, 1990. The regulations require that MS4 discharges to surface waters be regulated by a NPDES permit (Phase I Final Rule). The EPA published final regulations directed at storm water discharges not covered in the Phase I Final Rule, including small construction projects of one to five acres, on December 8, 1999 (Phase II Final Rule).

¹ *Additional background information was provided in a previously prepared Hydrology Study for Tentative Tract No. 60922 (Sikand Engineering Associates, February 18, 2005). This report is on file with the County of Los Angeles, Department of Regional Planning, Impact Analysis Section.*

The CWA authorizes the EPA to permit a state to serve as the NPDES permitting authority in lieu of the EPA. The State of California has in-lieu authority for an NPDES program under the Porter-Cologne Water Quality Control Act, described below.

The EPA recommends that effluent limitations for NPDES-regulated municipal storm water discharges be expressed as Best Management Practices (BMPs) or other similar requirements, rather than as numeric effluent limits. This approach involves implementing site design, source control, and treatment control BMPs that reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP).² According to the Section 402(p) of the CWA, MS4 permits must “require controls to reduce the discharge of pollutants to the MEP, including management practices, control techniques and system, design and engineering methods and such other provisions as the [U.S. EPA] Administrator or the State determines appropriate for the control of such pollutants.”

The CWA requires States to adopt water quality standards for water bodies and have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular water body (e.g. wildlife habitat, agricultural supply, fishing etc.), along with water quality objectives necessary to support those uses. Water quality objectives can be numerical concentrations or levels of constituents, such as lead, and suspended sediment, or narrative statements that represent the quality of water needed to support a particular use.

If the designated beneficial uses of a particular water body are being compromised and fail to meet water quality objectives, Section 303(d) of the CWA requires identifying and listing that water body as “impaired.” Once a water body has been deemed impaired, a Total Maximum Daily Load (“TMDL”) for each constituent of concern (pollutant) must be developed for that water body. The TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. A TMDL is implemented by reallocating the total allowable pollution among the different pollutant sources and watershed dischargers (through the permitting process or other regulatory means) to ensure that the water quality objectives are achieved. Once established, the TMDL is allocated among current and future dischargers into the water body.

² *The Office of Chief Counsel of the State Water Resources Control Board (SWRCB) has issued a memorandum interpreting the meaning of MEP to include technical feasibility, cost, and benefit derived with the burden being on the municipality to demonstrate compliance with MEP by showing that a BMP is not technically feasible in the locality or that BMP costs would exceed any benefit to be derived (February 11, 1993).*

(2) Federal Antidegradation Policy

The Federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Federal Antidegradation Policy, State Antidegradation Policy and implementation methods shall, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the State finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

(3) California Toxics Rule

Because California has not established a complete list of acceptable water quality objectives to the EPA, EPA Region IX (which includes California) has established numeric water quality criteria applicable to all receiving waters for certain toxic constituents in the form of the California Toxics Rule (“CTR”) (40 CFR 131.38).

CTR is a Federal Regulation issued by the EPA to provide water quality criteria for protection of surface waters of the State of California with designated beneficial uses. Although, CTR water quality criteria do not apply directly to discharges of storm water runoff, CTR criteria are applicable to the receiving water body and therefore should be used for comparison purposes based upon the probable hardness values of the receiving waters.

(4) The Porter-Cologne Act (California Water Code, Division 7)

California’s primary statute governing water quality and water pollution issues is the Porter-Cologne Water Quality Control Act of 1970. The Porter-Cologne Act grants the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs) broad powers to protect water quality, and it is the primary vehicle for implementation of California’s responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous wastes and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil/petroleum products. The SWRCB entered into a memorandum of agreement with the EPA, on September 22, 1989, to administer the NPDES Program governing discharges to waters of the U.S.

(5) California Antidegradation Policy/ Statement of Policy with Respect to Maintaining High Quality Waters in California

The California Antidegradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Waters in California (State Board Resolution No. 68-16), is incorporated into the Los Angeles RWQCB Basin Plan (Chapter 3.0). Unlike the Federal Antidegradation Policy, the State's Antidegradation Policy applies to all waters of the state, not just surface waters. The Policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource. Further, the Los Angeles RWQCB states that any activity which produces or may produce a waste or an increased volume or concentration of waste which is or is proposed to be discharged into a high quality water be required to meet waste discharge requirements that result in the best practicable treatment or control of the discharge necessary to assure that (1) a pollution or nuisance will not occur and (2) the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

Guidelines for implementation of the California Antidegradation Policy were developed and issued by the SWRCB in 1987. Based on the guidelines, the Federal Antidegradation Policy is triggered by a reduction in surface water quality. Ordinarily, new discharges or expansion of existing facilities would be the typical triggering mechanism. However, an increase in volume of discharge would not trigger application of the Federal Antidegradation Policy where the increased volume is offset by an increase in the level of treatment, so that there is no lowering of receiving water quality.

(6) Statewide Permits

The SWRCB issues statewide general NPDES permits for storm water discharge from construction sites (Water Quality Order 99-08-DWQ, NPDES No. CAS000002, General Construction Activity Storm Water Permit, reissued on April 17, 1997, updated April 2001). Under the General Construction Activity Storm Water Permit, all facilities discharging storm water associated with construction projects with a disturbed area of one or more acres (March 2003) are required either to obtain individual NPDES permits for storm water discharges, or to be covered by a statewide general permit by completing and filing a Notice of Intent with the SWRCB. The General Construction Activity Storm Water Permit addresses both storm water and non-storm water discharges from construction sites. Permits applicants must prepare a Storm Water Pollution Prevention Plan (SWPPP) and file a Notice of Intent (NOI) with the SWRCB to comply with the State Permit prior to issuance of a grading permit. The General Construction Activity Storm Water Permit relies upon BMPs to control pollutants.

(7) Los Angeles Regional Water Quality Control Board Requirements

(a) Basin Plan

The Basin Plan (adopted by the RWQCB on June 13, 1994) has been developed to preserve and enhance water quality within Los Angeles and Ventura Counties. The Basin Plan designates the beneficial uses of receiving waters and specifies both narrative and numerical water quality objectives for these receiving waters in its territory. However, since these standards are applicable to receiving waters, they cannot be a direct measure of storm water quality from the project site. Nonetheless, water quality criteria from the Basin Plan are useful benchmarks for comparison purposes.

The Basin Plan defines existing and potential beneficial uses for the receiving waters. Water quality objectives, as defined by the California Water Code Section 13050(h), are the “limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses or the prevention of nuisance within a specific area.” Beneficial uses are designated under CWA Section 303 in accordance with regulations.

(b) General Municipal Separate Storm Sewer System Permit

As previously described, the RWQCB is authorized to regulate MS4 discharges to surface waters under an NPDES permit. Specifically, MS4 are subject to the waste discharge requirements of the RWQCB Los Angeles Municipal Permit (General MS4 Permit) Order No. 01-182, NPDES Permit No. CAS004001 (adopted December 13, 2001 and amended September 14, 2006 by Order R4-2006-0074 and August 9, 2007 by Order R4-2007-0042). The Permittees under the MS4 Permit (the County of Los Angeles [Principal Permittee], and 84 incorporated cities), must ensure that storm water discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively addressed. The General MS4 Permit is intended to ensure that combinations of site planning, source control BMPs, and treatment control BMPs, are implemented in new developments to protect the quality of receiving waters through implementation of BMPs to the MEP. BMPs may include management practices, control and treatment techniques and systems, and site design planning to control the level of pollutants entering receiving waters.

One of the General MS4 Permit provisions is that the Permittees must prepare a Stormwater Quality Management Program (SQMP) specifying the BMPs that will be implemented to reduce the discharge of pollutants in storm water to the MEP. The various components of the SQMP, taken together, are expected to reduce pollutants in storm water and urban runoff to the MEP. The emphasis of the SQMP is pollution prevention through education, public outreach, planning, and implementation as source control BMPs first, and then structural and treatment control BMPs.

Finally, under the General MS4 Permit, Permittees are to publish guidelines for creating Standard Urban Storm Water Mitigation Plans (SUSMPs), as further described below.

(8) Los Angeles County Department of Public Works

The Los Angeles County Department of Public Works (LACDPW), Flood Control and Watershed Management Divisions also regulate storm water runoff and water quality as the Principal Permittee under the General MS4 Permit. Applicants for development projects have two major responsibilities under the General MS4 permit:

- The first responsibility is to submit and then implement a SUSMP that contains design features and BMPs appropriate and applicable to the project. The Los Angeles RWQCB approved Los Angeles County's SUSMP Ordinance on March 8, 2000, which requires new construction and development projects to implement BMPs pursuant to the General MS4 Permit.
- The second responsibility, applicable to all construction projects with disturbed areas greater than one acre, is to prepare a Storm Water Pollution Prevention Plan (SWPPP).

Under the guidance of the LACDPW County SUSMP Manual,³ projects that fall into any of the nine SUSMP development categories are required to incorporate appropriate SUSMP requirements into project plans as part of the development plan approval process for building and grading permits. Design standards for post-construction structural or treatment control BMPs were established in the General MS4 Permit and the County and City SUSMP ordinances, as explained in the County SUSMP Manual.

The General MS4 Permit and the County SUSMP Manual require that new developments employ the following measures to reduce post-development discharges of pollutants from storm water conveyance systems to the MEP: (1) reduce peak storm water runoff discharge rates; (2) conserve natural areas; (3) minimize storm water pollutants of concern; (4) protect slopes and channels; (5) provide storm drain stenciling and signage; (6) design standards for outdoor material storage and trash storage areas; (7) provide proof of ongoing BMP maintenance; and (8) design standards for structural or treatment control BMPs. In addition, project applicants are required to select source control and, in most cases, treatment control BMPs from the list approved by the RWQCB and included in the SUSMP. In combination, these treatment control BMPs must be sufficiently designed and constructed to treat, infiltrate, or filter storm water runoff to certain specified standards.

³ *Manual for the Standard Urban Storm Water the RWQCB LA Region, Los Angeles County Department of Public Works, September 2002.*

Design standards for post-construction structural or treatment control BMPs have been established in the SUSMP. The SUSMP numerical sizing criteria states that all post construction structural or treatment control BMPs shall be designed to mitigate storm water runoff through either infiltration or treatment, and control peak flow discharge to provide stream channel and over bank flood protection.

On November 14, 2008 the County adopted the Low Impact Development (LID) Standards Ordinance, which added Chapter 12.84 to the Los Angeles County Code and is part of the County's Green Building Program. LID reduces the impact from a proposed development by utilizing softscape and hardscape surface features to retain, detain, store, change the timing of, or filter storm water and urban runoff across a development site. This is achieved by the use of structural devices, engineered systems, vegetated natural designs, and education. Under the LID Standards Ordinance, developments consisting of five or more residential units are subject to storm water handling and treatment requirements. This Ordinance was effective on January 1, 2009. If a complete discretionary application for a Tentative or Vesting Tentative Map was filed with the Los Angeles County Department of Regional Planning (LADRP) before January 1, 2009 and the following activities have occurred, then the project is exempt from the LID Standards Ordinance:

- Completed one Subdivision Committee review;
- Submitted a Drainage Concept/SUSMP plan to LACDPW and received approval, or revised plan resubmitted to LACDPW;
- Submitted a Preliminary Soils and Geology Report to LACDPW and received approval, or revised report resubmitted to LACDPW;
- Submitted a Slope Density Exhibit to LADRP and no corrections were required in writing.

Based on the above criteria, LACDRP has determined that the proposed project is exempt from the LID Standards Ordinance. A copy of the correspondence received from LACDRP and related County policy for determining whether a project is exempt is provided in Appendix C-4, LID Standards Ordinance Exemption Determination.

b. Environmental Setting

(1) Hydrology

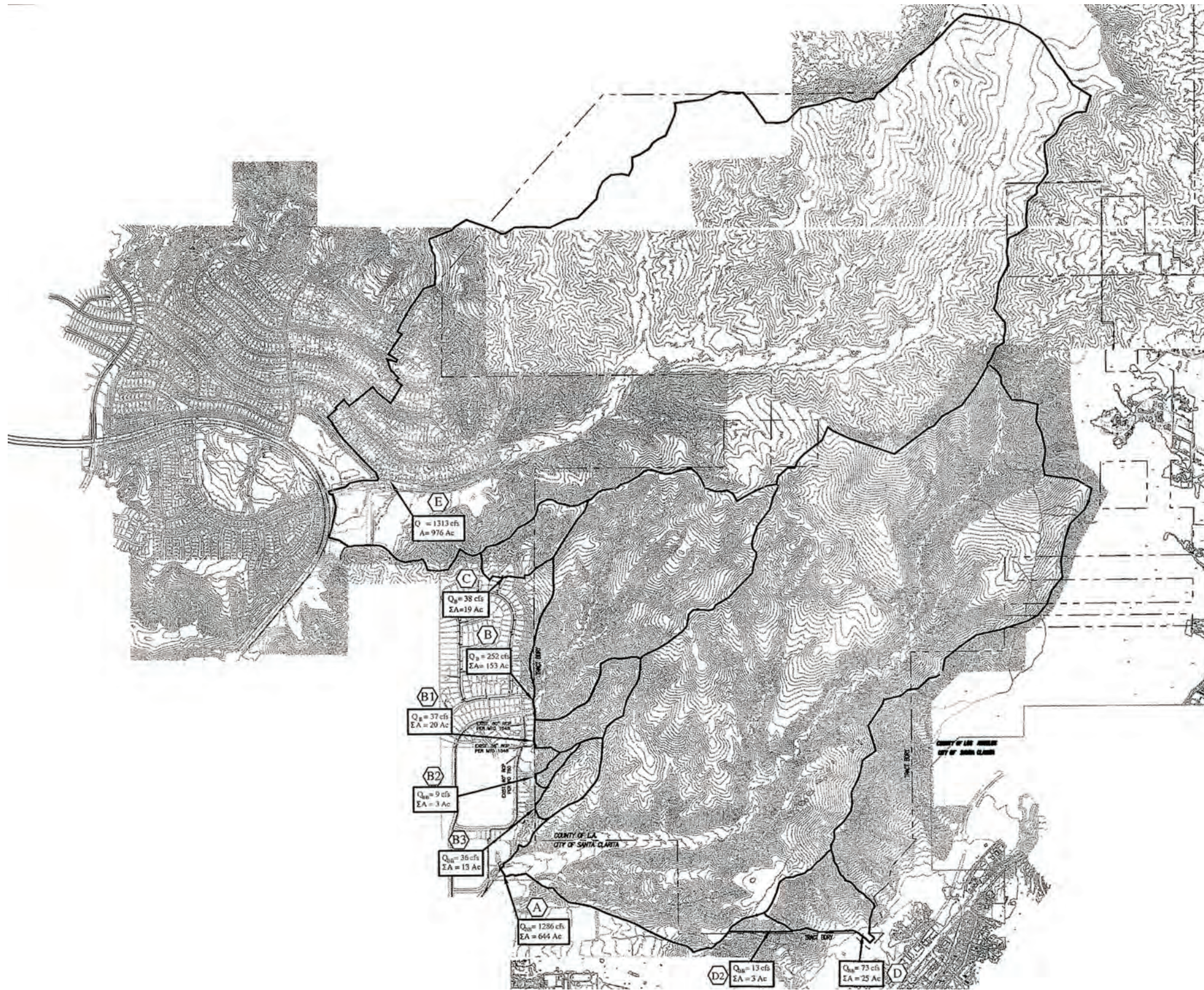
As described in the Basin Plan, on a regional scale, the project site is located within the Santa Clara River Watershed Management Area (SCRWMA), which includes the northwestern

portions of Los Angeles County and a significant portion of eastern Ventura County. The watershed drains an area of approximately 1,200 square miles with the Santa Clara River as its principal tributary. Flowing westerly across the watershed, the Santa Clara River is approximately 100 miles in length, originating in the northern slope of the San Gabriel Mountains and discharging into the Pacific Ocean between the cities of San Buenaventura and Oxnard.

Locally, the project site and the surrounding area has four “blue-line” streams, as identified on the United States Geologic Survey, Mint Canyon Quadrangle (7.5 Minute Series). Two are larger named streams and two are unnamed. North of the proposed development area, Plum Canyon is a named “blue-line” stream that runs east to west with headwaters located approximately 1.1 miles northeast of the proposed developed portion of the site at the southwestern end of Cruzan Mesa. Plum Canyon runs for a total of approximately 3.8 miles before joining Bouquet Canyon. The stream leaves the project site at the western side of the northern portion of the site. Continuing for approximately 0.5 mile off-site, the stream flows into two storm drain systems constructed as components of Tracts 46018 and 31803, which discharge into a flood control channel that extends for 0.26 mile and then enters Bouquet Canyon. The second named stream is Mint Canyon, which runs off-site from northeast to southwest and has headwaters located approximately 6.2 miles northeast of the project site. Mint Canyon is off-site, but runs past the project’s southeast boundary. Within the proposed development area, the first unnamed “blue-line” stream is located on the western edge of the project site and extends for approximately 0.7 mile. It leaves the site at the southwestern portion of the City of Santa Clarita/project site border and terminates just north of Bakerton Avenue into an existing debris basin. Finally, the second unnamed “blue-line” stream runs northeast to southwest through the site and parallel to and west of Mint Canyon. The stream’s headwaters are located approximately 0.2 mile south of the dirt section of Mint Canyon Road located on-site. The stream continues for approximately 1.7 miles on-site, then leaves the project site at the southern portion of the City of Santa Clarita/project site border (approximately 0.3 mile south of the unnamed “blue-line” stream above), flows discharge into a second existing debris basin, which is adjacent to a flood control channel. This flood control channel flows east for 1.29 miles and ultimately discharges to the Santa Clara River.

According to the Hydrology Study, the project site contains five watersheds. Figure 4.B-1, Existing Watershed and Drainage Areas Map, on page 4.B-9 illustrates these drainage areas in relation to the project boundary. The calculation of flow rates for the existing drainage areas are based on a 50-year frequency storm. Each of the five drainage areas is described below. Table 4.B-1, Existing Drainage Area Conditions, on page 4.B-10 Table 4.B-1 summarizes the existing flow and debris conditions.

Watershed A drains an area of approximately 644 acres. Runoff from the watershed drains to the second unnamed blue-line stream, described above. Waters then enter the flood control channel within the City of Santa Clarita, located at the southwest corner of the site, and



HYDROLOGY CRITERIA

RAINFALL FREQUENCY: 25 YR DEVELOPED,
50 YR UNDEVELOPED & DEVELOPED SUMP

DPA : 8

SOIL TYPE : 097 & 099

BULKING FACTOR : 1.36 (DPA -8 FOR 64 Ac. OR UNDER,
FOR OVER 64 Ac. SEE LACDPW Fig. P-5)

DEBRIS PRODUCTION RATE : 55 Cy/Ac (DPA-9 & DPA-8 FOR 64 Ac. OR UNDER,
FOR OVER 64 Ac. SEE ATTACHED LACDPW Fig. P-2)

TIME OF CONCENTRATION 5 MINUTE OR NOTED ON PLAN

ISOHYETS: 5.6" TO 5.8"

% IMP:

UNDEVELOPED 01%

DEVELOPED 42%

STREET 92%

LEGEND

- A - AREA (ACRES)
- Q_b - BURNED FLOW QUANTITIES (cfs)
- Q_{bb} - BURNED & BULKED FLOW QUANTITIES (cfs)
- SD - EXISTING STORM DRAIN
- (A) - DRAINAGE WATERSHED
- - - - - PHASE LINE AND TRACT BOUNDARY
- EXISTING DRAINAGE BOUNDARY

WATERSHED	RUNOFF (Q_{bb}) (cfs)
(A)	1286
(B)	252
(B1)	37
(B2)	9
(B3)	36
(C)	38
(D)	73
(D2)	13
(E)	1313



Figure 4.B-1
Existing Watershed and Drainage Areas Map

Table 4.B-1

Existing Drainage Area Conditions

Drainage Area	Area (acre)	Cleaned Q_b^a (cfs)	Bulk Q_{bb}^b (cfs)	Debris Volume (cy) ^c
A	644	--	1,286	15,456
B	153	252	--	--
B1	20	37	--	--
B2	3	--	9	138
B3	13	--	36	693
C	19	38	--	--
D	25	--	73	1,348
D2	3	--	13	176
E	976	1,313	--	--

^a Q_b = Mean Burned Flow Rate (with desilting basin);

^b Q_{bb} = Mean Burned and Bulked Flow Rate (without desilting basin);

^c cy = cubic yards.

Source: Sikand Engineering, 2009.

ultimately discharges to the Santa Clara River. The burned and bulked flow rate for the watershed is 1,286 cubic feet per second (cfs) and the volume of debris discharged is 15,456 cubic yards.

- Watershed B, and its sub-watersheds B1, B2, and B3, have a combined drainage area of 189 acres. Runoff from the watershed is collected into two existing desilting basins located inside the project site (maintained by the City of Santa Clarita per an easement to the City for flood control purposes) and two bulk flow inlets located off site behind existing homes. Both basins are located east of Bakerton Avenue, one is southeast of Foxlane Drive and the other is between Foxlane Drive and Bookham Drive. The basins are connected into an off-site storm drain system that consists of a 60-inch reinforced concrete pipe (RCP) and a 36-inch RCP that are designed for 418 cfs and 72 cfs, respectively. This infrastructure is in place for the development of nearby Tract 50536. These desilting basins clean part of the discharge from this watershed, thus, the cleaned burned and bulked flow rate for the watershed is 334 cfs and the volume of debris discharged is 831 cubic yards.
- Watershed C drains an area of approximately 19 acres. Runoff from the watershed drains into a desilting basin located at the northwest corner of the site and discharges into the storm drain located in Tract 46626 within the City of Santa Clarita. The watershed has a burned flow rate of 38 cfs and no debris volume discharge due to the existing desilting basin in place.

- Watershed D and sub-watershed D2 drain a combined area of 28 acres. Runoff from a natural canyon discharges via sheet flow into developed areas on the northwest side of Sierra Highway. Neither Los Angeles County nor City of Santa Clarita have storm drain systems within Sierra Highway to contain the runoff, thus, these waters drain as sheet flow onto the highway. These watersheds have a burned and bulked flow rate of 86 cfs and a debris volume discharge of 1,524 cubic yards.
- Watershed E drains an area of 976 acres and comprises portions of Tract Map No. 46018 to the west. Runoff from this area discharges southwesterly into a natural canyon where it is conveyed via an unlined ditch to a storm drain constructed for the development of portions of Tract Map No. 46018. This storm drain is located within Farrell Road and Whites Canyon Road. Several desilting basins associated with this storm drain system have been partially constructed. From this storm drain system waters then enter a flood control channel within the City of Santa Clarita. The downstream design flow rate is 1,313 cfs at the intersection of Farrell Road and Gaines Way. . There is no debris volume discharge due to the temporary desilting basins in place.

(2) Flood Plains

The southwest portion of Watershed A is within Zone A as designated by the Federal Emergency Management Agency (FEMA) on the Federal Insurance Rate Map (FIRM) panel No. 0607290365C.⁴ Zone A is defined as an area subject to 100-year floods with an undetermined base flood elevation. Similarly, a small portion of Watershed D is situated within a designated Zone AO. Zone AO is defined as an area subject to 100-year shallow flooding (usually sheet flow on sloping terrain) with average depth of 1 to 3 feet with an undetermined base flood elevation. The AO Flood Zone, with a 2-foot depth of runoff, affects Sierra Highway and areas adjacent properties southeast of the project site. These areas are subject to periodic flooding primarily as a result of large amounts of debris volume from Mint Canyon that clogs the bridge entrance near Sierra Highway and Scherzinger Lane. Two existing storm drain outlets are located north of the bridge. Watershed D is located within the County Flood Plain Boundary. The County Flood Plain Boundary is used to designate areas subject to 50-year floods, as shown on the recorded County Floodway maps. The 50-year flow rates were recently recalculated and adjusted by the County of Los Angeles, Water Resources Division, Hydrologic Development Section, as described under Methodology, below. As a result, the Calculated Existing County Flood Plain Boundary is slightly different than the Existing County Flood Plain Boundary shown on the Los Angeles County Flood Control District (LACFCD) Floodway Map 366-ML9. The Calculated Existing County Flood Plain Boundary, Recorded County Floodway Boundary, and

⁴ FEMA FIRM Panel No. 0607290365C, September 29, 1989.

FEMA Flood Zone Boundary are shown on Figure 4.B-2, Existing County and FEMA Flood Plain Designations, on page 4.B-13.

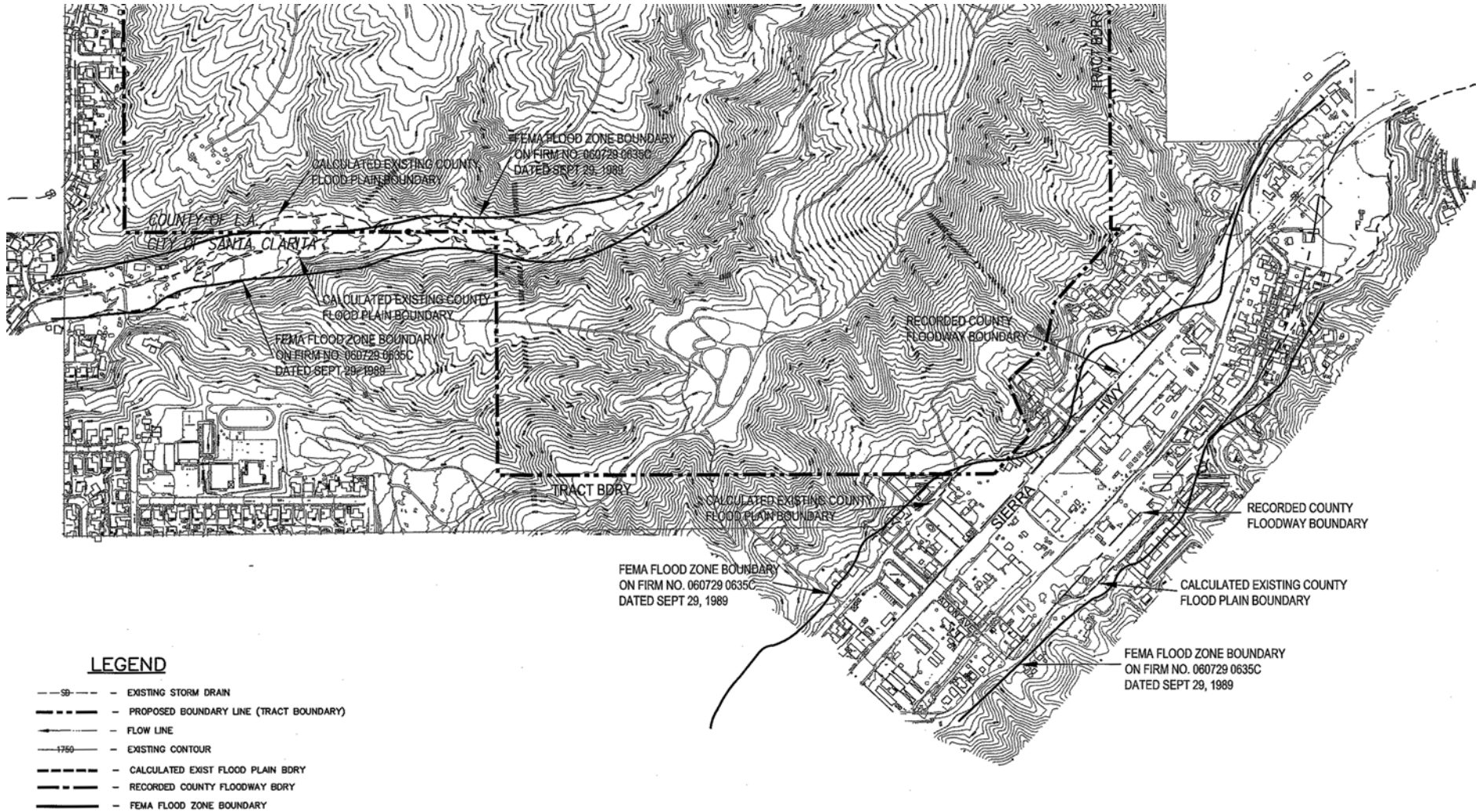
(3) Water Quality

Surface water quality can be affected by a number of variables, which include land use, hydrology, meteorology, geology, and soils. Land uses may affect surface water quality based on their associated activities. As an example, office uses typically generate small amounts of exterior pollutants, while surface parking lots and streets accumulate deposits of oil, gasoline, and other pollutants. These pollutants in turn are often washed away by storm water runoff. Meteorology affects surface water quality through the quantity and intensity of storm events, which determine the extent to which pollutants are washed away by runoff. Geology and soils affect surface water quality by influencing infiltration, runoff velocity, and runoff volume. The more infiltration of runoff into the soil, the slower the runoff velocity, the lower the volume of runoff, and the less potential it has to carry sediments and pollutants.

The project site is regionally located within the eastern extent of the SCRWMA with the Santa Clara River as the major tributary in that watershed. The SCRWMA covers large portions of natural/open space areas in both Los Angeles and Ventura Counties, large tracks of agricultural land in Ventura County, and several urban areas. Agricultural runoff has historically been the predominate source of pollutants discharged to the Santa Clara and its tributaries, where loads of phosphates, nitrogen/nitrites, and salts were the major pollutants. However, urban growth, especially in northern Los Angeles County, has been rapidly transitioning undeveloped land and agricultural tracks to residential housing communities and commercial centers. Primary sources of storm water pollution in urban areas typically include automobiles and activities associated with automobile use, housekeeping and landscaping practices, industrial activities, construction, non-storm water connections to the drainage system, and accidental spills. Common pollutant sources and the pollutants that are generated from these sources are listed in Table 4.B-2, Common Sources of Pollutants in Urban Runoff, on page 4.B-14. Other threats to the watershed include a number of smaller and older communities within the watershed that are unsewered.

The Santa Clara River is the largest river system in southern California that remains in a relatively natural state.⁵ Extensive patches of riparian habitat are present along the river and its

⁵ *California Regional Water Quality Control Board—Los Angeles Region, State of the Watershed – Report on Surface Water Quality, The Santa Clara Watershed, November 2006.*



LEGEND

- 30 --- EXISTING STORM DRAIN
- --- PROPOSED BOUNDARY LINE (TRACT BOUNDARY)
- --- FLOW LINE
- 1750 --- EXISTING CONTOUR
- --- CALCULATED EXIST FLOOD PLAIN BDRY
- --- RECORDED COUNTY FLOODWAY BDRY
- --- FEMA FLOOD ZONE BOUNDARY



Not to scale

Figure 4.B-2
Existing County and FEMA
Flood Plain Designations

Table 4.B-2

Common Sources of Pollutants in Urban Runoff

Pollutant	Automobile/ Atmospheric Deposit	Urban Housekeeping/ Landscaping/ Practices	Industrial Activities	Construction Activities	Non-Storm Water Connections	Accidental Spills
Sediments	X	X	X	X		
Nutrients	X	X	X	X	X	X
Bacteria and Viruses		X		X	X	X
Oxygen-Demanding Substances		X	X	X	X	X
Oil and Grease	X	X	X	X	X	X
Anti-Freeze	X	X		X	X	X
Hydraulic Fluids	X	X	X	X	X	X
Cleaners and Solvents	X	X		X	X	X
Heavy Metals	X	X	X	X	X	X
Chlorides			X	X		X
Trash and Debris		X	X	X		X
Paint		X		X	X	X
Wood Preservatives		X		X	X	X
Fuels	X		X	X	X	X
PCBs	X				X	X
Pesticides	X	X	X	X	X	X
Herbicides	X		X	X	X	X
Floatables ^a		X	X	X		X

^a Floatables in storm water are pollutants that contain significant amounts of heavy metals, pesticides, and bacteria.

Sources: PCR Services Corporation and Kimley-Horn and Associates, Inc., December 2003, revised February 2007.

tributaries, which includes Sespe and Piru Creeks. Both creeks support wild trout and steelhead and the Santa Clara is an important wildlife corridor. In addition, of the 20 beneficial uses the Basin plan defines for water bodies, the Santa Clara River has been designated with 13 uses due to its high quality waters and associated habitat.⁶ However, this natural river system is under strain to absorb urban-related waters from over 491 permitted dischargers. Due to the level of pollutants discharged to the Santa Clara River it is a 303(d) listed water body, with portions of the river impaired due to elevated levels of chloride, ammonia, nitrates/nitrites, coliform, and total dissolved solids (TDS).

⁶ Los Angeles Regional Water Quality Control Board, *Water Quality Control Plan—Los Angeles Region (Basin Plan)*, June 1994.

As indicated in the Basin Plan, the project site is located along Reach 7 of the Santa Clara River between Lang Gauging Station (to the east of the project, downstream of Agua Dulce Canyon Creek) and Bouquet Canyon Road Bridge (located west of the project). Under the Basin Plan, beneficial uses for Reach 7 include Municipal and Domestic Supply; Industrial Supply; Industrial Process Supply; Agriculture; Groundwater; Contact Water Recreation; Non-Contact Water Recreation; Warm Freshwater Habitat; Wildlife Habitat; Rare, Threatened or Endangered Species; and Wetland Habitat.

The reach of the Santa Clara River that the project discharges into, contains relatively little water when compared to other reaches of the river during non-flood conditions. This reach has intermittent flows mostly during the wet season (November through April), and only during and immediately after storm events of sufficient size. Therefore, under dry-weather (i.e., non-storm flow, excluding storm events) conditions, this reach does not contribute flow to and therefore is not expected to impact downstream reaches of the river.

The current land use within the project site watersheds is primarily undeveloped. Runoff from the site is drained through several natural channels and a man-made storm channel located offsite and to the west of the site, including Watershed E, which includes 84 acres of off-site residential and park development. Ultimately, the majority of the runoff from the site discharges to the Santa Clara River, Reach 7.

(a) Existing Surface Water Quality

Pollutants of concern for the project site watersheds were analyzed quantitatively for nitrate, nitrite and chloride constituents, and qualitatively for other relevant types of pollutants based on the existing, undeveloped site condition.

Table 4.B-3, Estimated Pollutant Concentrations and Loads Existing Conditions, on page 4.B-16 provides a summary of estimated pollutant concentrations and loads for nitrite-N, nitrate-N, and chloride. The concentrations and loads presented in Table 4.B-3 are levels typically associated with vacant/open space uses in the Los Angeles County area. A comparison of expected nitrite, nitrate, and chloride levels with the Basin Plan objectives (presented in Appendix C-3, Table 4 in this EIR) indicates that concentrations of these pollutants are well below the regulatory limits.

Under existing conditions, other pollutants of concern are fecal coliform bacteria and sediment as qualitatively assessed below.

- **Fecal Coliform Bacteria.** Coliform bacteria levels associated with vacant/open space uses in the Los Angeles County area are well above regulatory standards (Basin

Table 4.B-3

Estimated Pollutant Concentrations and Loads Existing Conditions

Watershed	Total Area		Runoff Volume Ac-ft/yr	Modeled Constituents					
	Ac	sq. ft.		Nitrite-N		Nitrate-N		Chloride	
			Mg/L	Lbs/yr	Mg/L	lbs/yr	Mg/L	lbs/yr	
A	644	28,052,421	98	0.05	13	1.05	280	6.6	1,758
B	189	8,232,776	29	0.05	4	1.05	82	6.6	516
C	19	827,634	3	0.05	0.39	1.05	8	6.6	52
D	28	1,219,670	4	0.05	0.6	1.05	12.2	6.6	76
E	976	42,514,228	180	0.06	28.5	1.00	491	6.36	3,112
Total	1,856	80,846,729	314	0.26	46.7	5.2	873.2	32.76	5,513.8

Note: Totals may not equal the sum of the individual watershed values due to rounding.

Source: Skyline Ranch Water Quality Technical Report, Revised May 2009.

Plan). Background bacteria levels are usually high in vacant/open space areas of Southern California due to non-domestic animal wastes, particularly waterfowl. The bacteria concentrations, although reflective of natural baseline conditions, may adversely affect the potential and existing designated beneficial uses of the river, particularly water contact recreation.

- **Sediment.** The current natural sediment load from the watersheds in the project area may be high. However, due to vacant uses of the area, the quality of sediment in the watersheds is expected to be high.
- **Dissolved Oxygen.** The current concentration of dissolved oxygen in discharges from project site watersheds are expected to be well above the Basin Plan standards, as the project site is generally vacant.
- **Trace Metals.** Because the primary sources of metal pollution in storm water is typically from commercial, residential, roads and parking lot areas and the project site is undeveloped, elevated metal concentrations in runoff from the project site are not expected.
- **Pesticides.** The vacant project site is currently in a natural condition and pesticides have not been used to maintain any areas within the watersheds under investigation.
- **Bioaccumulation.** There should be no cause for bioaccumulation from discharges from the project site watersheds, as the project site is generally vacant.
- **Trash and Debris.** The presence of trash and debris (other than natural sediments) is minimal in runoff from project site watersheds, as the project site is generally vacant.

- **Hydrocarbons.** The current concentration of hydrocarbons in the runoff is likely to be relatively small to none, as the project site is generally vacant.
- **Sulfates, Boron (Salts).** Since these constituents are most often associated with marine soils and coastal environments, they are not likely to appear in high concentrations in the project site runoff.

3. PROJECT IMPACTS

a. Thresholds of Significance

Appendix G of the *State CEQA Guidelines* provides thresholds for determining significant environmental impacts. A project may be deemed to have a significant impact on hydrology or water quality if the project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and
- Substantially degrade water quality.

b. Methodology**(1) Hydrology**

The hydrology analysis is based on the LACDPW's *Hydrology/Sedimentation Manual*. Manual guidelines require that the site analyses be designed for a 50-year storm. Using 50-year rainfall data (50-year Isohyets), runoff coefficients, and imperviousness factors, both the existing and proposed site conditions were modeled and calculated. The Modified Rational Method Hydrology (LAR04) method was utilized to calculate runoff flow rates (Q). Runoff from natural areas of the site are measured using a Debris Production Rates chart that factors in a "Burned and Bulked" rate to address the sediment and natural debris that is discharged from these areas. Other factors in the analyses include flow duration, slope of the flow path, area, and soil type.

(2) Flood Plains

The FEMA Flood Zone analysis is based on FEMA's FIRM designation, as previously described. The County Flood Plain analysis was revised using hydrologic data for Mint Canyon, based on changes that were implemented by the County of Los Angeles, Water Resources Division, Hydrologic Development Section due to revisions to the design data of rainfall and percent (34 percent) burned areas, advances in technology, and changes to topography. The Army Corps of Engineers program "HEC/RAS" was used for Flood Plain computations. This method is required by FEMA and accepted by LACDPW. Capital storm was modeled from downstream of the existing bridge at Scherzinger Lane to upstream of another bridge at Adon Avenue.

(3) Water Quality**(a) Construction**

Construction impacts were qualitatively assessed by identifying potential effects of construction activities (including erosion and other pollutants of concern) on water quality.

(b) Operation (Post-Construction)

The water quality evaluation methods used to assess impacts during the operation (or developed condition) of the site and off-site areas (associated with grading and infrastructure improvements) include:

- Estimating existing and future concentrations and loads of selected pollutants for the project site ;

- Establishing Total Maximum Daily Loads (TMDLs) of selected pollutants for the project site and affected watershed, based on the above and regulatory standards;
- Identifying the project's contribution of certain pollutants within the watershed;
- Implementing TMDLs by reallocating the total allowable pollution among the different pollutant sources and watershed dischargers.

In accordance with existing evaluation techniques appropriate for this study's goals and objectives as well as available data and information, a Pollutant Loading Model based on rainfall/runoff relationships and estimated concentrations in storm water runoff from typical land uses was used to approximate project impacts. The analysis provided in this water quality assessment examines two scenarios: 1) existing conditions assuming the entire project area is open space/vacant, and 2) developed conditions without BMPs. Impacts on water quality are then identified based on the change from existing to developed conditions without BMPs (including the proposed storm drain system).

Pollutants of concern to evaluate project impacts were selected based on their current and/or historic presence in the receiving waters, regulatory requirements as well as the type of constituents which maybe expected from the development and potential impacts on the receiving water beneficial uses. Pollutants of concern used for the water quality modeling presented in this study were chosen based on the above as well as the Los Angeles RWQCB's specific request to investigate impacts associated with the CWA 303 (d) pollutant listings for the immediate reaches of the Santa Clara River.⁷ The constituents chosen for the water quality modeling analysis include:

- Nitrite;
- Nitrate;
- Chloride.

The analytical model used to estimate concentrations and loads of the pollutants of concern listed above utilizes Event Mean Concentrations (EMCs) which are statistical measures of the concentrations of the modeled constituents based on Los Angeles County storm water monitoring data as model input. Data for these parameters have been collected over a range of storm events using flow composite sampling methods at similar land uses.

⁷ Elizabeth Erickson, Associated Geologist, TMDL Unit, Los Angeles Regional Water Quality Control Board, letter dated December 30, 2004 and included in Appendix A of this EIR.

Other typical pollutants of concern associated with this type of project development as well as other Los Angeles RWQCB concerns⁸ were chosen for qualitative evaluations because they are not easily modeled due to limited or non-existent monitoring data, difficulty in measuring pollutant concentrations, or due to pollutant concentrations that are typically below reporting limits. These constituents include:

- Fecal Coliform Bacteria;
- Sediment;
- Dissolved Oxygen;
- Trace Metals;
- Pesticides;
- Bioaccumulation;
- Trash and Debris;
- Hydrocarbons;
- Sulfate and Boron (salts).

A description of the Pollutant Loading Model components and pollutants of concern is provided in Appendix C-3, Water Quality Technical Report.

c. Impact Analysis

(1) Hydrology

The proposed project includes a residential development that would consist of 1,313 lots of which 1,260 would be residential lots, 1 school, 10 parks (public and private), 17 debris basin lots, 4 water tank/booster pump station lots, and 25 open space lots. Construction of the development is proposed to include several storm drain systems, 14 on-site and 2 off-site desilting basins, 1 off-site and 1 on-site rebuilt desilting basin, and approved Standard Urban Storm Water Mitigation Plan (SUSMP) devices.

For the proposed project, a storm drain system would be installed to carry runoff from the developed and undeveloped portions of the project to local regional off-site storm drain facilities. The storm drain system includes a 78-inch storm drain and concrete-lined trapezoid channel that would extend approximately 3,300 linear feet to the southwest and connect with an existing County Department of Public Works flood control channel (Shaffer Channel PD 704). Approximately 1,300 linear feet would extend offsite and approximately 800 feet would extend into private property and require an easement from the property owner. The proposed on and

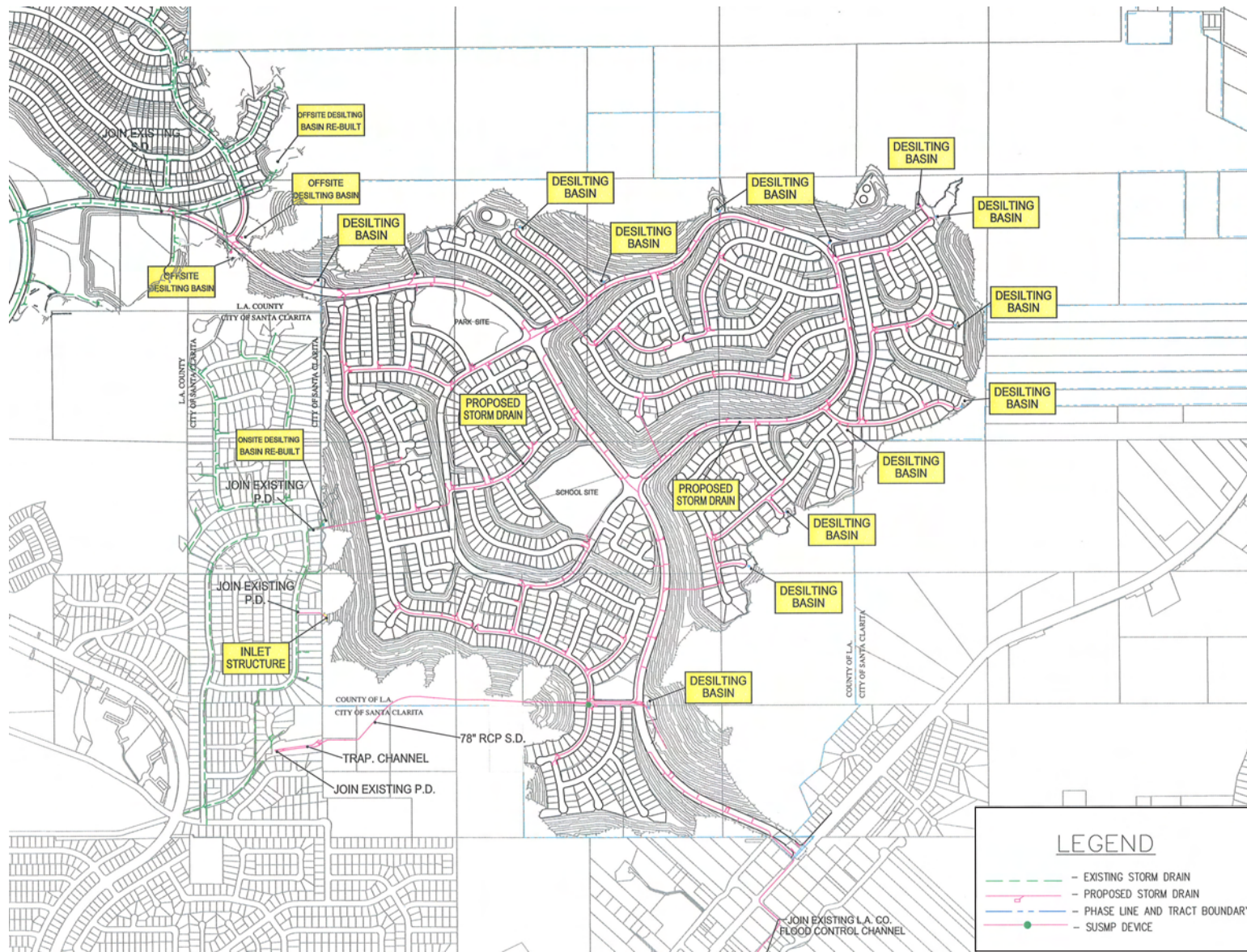
⁸ *Ibid.*

off-site storm drain system includes a series of catch basins, inlets, and pipelines within the roads and parks, as shown in Figure 4.B-3, Proposed Storm Drain and Desilting Basin Map, on page 4.B-22. Energy dissipaters, such as rip rap, would be placed at the discharge points of each storm drain outlet. At this stage of the development process, the exact sizes of the storm drain pipelines are not known. Final sizing of the storm drains would take place during the engineering stage by a licensed engineer who would implement both hydraulic and structural computations to carry the minimum design flow rates.

Within and adjacent to the project site, a total of 14 onsite desilting basins, 2 offsite desilting basins, 1 onsite rebuilt desilting basin, and 1 offsite rebuilt desilting basin would be placed to reduce the downstream flow rates and debris volumes associated with each of the watersheds. Figure 4.B-3 illustrates the general locations of the desilting basins. All of the desilting basins would be located on the upstream end of the watersheds. The Los Angeles County Flood Control District would be responsible for inspection of the basins after each major storm, in addition to their maintenance, and removal of debris.

Implementation of the proposed project would result in changes to the five watersheds discussed under Existing Conditions. It is important to note that for Watersheds A, B2, B3, D, and D2 the comparison is between existing conditions for Burned and Bulked flow rates (Bulk Q_{bb}) and proposed conditions Burned and Bulked, and Developed flow rates (Combined Q_{bb+d}). Watersheds B, B1, C and E compare the existing Cleaned Burned flow rate (Cleaned Q_b) versus the proposed Cleaned Burned and Developed flow rates (Cleaned Q_{b+d}). The difference in comparison for these watersheds is due to the existing desilting basins present in Watersheds B, B1, C and E, which currently generate a cleaned flow from these watersheds. Modifications to the five watersheds affected by the project are described below and shown in Table 4.B-4, Proposed Drainage Conditions, on page 4.B-23 and Figure 4.B-4, Proposed Watershed and Drainage Area Map, on page 4.B-24.

- Watershed A would decrease in size from 644 to 577 acres, a 67 acre decrease after development. This watershed would have nine desilting basins that would outlet to the proposed 78-inch storm drain system and then join Shaffer Channel PD 704. Due to the implementation of the debris basins and the storm drain system, the flow rate would decrease from 1,286 cfs to 985 cfs, a 301 cfs decrease. In addition, the debris volume would be reduced from 15,456 cubic yards to 4,030 cubic yards, an 11,426 cubic yard decrease in volume.
- Watersheds B, B1, B2, and B3 would increase in size from 189 to 259 acres for an increase of 70 acres. The project would place three desilting basins on the upstream portion of the watershed and the two onsite existing downstream basins would remain. The proposed improvements also include downsizing and rebuilding one onsite existing desilting basin. The flow rate within the storm drain system would be



Source: Sikand Engineering, 2009

Figure 4.B-3
Proposed Storm Drain
and Desilting Basin Map

Table 4.B-4

Proposed Drainage Conditions

Drainage Area	Area (acre)	Cleaned Q_{b+d}^a (cfs)	Combined Q_{bb+d}^b (cfs)	Debris Volume (cy)
A	577	--	985	4,030
B	246	410	--	--
B1	5	13	--	--
B2	4	--	12	39
B3	4	--	13	72
C	7	18	--	--
D	26	--	61	600
D2	1	--	4	61
E	988	1,310	--	--

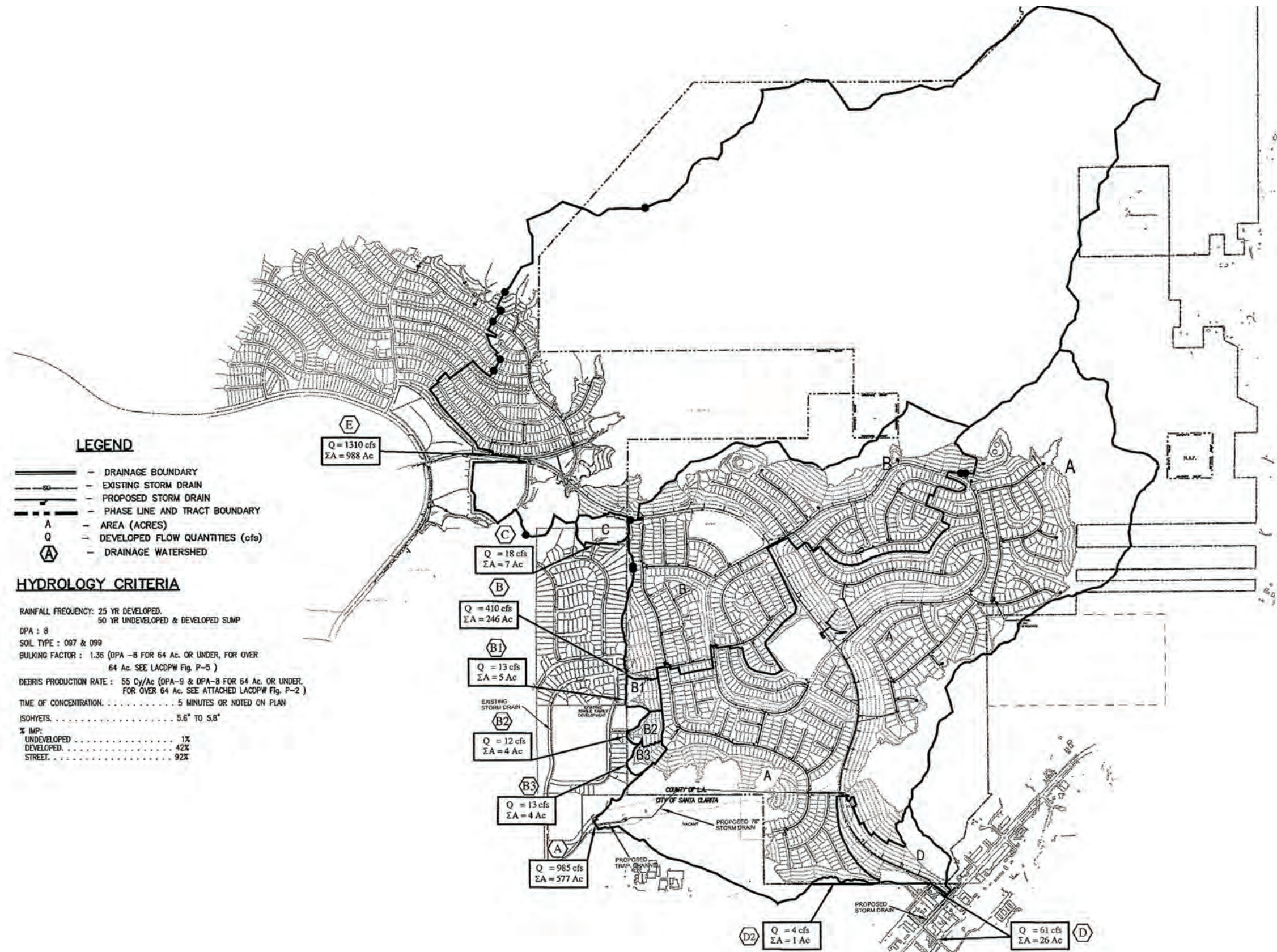
^a Q_{b+d} = Burned and Developed Flow Rate.

^b Q_{bb+d} = Burned & Bulked, and Developed Flow Rate.

Source: Sikand Engineering Associates, 2009.

increased from 334 to 448 cfs, an increase of 114 cfs. However, the design flow rates on the existing storm drains (MTD 1548 and PD 780) would not increase due to the debulking of the upstream development. With the implementation of the upstream debris basin and the urbanization of the site, the debris volume would be reduced from 831 cubic yards to 111 cubic yards once developed, a 720 decrease in volume.

- Watershed C reduces from 19 to 14 acres. Due to a 12 acre local diversion, the flow rate would decrease from 38 to 18 cfs, a 20 cfs decrease. After development, the effectiveness of the existing desilting basin would eliminate debris from the watershed.
- Watersheds D and D2's drainage area would decrease from 28 to 27 acres due to topographic changes and urbanization of the site. The larger watershed would result in a decreased flow rate from 86 cfs to 65 cfs, a 21 cfs decrease. Approximately half of the runoff from this area would discharge through reinforced concrete pipe (RCP) storm drains underneath Sierra Highway south to Adon Avenue into an existing bridge and unlined earthen L. A. County Flood Control channel. The remaining runoff would continue to flow through the proposed culvert and discharge as sheet flow on to Sierra Highway. The development would reduce debris production from 1,524 to 661 cubic yards; a reduction of 863 cubic yards.
- Watershed E increases from 976 acres to 988 acres. The previously approved storm drain system for Tract No. 46018, to the west, would be modified to accommodate runoff from the extension of Whites Canyon Road and the proposed project. As



LEGEND

- DRAINAGE BOUNDARY
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- PHASE LINE AND TRACT BOUNDARY
- AREA (ACRES)
- DEVELOPED FLOW QUANTITIES (cfs)
- DRAINAGE WATERSHED

HYDROLOGY CRITERIA

RAINFALL FREQUENCY: 25 YR DEVELOPED,
50 YR UNDEVELOPED & DEVELOPED SUMP

DPA : 8

SOIL TYPE : 097 & 099

BULKING FACTOR : 1.36 (DPA -8 FOR 64 Ac. OR UNDER, FOR OVER
64 Ac. SEE LACDPW Fig. P-5)

DEBRIS PRODUCTION RATE : 55 Cy/Ac (DPA-9 & DPA-8 FOR 64 Ac. OR UNDER,
FOR OVER 64 Ac. SEE ATTACHED LACDPW Fig. P-2)

TIME OF CONCENTRATION 5 MINUTES OR NOTED ON PLAN

ISOHYETS 5.6" TO 5.8"

% IMP:

- UNDEVELOPED 1%
- DEVELOPED 42%
- STREET 92%

WATERSHED	RUNOFF (Q _{bb}) (cfs)
(A)	985
(B)	410
(B1)	13
(B2)	12
(B3)	13
(C)	18
(D)	61
(D2)	4
(E)	1310



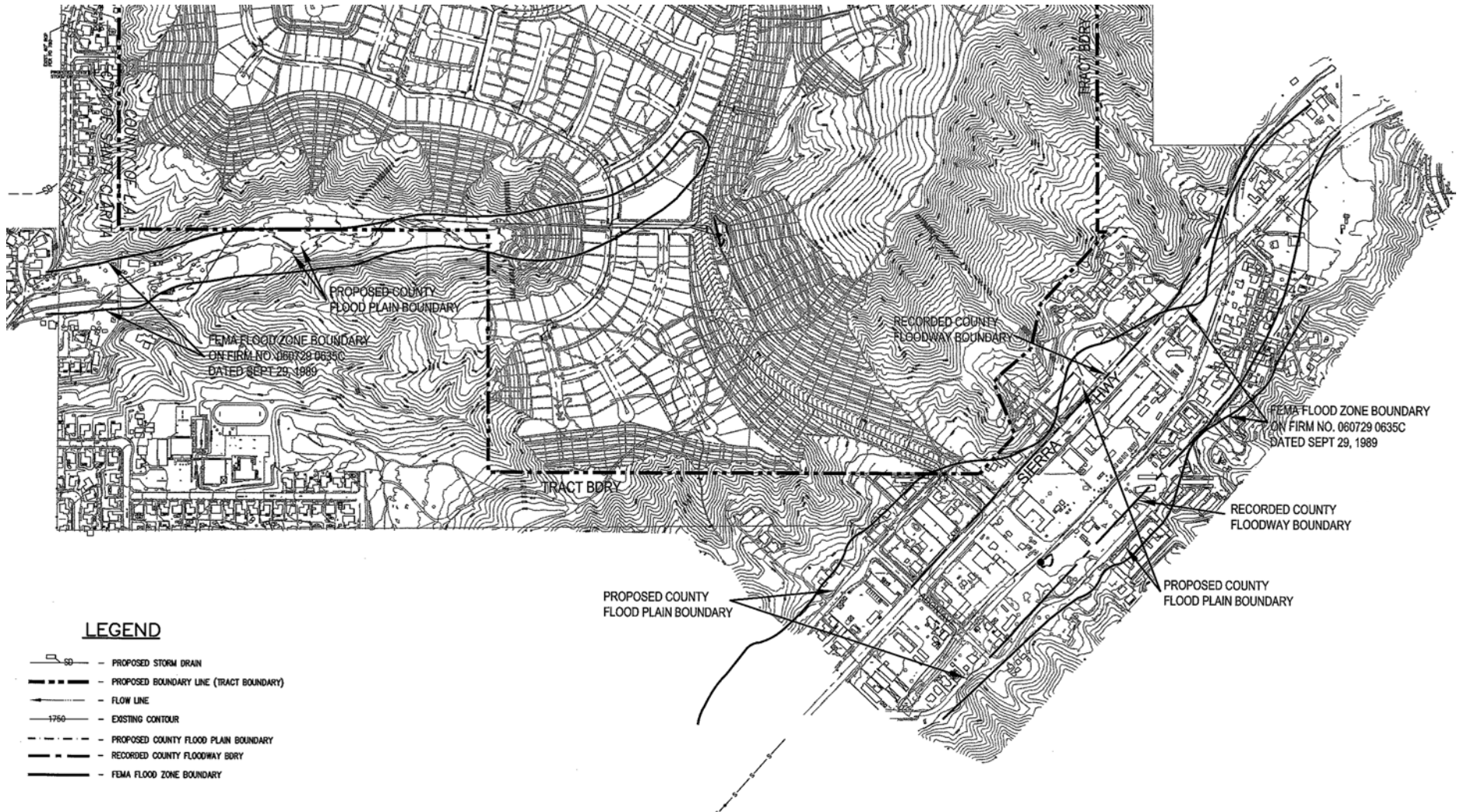
Figure 4.B-4
Proposed Watershed and
Drainage Area Map

shown on Figure 4.B-3, the proposed storm drain system would connect to the approved storm drain system. The three off-site desilting basins would eliminate debris generated at the project site from the watershed. The approved storm drain (PD 2583) would not increase in flow. The larger watershed would result in a 3 cfs decrease in flow, from 1,313 cfs to 1,310 cfs.

As described above, flow rates for on-site watersheds would decrease overall by 231 cfs and would discharge into approved and proposed storm drain systems, designed to accommodate this runoff volume. Debris volumes for Watersheds A through E would be reduced or completely eliminated from the drainage system. Installation of the debris basins, both upstream and downstream, in conjunction with the urbanization of the site would remove approximately 13,009 cubic yards of debris from the site's entire watershed. On-site drainage facilities would be designed and constructed in accordance with City and County standards and would be subject to Los Angeles County Flood Control Districts' (LACFCD), Los Angeles County Department of Public Works' (LACDPW), and City of Santa Clarita Public Works Department review and approval. As a result, construction of the proposed project would not have a significant impact on flow rates or debris production within Watersheds A through E.

(2) Flood Plains

As previously indicated, discharge of runoff from Watershed D currently occurs as sheet flow to Sierra Highway and adjacent properties southeast of the site near the project entrance, with a 2-foot depth of runoff in an area that is designated as a FEMA AO Flood Zone, subject to 100-year shallow flooding of 1 to 3 feet in depth. Construction of Skyline Ranch Road at Sierra Highway has the potential to increase flooding upstream (i.e., to the southeast of the proposed entrance) during a 50-year storm event due to the displacement of flood plain area with fill required to connect these roadways. Development of the entrance is proposed to include a bridge over a series of culverts and catch basins, which would allow water from Sierra Highway to flow under Skyline Ranch Road in order to minimize the potential for flooding at the project entrance and reduce the flow rate along Sierra Highway during a 50-year storm event. For comparison purpose, between the proposed drainage condition and the existing drainage condition in drainage area D and D2, there is a decrease in total flow rate of 21 cfs. However, with the construction of the proposed catch basin along Sierra Highway at the project entrance, the flow rate along Sierra Highway would be reduced by 40 cfs during a 50-year storm event, as depicted in the Flood Plain Analysis report and maps (see Appendix C-2 of this EIR). The water surface level would not rise above existing conditions during 50-year storm events. In addition, a change is proposed to the County Flood Plain Boundary as shown on Figure 4.B-5, Proposed County Flood Plain Boundary, on page 4.B-27. Construction of the proposed entrance would not encroach into the Recorded County Floodway Boundary. Although, as proposed, impacts on flooding would be less than significant, because these drainage facilities are preliminarily designed and not yet approved, a mitigation measure is provided below.



LEGEND

- PROPOSED STORM DRAIN
- PROPOSED BOUNDARY LINE (TRACT BOUNDARY)
- FLOW LINE
- EXISTING CONTOUR
- PROPOSED COUNTY FLOOD PLAIN BOUNDARY
- RECORDED COUNTY FLOODWAY BORY
- FEMA FLOOD ZONE BOUNDARY



Not to Scale

Source: Sikand Engineering, 2009

Figure 4.B-5
Proposed County
Flood Plain Boundary

(3) Water Quality

(a) Construction

Grading and construction activities would result in the removal of existing vegetation in an approximately 622-acre area of the site and off-site areas due to development grading involving approximately 20.8 million cubic yards. Removal of existing vegetation would expose much of the topsoil that would be susceptible to erosion from construction irrigation (i.e., dust control measures) and precipitation. Additionally, due to the extent of soils that would be graded, re-engineered, and reused, stockpiling of soils would occur within the site and would be subject to erosion from construction irrigation and/or precipitation. If not properly controlled, erosion of exposed soils would transport sediment and other pollutants typically used at construction sites (such as fertilizers, pesticides, and soil additives) into the natural channels southwest of the site and ultimately into the Santa Clara River. Without proper erosion control measures, these construction-related pollutants would have a significant impact on water quality.

In addition to grading, construction activities would involve several large construction vehicles, wash areas, temporary facilities, and construction materials and supplies. Maintenance and refueling of construction vehicles have the potential to result in spills of petroleum-related engine fluids and engine coolants. Washing of vehicles and equipment can discharge wash waters polluted with sediment, oils and grease, trace metals, and detergent based organics (e.g., adhesives, cleaners, sealants, and solvents). Equipment and facilities that may be required during construction include concrete mixers, portable sanitary and septic systems, and temporary trailers. All of these sources could come in contact with precipitation or irrigation waters and result in polluted runoff from the project site. Without mitigation, pollutants generated from construction activities would have a significant impact on water quality.

(b) Operation

Under the operational phase of the project 18 percent of previously permeable surface would become impervious surfaces, due to the addition of residential development, roads, sidewalks, a school, and offsite infrastructure improvements. Development of the site would result in an increase of urban-related pollutants that can be carried offsite by nuisance and storm water runoff into downstream receiving waters (i.e., Reach 7 of the Santa Clara River). Urban related pollutants may include roofing materials, atmospheric deposition, grease, oil, suspended solids, metals, solvents, and phosphates. Lawn maintenance and use of fertilizers and pesticides are also potential pollutants that, if untreated, would result in impacts to natural drainage channels and the Santa Clara River. A detailed analysis of runoff volumes and pollutant concentrations and loads that can be expected as a result of development of the project site is provided below.

Average Annual Runoff Volumes

As previously stated, development of the project site would result in the addition of impervious surfaces to previously undeveloped land, which would change the average annual storm runoff volumes compared to existing conditions, as shown in Table 4.B-5 on page 4.B-29. The increase in runoff volumes would result in significant drainage and water quality impacts prior to mitigation.

Pollutants of Concern

Table 4.B-6 on page 4.B-29 provides a comparison of existing and proposed pollutant concentrations from the project site watersheds with the Basin Plan objectives for nitrite-N, nitrate-N and chloride. As shown, all modeled constituents generated from the developed project area watersheds would be in compliance with Basin Plan objectives.

Table 4.B-7 on page 4.B-30 provides a comparison of the predicted average annual nitrite-N, nitrate-N, and chloride concentrations for existing and developed conditions. As shown in this table, under developed conditions, concentrations of nitrate-N and chloride decrease or remain the same, with the exception of chloride levels at Watershed A, but nitrite-N concentrations increase or remain the same. Although developed condition concentrations for nitrite-N are expected to increase, concentrations would remain well below the Basin Plan objectives.

Table 4.B-8 on page 4.B-30 is a comparison of the predicted average annual nitrite-N, nitrate-N, and chloride loads for existing and developed conditions. As listed in this table, with the exception of Watershed C, loads of all modeled constituents for all other watersheds are predicted to increase for the project under developed conditions. The increases in annual pollutant loads are the result of the predicted increases in annual storm water runoff volumes after development due to the increased amount of impervious areas as well as changes in pollutant concentrations. Because loads of nitrite-N and nitrate-N are expected to increase substantially as a result of project development, and there are no appropriate load allocation standards available to assess whether these increases are significant, it is conservatively assumed that increases in nutrient pollutant loads would represent a significant impact prior to mitigation. As shown on Table 4.B-6, the total chloride concentration from the project watersheds with project development is well below the Basin Plan objective and, as listed on Table 4.B-7, decreases overall compared to existing conditions.

Table 4.B-5**Average Storm Runoff Volumes For Project Watersheds
(Existing and Developed Site Conditions)**

Watershed	Average Annual Runoff Volume (acre-feet)		
	Existing Conditions	Developed Conditions	Percent Change
A	98	259	164
B	29	138	379
C	3	1	63
D	4	10	142
E	180	186	4
Total	314	594	89

Note: Percent change is rounded to the nearest whole number.

Source: Skyline Ranch Water Quality Technical Report, Revised May 2009.

Table 4.B-6**Total Expected Constituent Concentrations
(Comparison of Existing and Developed Site Conditions
with Basin Plan Objectives)**

Constituent	Units	Existing Conditions	Developed Conditions (without any BMPs)	Basin Plan Objectives
Nitrite-N	mg/L	0.26	0.35	1
Nitrate-N	mg/L	5.2	4.58	10
Chloride	mg/L	32.76	31.36	100

Source: Skyline Ranch Water Quality Technical Report, Revised May 2009.

Loads of chloride (as shown on Table 4.B-8) however, are expected to increase with developed conditions in all watersheds except for Watershed C. As there are no appropriate load allocation standards available to assess whether increases in chloride loads are significant, it is conservatively assumed that increases in chloride pollutant loads with development would represent a significant impact prior to mitigation.

Assessment of Qualitatively Addressed Constituents

As further described below, impacts from sediment, dissolved oxygen, trace metals, and sulfates would be less than significant, and impacts from all other pollutants of concern would be significant prior to mitigation.

Table 4.B-7

Average Annual Concentrations
(Comparison of Existing and Developed Site Conditions)

Watershed	Nitrite-N			Nitrate-N			Chloride		
	Existing (mg/L)	Developed. (mg/L)	Percent Change	Existing (mg/L)	Developed. (mg/L)	Percent Change	Existing (mg/L)	Developed. (mg/L)	Percent Change
A	0.05	0.08	69	1.05	0.84	-20	6.60	6.88	4
B	0.05	0.09	75	1.05	0.84	-20	6.6	5.50	-17
C	0.05	0.05	0	1.05	1.05	0	6.6	6.6	0
D	0.05	0.07	45	1.05	0.85	-19	6.6	6.03	-9
E	0.06	0.06	1	1.00	1.00	-1	6.36	6.34	0
Total	0.26	0.35	37	5.2	4.58	-12	32.76	31.36	-4

Note: Percent change is rounded to the nearest whole number.

Source: Skyline Ranch Water Quality Technical Report, Revised May 2009.

Table 4.B-8

Average Annual Loads
(Comparison of Existing and Developed Site Conditions)

Watershed	Nitrite-N			Nitrate-N			Chloride		
	Existing lbs/yr	Developed lbs/yr	Percent Change	Existing lbs/yr	Developed lbs/yr	Percent Change	Existing g lbs/yr	Developed lbs/yr	Percent Change
A	13	59	346	280	592	112	1,758	4,844	176
B	4	33	738	82	314	282	516	2,063	300
C	0.39	0.14	-63	8	3	-63	52	19	-63
D	0.6	2	251	12.2	23.8	96	76	169	121
E	28.5	29.9	5	491	504.8	3	3,112	3,213	3
Total	46.7	124.3	166	873.2	1,437.5	65	5,513.8	10,307.9	87

Note: Percent change is rounded to the nearest whole number.

Source: Skyline Ranch Water Quality Technical Report, Revised May 2009..

- Fecal Coliform Bacteria.** Fecal coliform concentrations and loads in the project watersheds can be expected to increase under developed conditions and, as with existing site conditions, would be well above the current regulatory standards (Basin Plan) for the downstream receiving waters. Although development of the project area may reduce the natural sources of pathogens (i.e., non-domestic animal waste), the proposed project would increase pet waste sources. Therefore bacteria levels could significantly impact designated beneficial uses of the downstream receiving waters, particularly water contact recreation, prior to mitigation.

- **Sediment.** Development of the proposed project would decrease the existing rates of natural sediment load from the watersheds in the project area due to high erosion rates associated with the vacant/open spaces of the existing watersheds. Therefore, impacts associated with sediments generated from the project site watersheds would be less than significant.
- **Dissolved Oxygen.** Under developed conditions, dissolved oxygen levels are expected to be in compliance with the water quality objectives, based on modeling of nitrite-N and nitrate-N levels. Therefore, impacts associated with any increase in dissolved oxygen levels from the developed project site watersheds would be less than significant.
- **Trace Metals.** Concentration and loads of trace metals are predicted to increase with development, due to runoff from roads and parking areas that may contain trace metals associated with metal products, fuels, adhesives, paint, and other coatings. However, trace metal concentrations generated from the project are not expected to be at levels that would exceed benchmark CTR criteria nor jeopardize the downstream receiving water. Therefore, impacts associated with trace metal concentration would be less than significant.
- **Pesticides.** Development of the project would result in an increase in pesticide use, primarily due to maintenance of landscaped and park areas. The use of pesticides in the project watersheds could have a potentially significant impact on downstream receiving waters prior to mitigation.
- **Bioaccumulation.** Toxics associated with the proposed project could include trace metals, pesticides used in landscaping applications, and other chemical constituents. Although runoff from trace metals would be less than significant, runoff from pesticide use is a potentially significant impact. Therefore, bioaccumulation impacts on water quality would be potentially significant without incorporation of mitigation measures.
- **Trash and Debris.** Development of the proposed project would result in the generation of trash and debris which has the potential to enter downstream receiving waters and significantly impact designated beneficial uses, prior to mitigation.
- **Hydrocarbons.** The concentration of hydrocarbons is expected to increase as a result of project development, through the introduction of oil and grease on roads, driveways, and parking areas to the runoff water and development area watershed. Therefore, water quality impacts from hydrocarbon concentrations would be potentially significant without mitigation.

- **Sulfates, Boron (Salts).** Salts (such as chloride, boron, and sulfate) are most often associated with marine soils and coastal environments, so they are likely to only appear in small amounts under developed conditions. As presented above for chloride, the total chloride concentration in storm water runoff from the developed project watersheds was estimated to be well below the Basin Plan limits. Therefore, the concentrations of these constituents would not adversely affect beneficial uses of the receiving waters or water quality and would be considered less than significant.

Non-Storm (Dry-Weather) Flows

Development of the project site would result in dry weather flows primarily due to irrigation of landscaped and park areas. Dry-weather flows are relatively slow and as a result, causes sediment to settle out or to be filtered out by algae and other plants growing in the receiving waters. Based on 654 acres of developed on- and off-site area, it is estimated that as much as 0.06 acre-feet/day of dry weather flow could be generated and 20 acre-feet/year from project development.⁹ Impacts associated with dry weather flows would be considered significant prior to mitigation.

Changes in Runoff Volume Associated with Historic Drought Conditions

The main purpose of assessing changes to average annual runoff volume during historic drought conditions with and without development of the site, is to ensure that groundwater supplies would not be significantly depleted as a result of the proposed project. Significant reduction in the amount of runoff which would infiltrate into the groundwater under existing conditions, could impact the groundwater quantity as well as quality.

As shown on Table 4.B-9 on page 4.B-33, based on an average rainfall depth of 6.40 inches for historic drought years and without drainage mitigation measures in place, the increase in runoff volume during historic drought years is estimated to be 106 acre-feet per year. This increase would equate to less than approximately 0.3 percent of the average operational yield of the Alluvial Aquifer in drought years and about 0.4 percent of the planned dry-year pumping of the Saugus Formation.

Due to negligible increases in runoff volume in comparison to the area's aquifer yields, no significant impacts associated with runoff volume changes during drought years would occur.

⁹ Based on a factor of 2.93×10^4 cubic feet per second per acre of development.

Table 4.B-9

**Annual Runoff Volume Changes for Project Watersheds
for Drought Conditions**

Watershed	Average Annual Drought (Below Normal) Runoff Volume (acre-feet) ¹		
	Existing Conditions	Developed Conditions	Percent Change ²
A	37	98	162
B	11	52	379
C	1	0	-63
D	2	4	142
E	68	71	4
Total	119	225	89

¹ Based on average annual precipitation during historic drought years of 6.4 inches from historic rainfall data obtained from three Los Angeles County Department of Public Works stations.

² Percent change is rounded to the nearest whole number.

Source: Skyline Ranch Water Quality Technical Report, Revised May 2009.

4. MITIGATION MEASURES

a. Hydrology

(1) Storm Drains and Flooding

4.B-1 *Final drainage plans for the project shall ensure that there is no displacement of flood plain area in the vicinity of Sierra Highway and its intersection with proposed Skyline Ranch Road through construction of a culvert, bridge, or combination thereof, within the flood plain area. Final drainage plans and the culvert or bridge shall be designed during the engineering stage by a licensed engineer to ensure that the water surface shall be equal or lower than existing conditions both downstream and upstream of the proposed project entrance along Sierra Highway and adjacent properties during a 50-year storm event and that post-development flow rates shall be less than existing conditions downstream along Sierra Highway and adjacent properties. Final drainage plans to achieve these standards shall be designed to the satisfaction of, and approved by, the Los Angeles County Department of Public Works and City of Santa Clarita, Department of Public Works.*

b. Water Quality**(1) Erosion and Sedimentation**

4.B-2 *Prior to issuance of grading permits, the construction contractor shall prepare an Erosion Control Plan (ECP) that incorporates BMPs to specifically address and reduce the potential for erosion and sedimentation impacts on downstream receiving waters. The project shall include any combination of the following erosion control BMPs: Hydraulic mulch, preservation of existing vegetation, hydroseeding,¹⁰ streambank stabilization, diversion of runoff (such as earth dikes, temporary drains, slope drains), velocity dissipation devices (outlet protection, check dams, and slope roughening/terracing), and dust control measures (such as sand fences and watering). Sedimentation control BMPs may include filtration devices and barriers (such as silt fencing, check berms, debris basins, sediment traps, fiber rolls, sandbags, gravel inlet filters, and straw bale barriers) and/or settling devices (such as sediment traps or basins). Stabilization control BMPs may include blankets, reinforced channel liners, soil cement, fiber matrices, geotextiles, or other erosion resistant soil coverings or treatments. The construction entrance(s)/exit(s) should also be stabilized (e.g. aggregate underdrain with filter cloth). Specific application of these BMPs shall occur before site runoff is discharged to proposed and existing off-site storm drain/flood control channel systems that ultimately discharge water to the Santa Clara River.*

The ECP shall be reviewed by the Los Angeles County Department of Public Works and by the Los Angeles Regional Water Quality Control Board for inclusion of appropriate and effective erosion and sedimentation controls.

(2) Construction-Related Pollutants

4.B-3 *Prior to issuance of any grading permits, a Notice of Intent (NOI) and a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared by the construction contractor and submitted to the Los Angeles County Department of Public Works and the Los Angeles Regional Water Quality Control Board for approval. The SWPPP shall meet all applicable regulations by requiring controls of pollutant discharges that utilize best available technology economically achievable (BAT) and best conventional pollutant control*

¹⁰ California Stormwater Quality Association, *California Stormwater BMP Handbook—Construction*, January 2003.

technology (BCT) to reduce pollutants. The SWPPP shall be certified in accordance with the signatory requirements of the General Construction Permit.

The SWPPP shall be developed and amended or revised, when necessary to meet the following objectives:

- *Identify all pollutant sources including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site;*
- *Identify non-storm water discharges;*
- *Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction; and,*
- *Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs). Paving operations shall be performed using measures to prevent runoff pollution.*

In compliance with the SWPPP, non-stormwater level BMPs shall be implemented that include controls and objectives for vehicle and equipment maintenance, cleaning, and fueling, and potable water/irrigation practices. Material/waste management BMPs shall include: liquid waste management, spill prevention and control, hazardous waste management, and sanitary/septic waste management. Specific BMPs to be implemented by the construction contractor may include but are not necessarily limited to the following:

- *Paving operations shall be performed using measures to prevent runoff pollution;*
- *Wash out areas for concrete trucks, construction vehicles and equipment, paint and stucco equipment, and other construction materials shall be designated, and containment measures employed, to prevent discharges of wash water;*
- *Vehicle and equipment maintenance and fueling activities shall occur off-site to the degree feasible;*

- *Construction area, street and pavement washing shall be controlled to preclude discharges of wash water;*
- *Discharging super-chlorinated water pipe and sprinkler system flushing and test water to the storm drain system shall be prohibited;*
- *All waste shall be properly stored and disposed of off-site;*
- *Employees and subcontractors shall be trained in the prevention of storm water contamination;*
- *Hazardous material (specifically chlorine- and ammonia-containing products) shall be stored in elevated (e.g., on pallets or a deck) and covered structures to prevent any contact between the chemicals and irrigation or precipitation;*
- *All hazardous and chemical materials generated during construction (i.e., diesel fuel, hydraulic fluid, motor oil, etc.) shall be cleaned up and disposed of in compliance with Federal, State, and local laws, regulations and ordinances; and*
- *All structure construction and painting areas shall be enclosed, covered, or bermed to prevent run-on/run-off in these areas and associated contamination of storm water.*

(3) Discharge of Urban-Related Pollutants

4.B-4 *Prior to approval of a NPDES Stormwater Permit No. CAS004001 (Order No. 01-182) and issuance of a grading permit, the applicant or an applicant designee shall complete and have approved a Stormwater Quality Management Plan (SQMP) and a Standard Urban Stormwater Mitigation Plan (SUSMP) outlining usage of BMPs for non-point source pollution control measures to address pollutants from such sources as roofing materials, atmospheric deposition, grease, oil, suspended solids, metals, solvents, phosphates, fertilizers and pesticides. Post-construction structural or treatment BMPs shall be designed to meet performance standards that mitigate (treat) storm water runoff from either: (1) the 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998), or; (2) the volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more treatment by the method*

recommended in California Stormwater Best Management Practices Handbook—Industrial Commercial, (1993), or: (3) the volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system; and, (4) the volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff even. Furthermore, project BMPs and design features shall control peak flow discharge to provide stream channel and over bank flood protection, based on design criteria selected by the local agency.

The range of BMPs, which shall meet the performance standards identified above, shall include but not be limited to the following to the extent feasible:

Site Planning and Design BMPs

Minimize Impervious Area and Directly Connected Impervious Areas

- *Minimize impervious areas by incorporating landscaped areas over substantial portions of the project area. [For the Skyline Ranch Project, the area designated solely for uses with impervious surfaces are about 401 acres or 18 percent of the entire project site. This means the remaining 1,772 acres or 82 percent will be either vacant or in uses with impervious ground surface such as landscaped and park areas.]*
- *If possible, minimize directly connected impervious areas by draining parking lots to landscaped areas, desilting (secondary infiltration) basins or other pervious surfaces to promote filtration and infiltration of storm water, if landscaping slopes are less than 2 percent and the area is not directly adjacent to steep slopes (which promotes further erosion); or the area is being treated with catch basin inserts. Furthermore, lot runoff (from the pervious surfaces) shall be infiltrated from the graded pad areas through onsite pervious soils.*
- *To the extent practicable, utilize vegetated areas (e.g., parks, setbacks, end islands, and median strips) for biofiltration and/or bioretention of nuisance and storm runoff flows from parking lots.*

Selection of Construction Materials and Design Practices

- *Select building materials for roofs, roof gutters and downspouts that do not include exposed copper or zinc.*
- *Construct streets, sidewalks, and parking lot aisles to the minimum widths as specified in the Los Angeles County Department of Public Work's requirements (also in compliance with regulations for the Americans with Disabilities Act) for safety requirements for fire and emergency vehicle access and incorporate landscaped buffer areas between sidewalks and streets.*

Conserve Natural Areas

- *Concentrate or cluster the development on the least environmentally sensitive portions of the project site while leaving the remaining land in a natural, undeveloped condition. [For the Skyline Ranch Project, about 1,551 acres of the site (71 percent of the project site) is proposed to remain undeveloped, including 1,355 acres to be designated as natural open space through the establishment of the Skyline Ranch Conservation Area (SRCA) .]*
- *Maximize canopy interception and water conservation by preserving existing native trees and shrubs and planting additional native or drought tolerant trees and large shrubs. [For the Skyline Ranch Project, approximately 71 percent of the project site is proposed to remain undeveloped, and along the perimeter of the site, landscaping would consist of a mix of native, drought-tolerant and non-invasive plant species.]*

Protect Slopes and Channels

- *Protect slopes and minimize erosion potential by covering highly erodible soils with vegetative cover (preferably native or drought tolerant plants), route flows safely from or away from steep and or sensitive slopes, stabilize disturbed slopes. All slopes within the project should be designed and constructed to minimize erosion.*
- *Protect channels and minimize erosion by controlling and treating flows in landscaping and/or other controls prior to reaching existing natural drainage systems; stabilize channel crossings; ensure that increases in runoff velocity and frequency caused by the project do not erode the*

channel; install energy dissipaters (riprap), at the outlets of storm drains, culverts and conduits .

Source (non-structural) Control BMPs

- *Drain Inlet Stenciling or Signage. Stenciling (or signage) is intended to raise public awareness and limit illegal dumping of trash, debris, oil, and other pollutants into storm drains. "Stenciling" may be accomplished via a traditional stencil or via the use of grates with text such as "Warning! Drains to Ocean" notes or other equivalent symbols. All catch basins and inlets shall be stenciled.*
- *Irrigation Controls and Management. Irrigation controls shall be implemented to ensure that irrigation is conducted efficiently. Where feasible, plants with similar watering requirements shall be grouped in order to reduce excess irrigation runoff and promote surface filtration. Efficient irrigation systems may include computerized and/or radio telemetry that controls the amount of irrigation based on soil moisture or other indicators.*
- *Proper Application of Fertilizers and Pesticides. Best management practices shall be implemented to minimize the application of fertilizers, pesticides, and other landscape management products on slopes and landscaped areas maintained by the homeowners' association (HOA) and/or landscape maintenance districts (if any). Examples of these management practices include, but are not limited to: the use of slow release fertilizers, applying fungicides only to greens to limit the use of pesticides, and closely monitoring weather forecast to ensure appropriate timing (during dry periods) for the application of landscape management products.*
- *Community Education Program. Public education shall be used to reduce the potential for hazardous materials entering the storm drain system. This shall be accomplished through distribution of brochures or other materials to property managers, owners and occupants, and employees at the time of initial sale or lease of property or hiring of employees and periodically thereafter. Brochures shall discuss, among other topics and as appropriate for the audience: 1) the importance of downstream water bodies, the storm water system, management of fertilizers, pesticides, and other harmful chemicals, 2) the impacts of dumping oil, antifreeze, pesticides, paints, and other pollutants into storm drains and proper handling and disposal of these materials, 3) effective cleaning practices*

such as the cleaning of vehicles only in maintenance areas where the water will be recycled or routed to the sanitary sewer system to prevent nuisance flows, 4) the benefits of the prevention of excessive erosion and sedimentation, 5) the benefits of proper landscaping practices, 6) pavement clean-up practices, 7) the impacts of over-irrigation, 8) swimming pool draining practices, and 9) other relevant issues.

- *Prevention of Nuisance Flows. Grease traps shall be included for school cafeterias (if any). Draining swimming pools into storm drains shall be prohibited. These flows shall be properly connected to sewer lines.*
- *Pavement Sweeping Program. The majority of roads in the project area are proposed to be dedicated to the public, and would thus be maintained by the Los Angeles County Department of Public Works. The County has street sweeping programs that will help control trash, vegetation debris and sediment that may accumulate on roadways. Other non-public roadways shall also be periodically swept.*
- *Litter Control Program & Design of Trash Storage Areas. A program for litter control shall be implemented to control litter in common areas. The program may include standards for proper placement and emptying of trash receptacles, practices to ensure that trash bins are maintained in the closed position, and regular removal of trash from parking and landscaped areas. In conjunction with the litter control program, trash storage areas shall be designed to prevent introduction of pollutants into runoff. The design principles to prevent this pollution from occurring are using impervious surfaces for storage areas which prevent run-on from adjacent areas, ensuring that there is no connection of trash drains to the storm drain system, and keeping lids on all trash receptacles in addition to the use of roofs or awnings to minimize direct precipitation.*
- *Proper Connection and Maintenance of Sewer Lines. Sewer lines shall be properly connected and adequately maintained.*
- *Activity Restrictions (Conditions, Covenants, and Restrictions). For source control BMPs, County maintenance and implementation of BMPs or Conditions, Covenants, and Restrictions (CC&Rs) shall be prepared requiring maintenance and implementation of BMPs by the HOA for the purpose of surface water quality protection, or use restrictions shall be developed through lease terms.*

- *BMP Maintenance. Los Angeles County shall assume responsibility for the inspection and maintenance of structural BMPs within their boundaries. For the public school site, the school district with jurisdiction shall be responsible for the inspection and maintenance of structural BMPs. For private roads and private parks the HOA shall be responsible for BMP maintenance.*
- *Common Area Drainage Facility Inspection. Privately-owned common area drainage facilities shall be inspected each year and, if necessary, cleaned and maintained prior to the storm season.*

Structural and Treatment Control BMPs

Implementation of NPDES General Permit requirements entails the use of post-construction structural controls that will remain in service to protect water quality throughout the life of the project. Therefore, these BMPs will need to be regularly maintained for proper function. As Los Angeles County will assume maintenance of BMPs in public rights-of-way, the main structural BMPs recommended below are systems that the County currently approves of for use within their jurisdiction. Final selection, design and siting of structural BMPs will ultimately depend on the project-wide drainage plan approved by the County. The following BMP options were selected due to their relative effectiveness for treating potential pollutants from the project site; as well as consideration for County of Los Angeles requirements and acceptance of these systems (as they would be maintained by the County), site feasibility, relative costs and benefits; and other constraints. The recommended BMP design flow rates, volumes, types and other specifications will be provided during final design stage of the project (with hydrology map approval).

- *Hydrodynamic Separator Systems and Gross Solids Removal Devices. Hydrodynamic Separation Systems (HSS) and Gross Solids Removal Devices (GSRDs) are flow-based, flow-through BMPs that are installed within a storm drain line in order to remove large sediment particles and associated storm water pollutants, as well as trash, oils, and grease. HSS and/or GSRDs, such as a Continuous Deflective Separator (CDS), manufactured by CDS Technologies, Inc., supplemented with oil absorbent materials (such as pellets), are recommended for use at various locations in the proposed storm drain systems. Depending on the particular model and manufacturer, maintenance shall occur quarterly to yearly for clean-outs. Cleaning after a storm event may also be required.*

Inspection is required to make certain that the unit is operating correctly and to make any repairs.

- *Stormscreen. The StormScreen is a manufactured patented BMP by CONTECH Stormwater Solutions, Inc., designed to remove mostly trash and debris and larger suspended solids at high flow rates. The StormScreen is comprised of a grouping of StormScreen cartridges placed in a precast or cast-in-place concrete vault. Although maintenance may be required within six (6) months of project completion due to erosion occurring on newly constructed sites, it is intended that the StormScreen be maintained annually by the Los Angeles County Department of Public Works, Flood Control Division. For the StormScreen maintenance, during the first year, an inspection is recommended every other month for the first six months of operation in order to develop an ongoing maintenance schedule. A visual inspection can be conducted without entering the vault. Sediments and water must be disposed of in accordance with all applicable waste disposal regulations.*
- *Catch Basin Inserts. Catch basin inserts are flow-based BMP options for consideration at various locations to treat runoff before it enters the storm drain system by filtering or screening out sediments and associated storm water pollutants during dry weather and low flow events. During large flow events, they are typically designed to allow storm water runoff to bypass the inlet device and continue directly into the storm drain system. Although treatment levels are generally low for the pollutants of concern for this project, the inserts would provide pre-treatment of storm water runoff prior to further treatment at downstream BMPs. Drainage inserts could be replaced with HSS or GSRDs that perform similar functions and are interchangeable. At the time of final design, if the implementation of a CDS is deemed infeasible, a catch basin insert may be used in its place. Although maintenance requirements vary greatly depending on the particular model and manufacturer, they are typically maintained quarterly to yearly for clean-outs. Cleaning after a storm event and in anticipation of storm events after extended dry periods or periods of typical debris removal is recommended. Inspection will be required to make certain that the unit is operating correctly and to make any repairs.*
- *Detention/Retention Basins. Detention and retention basins require a fairly large amount of space to build them. Basins can be used on sites with slopes up to about 15 percent. The design should incorporate enough elevation drop from the basins inlet to the outlet to ensure that flow can move through the system. These systems require regular maintenance*

(semi-annual and annual), as well as sediment removal from the forebay every 5 to 7 years and monitoring the sediment accumulation and removal when the volume has been significantly reduced (about every 25 to 50 years). Basins shall be properly maintained to avoid safety hazards.

5. CUMULATIVE PROJECT IMPACTS

Table 3-1, on page 3-3 identifies 48 related projects within proximity of the project site. These urban development projects could potentially contribute point and non-point source pollutants to the surface water resources, resulting in a cumulative impact to water quality. However, the related projects would be subject to State NPDES permit requirements for both construction and operation, including development of SQMPs, SWPPPs, and SUSMPs. Additionally, each project would be evaluated individually to determine appropriate BMPs and treatment measures to reduce impacts to surface and groundwater quality. Thus, cumulative impacts to water quality would be less than significant after compliance with regulatory requirements and project specific mitigation measures.

In regards to hydrology, it is assumed that project-by-project review of drainage plans by the County or City will ensure that project features and/or mitigation measures are provided to their satisfaction such that impacts on hydrology and flooding are reduced to less than significant levels. With mitigation the project would not have a significant impact on flooding, and reductions in off-site storm water flows and debris volumes would be beneficial. Therefore, with related project and project design features and implementation of mitigation measures, cumulative impacts on hydrology would be less than significant.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the mitigation measures listed above and compliance with required regulatory standards and guidelines would reduce potential hydrology and water quality impacts to a less than significant level. Implementation of mitigation measures and compliance with the requirements of the NPDES General Construction Activity Storm Water Permit, General MS4 Permit, and tiered BMPs would reduce impacts from erosion and sedimentation to a less than significant level. For purposes of water quality compliance with objectives and standards of the NPDES Permit and the Basin Plan, development of the SQMP and SUSMP would reduce impacts to a less than significant level and would ensure that the project would not violate discharge requirements or violate water quality standards. Potential impacts on flooding along Sierra Highway at Skyline Ranch Road due to the displacement of floodplain area with fill required to connect the roadways would be mitigated to a less than significant level by providing drainage features, such as a bridge over a series of culverts or catch basins at the project entrance that would allow water to flow under Skyline Ranch Road.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

C. BIOLOGICAL RESOURCES

1. INTRODUCTION

The following section is based on information and analysis provided by Natural Resource Consultants (NRC) and Glenn Lukos Associates (GLA) in the following documents which are included in Appendix D, Biological Resources Technical Reports:

- Biological Resources Assessment of the 2,173-Acre Skyline Ranch Site Located in the Vicinity of the City of Santa Clarita, Los Angeles County, California (NRC May 8, 2009) (BRA);
- Biological Inventory and Qualitative Functional Assessment, Cruzan Mesa Vernal Pools (GLA February 14, 2007) (Vernal Pool Report) and included as Appendix E of the BRA;
- Technical Memorandum, Temporary Impacts Due to Equipment and Construction Activities on the Skyline Ranch Site (NRC June 4, 2009) and included in Appendix F of the BRA;
- Conceptual Habitat Mitigation and Monitoring Plan for Impacts to Areas within the Jurisdiction of the United States Army Corps of Engineers Pursuant to Section 404 of the Clean Water Act and the California Department of Fish and Game Pursuant to Chapter 6, Section 1602 of the Fish and Game Code, Skyline Ranch, Los Angeles County, California (GLA May 5, 2009) (HMMP). The HMMP includes the following document as an appendix: Hybrid Functional Assessment for Areas within the Jurisdiction of the United States Army Corps of Engineers Pursuant to Section 404 of the Clean Water Act and the California Department of Fish and Game Pursuant to Section 1600 of the California Department of Fish and Game Code, Skyline Ranch Project, Los Angeles County, California (GLA May 5, 2009) (HFA);
- Jurisdictional Delineation of the 2,173-Acre Skyline Ranch Residential Development Project, Los Angeles County, California (GLA Revised November 30 2005, November 29, 2006, and May 5, 2009) (Jurisdictional Delineation);
- Jurisdictional Delineation of Off-site Impact Areas Associated with the Skyline Ranch Road Project in the City of Santa Clarita, Los Angeles County, California

(GLA November 13, 2006, Revised May 5, 2009) (Off-site Jurisdictional Delineation)

The BRA includes a description of the biological resources occurring within the Skyline Ranch study area and the results of general and focused sensitive plant and wildlife surveys. In addition, the BRA evaluates the anticipated impacts of the proposed project and provides mitigation measures designed to offset resulting significant impacts. The Technical Memorandum identifies potential impacts that could occur within the 50-foot grading buffer zone that surrounds the development footprint. The Vernal Pool Report, included as Appendix E of the BRA, describes the quality and functional value of the vernal pools within the study area, including the presence of sensitive species, and provides both short- and long-term recommendations to protect the vernal pools. The Jurisdictional Delineation and Off-site Jurisdictional Delineation document the existing features within the study area that would be regulated by the U.S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CDFG), and Regional Water Quality Control Board (RWQCB) and provide an impact analysis based on the proposed project. The HFA characterizes and evaluates the functions of the vernal pools within the study area and compares pre- and post-project aquatic functions relative to 24 riparian metrics and 13 vernal pool metrics. The HMMP describes the mitigation strategy that will establish, and preserve jurisdictional areas within the study area to mitigate impacts of the proposed project to jurisdictional features.

These documents were prepared consistent with the reporting requirements of the CDFG, the U.S. Fish and Wildlife Service (USFWS), ACOE, RWQCB, and the County of Los Angeles (County). Complete copies of these documents are included in Appendices D-1 through D-4 of this Draft EIR.

As further described in Chapter 2.0, Project Description, and as shown in Figure 2-3, Aerial View-Development and Conservation Areas, the Skyline Ranch project site includes an approximately 622-acre development area (grading only) in the southern portion of the study area, with nearly three quarters or approximately 1,551 acres in the northern portion of the site to remain undeveloped. Approximately 1,355 acres of the undeveloped area would be dedicated or designated and managed as natural open space through the proposed establishment of the Skyline Ranch Conservation Area (SRCA). A total of 166 acres on the Cruzan Mesa, the Non-Development/Continuing Use Area, would remain undeveloped with restrictions placed on use of the land to prevent buildings from being established. The remaining nine acres of undeveloped area in the northern portion of the site would be designated as open space without conservation easements or restrictions. In addition, approximately 60.8 acres off-site would be altered to accommodate fuel modification, remedial grading, and access roads. Collectively the project site and off-site areas are referred to herein as the study area. Much of the northern portion of the study area has been of interest to the County, and falls within the proposed Cruzan Mesa Vernal Pools Significant Ecological Area (SEA) being considered in an update to the

County General Plan. All portions of the study area within the County's proposed SEA are located outside of the proposed Skyline Ranch development area and off-site areas subject to project-related grading and alteration. The SRCA and the Non-Development/Continuing Use Area are further described below under Subsection 3, Project Impacts, c. Relevant Project Features.

2. EXISTING CONDITIONS

a. Regulatory Framework

As part of the proposed project's review and approval there are a number of performance criteria and standard conditions that must be met. These include compliance with all of the terms, provisions, and requirements of applicable laws that relate to Federal, State, and local regulating agencies for impacts to sensitive habitats, sensitive plant and wildlife species, wetlands, riparian habitats, and stream courses.

(1) State of California Fish and Game Code, Section 1602

Section 1602¹ of the California Fish and Game Code requires any entity (e.g., person, State or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, to notify CDFG of the proposed project and the availability of documentation prepared pursuant to CEQA. In the course of this notification process, the CDFG will review the proposed project and this Draft EIR for potential effects on streambed habitats within the study area. The CDFG may then place conditions on the Section 1602 authorization (i.e., the Streambed Alteration Agreement) to avoid, minimize, and mitigate the potentially significant adverse impacts within CDFG jurisdictional limits.

(2) Federal Clean Water Act, Section 404

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within "Waters of the U.S." and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. "Waters of the U.S." are defined by the CWA as "rivers, creeks, streams, and lakes extending to their

¹ On January 1, 2004, legislation took effect that repealed Fish and Game Code sections 1600-1607 and added Fish and Game Code sections 1600-1616 (S.B. 418 Ch. 736).

headwaters and any associated wetlands.” Wetlands are defined by the CWA as “areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.” The permit review process entails an assessment of potential adverse impacts to ACOE jurisdictional “Waters of the U.S.” and wetlands. In response to the permit application, the ACOE will also require conditions amounting to mitigation measures. Where a Federally listed species may be affected, they will also require Section 7 consultation with the USFWS under the Federal Endangered Species Act (ESA).

(3) Federal Clean Water Act, Section 401

The mission of the California RWQCB is to develop and enforce water quality objectives and implement plans, which will best protect the beneficial uses of the State’s waters, recognizing local differences in climate, topography, geology, and hydrology. Section 401 of the CWA requires that:

“any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.”

Therefore, before the ACOE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB. A complete application for 401 Certification will include a conceptual Water Quality Management Plan that will address the key water quality features of the project to ensure the integrity of water quality in the area during and post-construction.

Under separate authorities granted by State law (i.e., the Porter-Cologne Water Quality Control Act), the RWQCB may assert jurisdiction over dredge or fill activities within non-Federal, State waters through issuance of Waste Discharge Requirements (WDRs). Processing of a WDR is similar to that of a Section 401 certification and addressing impacts to non-Federal waters may be streamlined within the 401 process at RWQCB discretion.

(4) Federal Endangered Species Act, Section 10 and Section 7

Generally speaking, “take” of a threatened or endangered species is prohibited under Federal law without a special permit. Section 10(a)(1)(B) of the ESA allows for take of a threatened or endangered species incidental to development activities once a Habitat Conservation Plan (HCP) has been prepared to the satisfaction of the USFWS. For Federal projects (including those involving Federal funding), Section 7 of the ESA allows for consultation between the affected agency and the USFWS to determine what measures may be

necessary to compensate for the incidental take of a listed species. A “Federal” project is any project that is proposed by a Federal agency or is at least partially funded or authorized by a Federal agency. If the listed species or Federally designated “critical habitat” for that species occurs in a portion of the project subject to Federal jurisdiction or activity (such as “Waters of the United States”), then consultation under Section 7 of the Act is usually permissible and may be required. Incidental take authority for threatened and endangered species may be obtained through Section 7 of the ESA when such Federal agency action is involved.

(5) The County of Los Angeles General Plan and Significant Ecological Areas

One of the objectives of the County of Los Angeles’ General Plan is to “preserve significant ecological resources and habitat areas in viable and natural conditions.” In order to reach this goal, Significant Ecological Areas (SEAs) were created in 1972 by a committee of scientists that prepared the “original” SEA report as a background study for the 1973 County General Plan. In 1976, a second SEA study, identifying 61 SEAs, was completed by England and Nelson and amended into the General Plan in 1980. The SEA program is currently being reevaluated and updated as part of the next General Plan.² The SEA program update includes a proposal, which if approved, would designate areas of the Skyline Ranch Site as the Cruzan Mesa Vernal Pools SEA.

Under the current General Plan, an area qualifies for recognition as an SEA if it possesses one or more of the following features, or classes:³

- Is habitat of rare, endangered, or threatened plant or animal species.
- Represents biotic communities, vegetative associations, or habitats of plant or animal species that are either one-of-a-kind, or are restricted in distribution on a regional basis.
- Represents biotic communities, vegetative associations, or habitats of plant or animal species that are either one-of-a-kind, or are restricted in distribution in Los Angeles County.

² PCR Services Corporation (PCR), *Biological Resources Assessment of the Proposed Cruzan Mesa Vernal Pools Significant Ecological Area (Significant Ecological Area Update Study)*, Prepared for Los Angeles County Department of Regional Planning, 2000.

³ England and Nelson, *Land Capability/Suitability Study, Los Angeles County General Plan Revision Program, Significant Ecological Areas Report*, Prepared for Los Angeles County Department of Regional Planning and Environmental Systems Research Institute, 1976.

- Is habitat that at some point in the life cycle of a species or group of species serves as a concentrated breeding, feeding, resting, or migrating grounds, and is limited in availability.
- Represents biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or they represent an unusual variation in a population or community.
- Is an area important as game species habitat or as fisheries.
- Is an area that would provide for the preservation of relatively undisturbed examples of the natural biotic communities in Los Angeles County.
- Is a special area, worthy of inclusion, but one which does not fit any of the other seven criteria.

(6) County of Los Angeles Oak Tree Ordinance

The proposed project will abide by the guidelines and conditions set forth in the County of Los Angeles Zoning Code, Sections 22.56.2050 through 22.56.2260 related to oak trees. Section 22.56.2060 is entitled: “Damaging or removing oak trees prohibited-Permit requirements” and Section 22.56.2180 is entitled “Additional conditions imposed when”. The main objective of the guidelines is to avoid impacts to oak trees and their protected zones; however, the guidelines also provide conditions and mitigation measures when impacts are unavoidable.

On January 1, 2005, Senate Bill 1334 (SB 1334), Kuehl Oak Woodlands Conservation: Environmental Quality, took effect. This bill requires a County, in determining whether CEQA requires an environmental impact report, negative declaration, or mitigated negative declaration, to determine whether a project in its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. SB 1334 also requires that the County, if it determines there may be a significant effect to oak woodlands, require one or more mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. SB 1334 defines “oak” as a native tree species in the genus *Quercus*, not designated as Group A or Group B commercial species pursuant to regulations adopted by the State Board of Forestry and Fire Protection pursuant to Section 4526, and that is 5 inches or more in diameter at breast height (dbh).

b. Environmental Setting

(1) Biological Survey Methods

NRC performed a literature search and Geographic Information System (GIS) analysis for references and existing biological resources documentation relevant to this study area. Sources included:

- Occurrence data from the California Natural Diversity Database (CNDDDB) for the Mint Canyon U.S. Geological Survey (USGS) quadrangle and all surrounding quadrangles (Springs Mountain, Green Valley, Sleepy Valley, Agua Dulce, Sunland, San Fernando, Oat Mountain, and Newhall);⁴
- Sensitive species occurrence data from the USFWS;
- Species critical habitat boundaries from the USFWS;
- Biological Resources Assessment of the Proposed Cruzan Mesa Vernal Pools Significant Ecological Area;⁵ and
- Existing documentation pertaining to Los Angeles County SEAs and proposed development projects in the vicinity of the study area.

NRC conducted general biological surveys of the Skyline Ranch study area in June and July 2002, March through July 2003, April through June 2005, March through June 2006, and January through June 2007. In addition to general surveys, focused surveys for special status plant and wildlife species were conducted. NRC's biological surveys were designed to provide a thorough record of the extent and location of existing vegetation communities and to inventory the plant and wildlife species that occur within the study area. NRC's general and focused surveys did not include small mammal trapping, pitfall trapping or night surveys for amphibians, reptiles, or bats, or focused searches for butterflies or other insect species. Animal taxonomy

⁴ *California Natural Diversity Data Base, Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species and Communities in the Vicinity of Mint Canyon, USGS 7.5 Minute Quadrangle. State of California Resources Agency, California Department of Fish and Game, Natural Heritage Division, Sacramento, CA, 2007.*

⁵ *PCR Services Corporation (PCR), Biological Resources Assessment of the Proposed Cruzan Mesa Vernal Pools Significant Ecological Area (Significant Ecological Area Update Study), Prepared for Los Angeles County Department of Regional Planning, 2000.*

follows NABA⁶ for butterflies, Stebbins⁷ for amphibians and reptiles,⁸ AOU⁹ for birds, and Jameson and Peeters¹⁰ for mammals.

Detailed information on the surveys conducted is presented in Table 1, Biological Survey Information, of the NRC BRA, which is included as Appendix D-1 of this Draft EIR.

Focused plant surveys on all portions of the study area were conducted between March and July 2003 by Anuja Parikh and Nathan Gale of Flx and between April and June 2005 by Andy Sanders of the University of California, Riverside (UCR) herbarium. A list of plant species, including rare and commonly occurring plants observed within the study area, was compiled. Special emphasis was placed on searching for threatened, endangered, and otherwise special status plants that might be present within the study area, including San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) and slender-horned spineflower (*Dodecahema leptoceras*). Surveys also focused on determining the presence of vernal pool indicator species, rare species, and narrow endemics. Voucher specimens from the 2005 field season have been deposited in the UCR herbarium.

Focused surveys for the coastal California gnatcatcher were conducted to determine presence/absence of this species within the study area. Between April 21 and July 2, 2003, NRC biologists Claude Edwards (TE-814215-3), H. Lee Jones (TE-829204-2), and Kelly Volansky (TE-040531-2) conducted a habitat assessment followed by focused surveys for the coastal California gnatcatcher according to guidelines issued by the USFWS. Focused surveys were repeated between April 12 and June 2, 2005 by Claude Edwards, H. Lee Jones, and Jean-Paul LaCount (TE-081894-1); between March 16 and June 30, 2006 by H. Lee Jones, Claude Edwards, Kelly Volansky, and Eric Kline (TE-110373-0); and between April 7 and June 17, 2007 by H. Lee Jones and Michael Couffer. In general, coastal sage scrub areas and adjacent areas of mixed chaparral-coastal sage scrub were considered suitable gnatcatcher habitat. Details of the survey methodology can be found in the BRA included in Appendix D-1 of this Draft EIR.

Focused dry-season fairy shrimp surveys were conducted by GLA in Cruzan Mesa in 2002, and wet-season surveys were conducted by GLA in Plum Canyon and Cruzan Mesa in

⁶ North American Butterfly Association (NABA), *Checklist & English Names of North American Butterflies*, North American Butterfly Association, Morristown, NJ, 1995.

⁷ Stebbins, R. C., *A Field Guide to Western Reptiles and Amphibians*, Boston: Houghton-Mifflin, 2003.

⁸ The NRC BRA uses the following: *The Center for North American Herpetology, Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians (Fifth Edition)*, available on the web at www.cnah.org/, 2002.

⁹ American Ornithologists' Union, *The A.O.U. Check-List of North American Birds*, 7th ed., Allen Press, Lawrence, Kansas, Plus supplements published in *The Auk*, 1998.

¹⁰ Jameson, E. W., Jr. and H. J. Peeters, *Mammals of California*, Berkeley: University of California Press, 2004.

2003. A comprehensive functional evaluation of the existing vernal pool complexes on Cruzan Mesa was completed by GLA in 2004. Details of the methodology used for these surveys is included in the BRA (refer to Appendix D-1 of this Draft EIR).

In 2002, 2005, 2006, and 2008 GLA regulatory specialists examined the study area and adjacent off-site areas to determine the limits of: (1) ACOE jurisdiction pursuant to Section 404 of the Clean Water Act; and (2) CDFG jurisdiction pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code. Prior to beginning the field delineation, GLA examined 200- and 400-scale topographic base maps and a 300-scale color aerial photograph of the study area and compared with a USGS topographic map to determine the locations of potential areas of ACOE and CDFG jurisdiction. Suspected jurisdictional areas were field checked for the presence of definable channels and/or wetland vegetation, soils and hydrology. Suspected wetland habitats within the study area were evaluated using the methodology set forth in the U.S. Army Corps of Engineers 1987 Wetland Delineation Manual.¹¹ While in the field the jurisdictional area was recorded onto a 200-scale color aerial photograph using visible landmarks. Other data were recorded onto wetland data sheets. A copy of the jurisdictional delineation reports are included as Appendices D-3 and D-4 of this Draft EIR.¹²

On November 28, 2003, NRC biologist H. Lee Jones located and measured all trees greater than 6 inches dbh in the unnamed drainage that lies mostly within the proposed Skyline Ranch development footprint. These tree data were supplemented by the addition of GPS data collected by H. Lee Jones on April 12, 2005. An additional survey was completed on April 6, 2007 to more fully describe the one oak tree recorded in 2003.

(2) Vegetation Communities

The Skyline Ranch study area supports twelve vegetation communities as shown in Table 4.C-1, Vegetation Communities, on page 4.C-10 and Figure 4.C-1, Vegetation Communities, on page 4.C-11. Plant community classifications follow Holland¹³ and, where

¹¹ *Environmental Laboratory, Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi, 1987.*

¹² *Glenn Lukos Associates, Jurisdictional Delineation of the 2,173-Acre Skyline Ranch Residential Development Project, Los Angeles County, California, Technical Letter Report, Prepared for Hugh Hewitt, Revised May 5, 2009 and included in Appendix D-3.*

Glenn Lukos Associates, Jurisdictional Delineation of the Skyline Ranch Road Impact Area and the 78-Inch Storm Drain Study Area, Two Off-Site Facilities Associated with the Skyline Ranch Project in the City of Santa Clarita, Los Angeles County, California, Technical Letter Report, Prepared for Hugh Hewitt, Revised May 5, 2009 and included in Appendix D-4.

¹³ *Holland, R. F., Preliminary Descriptions of the Terrestrial Natural Communities of California, Unpublished Report, State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California, 1986 (updated in 1992).*

Table 4.C-1

Vegetation Communities

Vegetation Community	On-Site Acres	Off-Site Acres ^a
Coastal Sage Scrub	906.5	6.1
Disturbed Coastal Sage Scrub	330.6	9.3
Coastal Sage-Chaparral Scrub	324.5	1.2
Chaparral	261.9	0.0
Non-native Grassland	231.4	2.0
Disturbed	57.3	41.8
Barren	24.1	0.0
Holly-leaved Cherry Scrub	12.7	0.1
Southern Vernal Pool	12.2	0.0
Developed	6.6	0.3
Sycamore Riparian Woodland	4.6	0.0
Southern Willow Scrub	0.6	0.0
TOTAL	2,173.0	60.8

^a Off-site grading and fuel modification will occur east, west, and south of the development area.

Source: NRC 2007.

appropriate, Sawyer and Keeler-Wolfe.¹⁴ Floral taxonomy, except for ferns and gymnosperms, follows the Angiosperm Phylogeny Group¹⁵ for classification at the family level, and Hickman¹⁶ for classification of all plant taxa below the family level, with a few exceptions based on the recent literature.

As shown in Figure 4.C-1, the Quinn Fire burned approximately 100.2 acres on a hill in the eastern portion of the study area in August 2005. The vegetation communities burned include 51.6 acres of coastal sage scrub, 4.3 acres of disturbed coastal sage scrub, 30.6 acres of coastal sage-chaparral scrub and 10.6 acres of chaparral. Though burn damage was evident in the area during a site visit by NRC in January 2007, fire is an important part of the natural ecology of each of these vegetation communities and they are expected to fully recover to their pre-burn state within a couple of years. As such, the fire did not substantially diminish the resource value of these communities in the burn area.

¹⁴ Sawyer, J. O., and Keeler-Wolf, T., *A Manual of California Vegetation*, CNPS Press, Sacramento, California, 1995.

¹⁵ Angiosperm Phylogeny Group, *An Ordinal Classification for the Families of Flowering Plants*, *Annals of the Missouri Botanical Garden*, 85:531-55, 1998.

¹⁶ Hickman, J. C. (Editor), *The Jepson Manual, Higher Plants of California*, University of California Press, Berkeley, California, 1993.

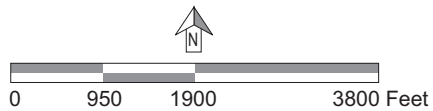
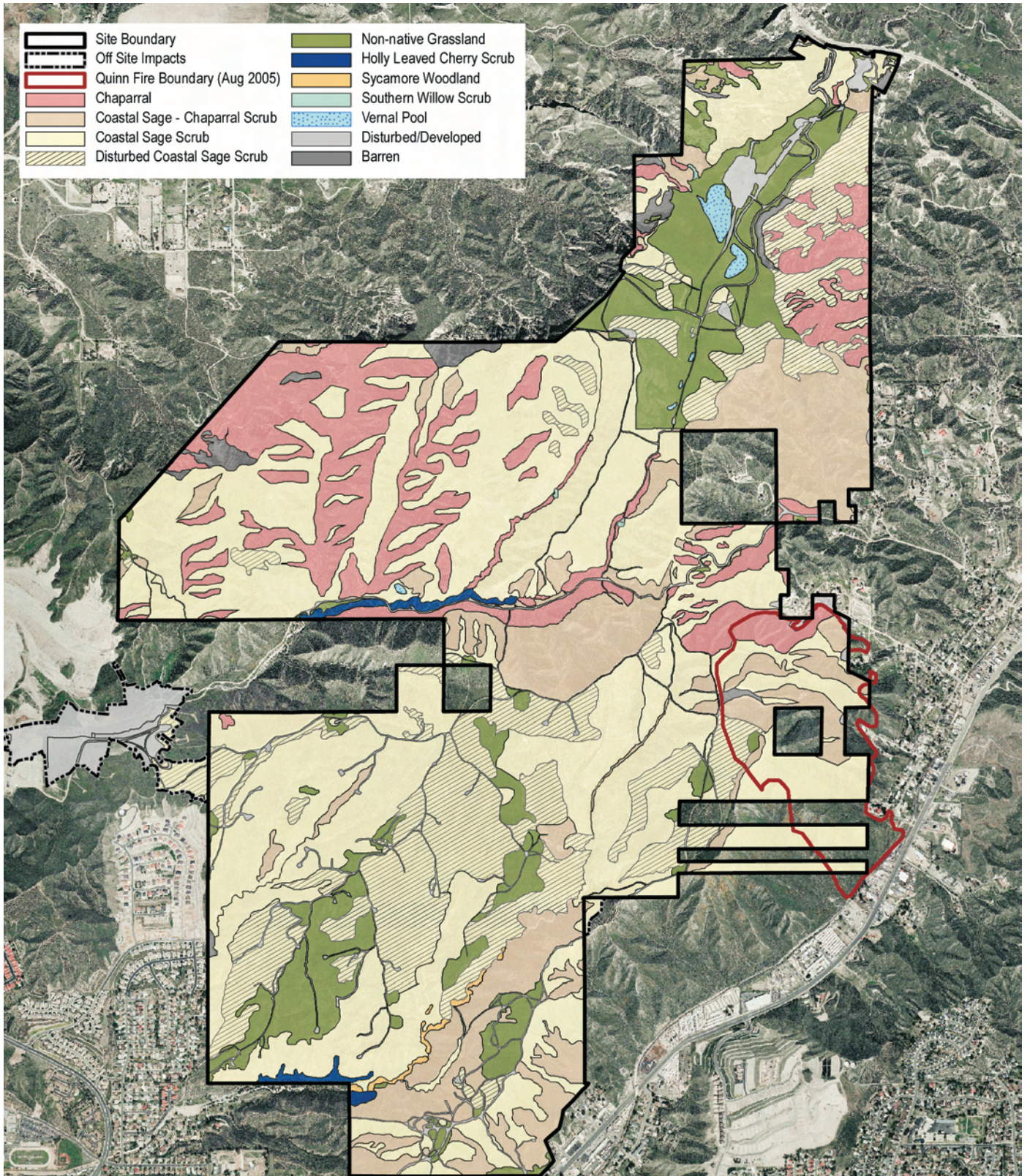


Figure 4.C-1
Vegetation Communities

Source: Natural Resources Consultants, October 2007.

Coastal sage-chaparral scrub is a mixed plant community supporting the component species of mixed coastal sage scrub and chamise chaparral. This vegetation community supports an overstory that is relatively open and is dominated by chamise (*Adenostoma fasciculatum*), chaparral yucca (*Hesperoyucca whipplei*), California buckwheat (*Eriogonum fasciculatum*) and California sagebrush (*Artemisia californica*). Other chaparral species that occur in these areas, especially on north-facing slopes, include scrub oak (*Quercus berberidifolia*), California lilac (*Ceanothus cuneatus*, *C. crassifolius*), and buckthorn (*Rhamnus crocea*, *R. ilicifolia*). The understory in these areas is often open cobble dominated by bromes (*Bromus madritensis* ssp. *rubens*, *B. hordeaceus*, *B. tectorum*), Mediterranean schismus (*Schismus barbatus*), and wild oats (*Avena barbata*, *A. fatua*). A total of 325.7 acres (324.5 acres on-site and 1.2 acres off-site) of coastal sage-chaparral scrub occur throughout the study area. As mentioned previously, approximately 30.6 acres of this vegetation community burned during the Quinn Fire; however, it is expected to fully recover to its pre-burn state due to the natural ecology of the vegetation community which is adapted to periodic brush fires.

A xeric type of **coastal sage scrub** and **disturbed coastal sage scrub** showing characteristics of both Riversidian and Venturan sage scrub occupy 1,252.5 acres (1,237.1 acres on-site and 15.4 acres off-site) on sloping terrain. The dominant coastal sage scrub species are California sagebrush and California buckwheat. Purple sage (*Salvia leucophylla*) and deerweed (*Lotus scoparius*) are dominant locally. Other less dominant plants include thicketleaf yerba santa (*Eriodictyon crassifolium* var. *nigrescens*), black sage (*S. mellifera*), white sage (*S. apiana*), interior goldenbush (*Ericameria linearifolia*), Acton's encelia (*Encelia actoni*), our Lord's candle, cudweed aster (*Lessingia filaginifolia*), and beavertail cactus (*Opuntia basilaris* var. *basilaris*). Various grasses and herbs are prevalent in the understory, including native needlegrasses (*Nassella pulchra*, *N. lepida*), fascicled tarweed (*Hemizonia fasciculata*), and chia (*S. columbariae*). The non-native, invasive short-podded mustard (*Hirschfeldia incana*) has become established throughout the coastal sage scrub community; these areas are mapped as disturbed coastal sage scrub. As mentioned previously, approximately 51.6 acres of coastal sage scrub and 4.3 acres of disturbed coastal sage scrub burned during the Quinn Fire; however, these areas are expected to fully recover to their pre-burn state due to the natural ecology of coastal sage scrub as a fire-adapted community.

The **non-native grassland** community generally consists of invasive non-native grasses and mustards that are primarily of Mediterranean origin, and which have become the dominant ground cover formation on disturbed sites throughout the western states. Approximately 233.4 acres of non-native grassland (231.4 acres on-site and 2.0 acres off-site) generally occur in the northern portion of the study area on the Cruzan Mesa and in the southern portion of the study area on mesas, ridgelines, and gentler south-facing slopes. In many areas it is transitional with coastal sage scrub and clearly represents an early seral stage of coastal sage scrub following past soil disturbance. Grasslands found within the study area are dominated by bromes, Mediterranean schismus, and wild oats. Native grass species scattered in this community include

fescue (*Vulpia octoflora* var. *octoflora* and *V. microstachys*) and perennial needlegrasses. Native grasses occur in scattered patches within the non-native grassland, especially along the margins of the vernal pools; however, NRC did not detect any grassland patches where native grasses covered greater than ten percent of the vegetation cover and none were mapped as a separate vegetation community. Herbaceous plants commonly observed in the grassland community were the introduced red-stemmed filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), short-podded mustard, black mustard (*Brassica nigra*), tumble mustard (*Sisymbrium altissimum*), and the native fascicled tarweed. Native shrubs scattered in the grasslands include California buckwheat and California sagebrush.

A total of 261.9 acres of **chaparral** (all on-site) are found in scattered patches on steeper north-facing slopes in the northern half of the Skyline Ranch study area, but in many areas it thoroughly intergrades with coastal sage scrub and is impractical to map as a distinct plant community. Chamise is the predominant chaparral species, especially on slopes where chaparral and coastal sage scrub are found together, but in a few areas other species such as scrub oak, California lilac, buckthorn, mountain mahogany (*Cercocarpus betuloides*), toyon (*Heteromeles arbutifolia*), and thick-leaf yerba santa predominate. Areas dominated by these species are small in their extent and were not mapped as separate subcommunities. As mentioned previously, approximately 10.6 acres of chaparral burned during the Quinn Fire; however, is expected to fully recover to its pre-burn state due to the natural ecology of chaparral as a fire-adapted community.

A **sycamore riparian woodland** community is present in the middle portion of the unnamed drainage in the southern portion of the study area and occupies approximately 4.6 acres (all on-site). A few Fremont cottonwood trees, which are scattered among sycamores, occur throughout the middle portion of the unnamed drainage.

A total of 0.6 acre (all on-site) of **southern willow scrub** occurs on the north slope of Cruzan Mesa on steep terrain. Willows are poorly represented within the study area because of the low annual rainfall, highly porous sandy soils, and consequent lack of water in the drainages for most of the year. As mapped, this small area is comprised almost entirely of willows (*Salix* sp.) and is surrounded by chaparral and barren areas.

A total of 12.2 acres of **southern vernal pool** and artificial pools have been mapped within the on-site portions of the study area within six pools. Vernal pools form in natural depressions over clay soils with limited drainage, hold water only during the rainy season, and support a special array of annual plant species that typically flower in the spring as these seasonal ponds dry up. Five of the pools occur on Cruzan Mesa and one occurs in Plum Canyon. Agency-listed plants and invertebrates, as well as non-listed vernal pool endemics, occur in the pools on-site as discussed in detail in Section 10c, *Sensitive Plant Species*, and Section 10d, *Sensitive Wildlife Species*, below.

The vernal pool complex on Cruzan Mesa consists of one large, bisected pool (totaling 10.7 acres) in the central mesa. This pool formerly existed as a single pool prior to the installation of a small private airstrip in the 1950s. Four smaller artificial pools (totaling 0.58 acres) exist seasonally in the southern part of the mesa and include man-created stock ponds and partially enclosed concrete basins. The Plum Canyon pool (0.95 acre) occurs in a depression on a hill-slope terrace north of the main drainage channel. The pool is not visible from the road below it, and is relatively undisturbed. At its upland edges, it is surrounded by grassland and herbaceous vegetation with cherry scrub along the channel below it and coastal sage scrub on the hill-slopes above it.

Wetland plant species in the pools include the Federally listed spreading navarretia (*Navarretia fossalis*) and California Orcutt grass (*Orcuttia californica*); other plant species present are spikerush (*Eleocharis macrostachya*, *E. geniculata*), dwarf woollyheads (*Psilocarphus brevissimus* var. *brevissimus*), annual hairgrass (*Deschampsia danthonioides*), purslane speedwell (*Veronica peregrina* ssp. *xalapensis*), smooth boisduvalia (*Epilobium pygmaeum*), short-seeded waterwort (*Elatine brachysperma*), and lowland cudweed (*Gnaphalium palustre*). Upland vegetation around the Plum Canyon pool consists of brome grasses, wild oats, and fascicled tarweed.

Conservation of vernal pool resources, including special status plant and invertebrate species, depends on maintenance of the functional watershed (i.e., the catchment that contributes runoff to the pool). The functional watershed of the Cruzan Mesa vernal pools was determined by Sikand Engineering to cover approximately 101.6 acres, including the area of the vernal pool basins. The functional watershed has not been determined for the Plum Canyon vernal pool.

A total of 12.8 acres (12.7 acres on-site and 0.1 acre off-site) of **holly-leaved cherry scrub (unique stand)** is found on low terraces along both major drainages within the study area. These areas are dominated by relatively large, mature shrubs and small trees of holly-leaved cherry (*Prunus ilicifolia* ssp. *ilicifolia*), up to 19 feet (6 meters) in height. Few other native tree species are found in association with this plant community within the study area, with the exception of a few toyon and an occasional willow (*Salix lasiolepis*, *S. exigua*), in Plum Canyon, and a few toyon and western sycamore in the unnamed canyon. Proceeding upstream in the unnamed canyon, the holly-leaved cherry scrub community transitions into sycamore riparian woodland. The understory of this community comprises a number of species, including primroses (*Camissonia* spp.), mesa phlox (*Eriastrum densifolium*), lastarriaea (*Lastarriaea coriacea*), beavertail cactus, valley lessingia (*Lessingia glandulifera* var. *glandulifera*), skunkbrush (*Rhus trilobata*), and Mediterranean schismus.

Developed, disturbed, and barren areas are those areas generally devoid of vegetation that provide habitat for few species of wildlife. Often lumped together in biological analyses, they are separated herein because they do have distinct structural characteristics. Developed

areas are those portions of the study area that contain man-made structures such as buildings or pavement. Disturbed areas are those portions of the study area without vegetation, the cause of which is apparently man-made, but vegetation in some form could have the opportunity to return if left alone. This category includes unimproved roads and trails. Barren areas are those portions of the study area that are naturally devoid of vegetation and generally consist of steep slopes subject to frequent landslide events. A total of 130.1 acres (88.0 acres on-site and 42.1 acres off-site) of developed, disturbed, and barren areas occur within the study area.

(3) County Jurisdictional Oak Trees

One isolated mature coast live oak (*Quercus agrifolia*) tree occurs in the upper reaches of the unnamed canyon on the study area boundary. It is located on the southern bank of the drainage opposite the point where two side drainages converge and enter the main drainage. The dbh of this oak tree is 32 inches. Because the study area only supports one coast live oak tree, it is not considered a coast live oak woodland plant community. Therefore, this tree would not be regulated under SB 1334, but would be regulated under the County's Oak Tree Ordinance.

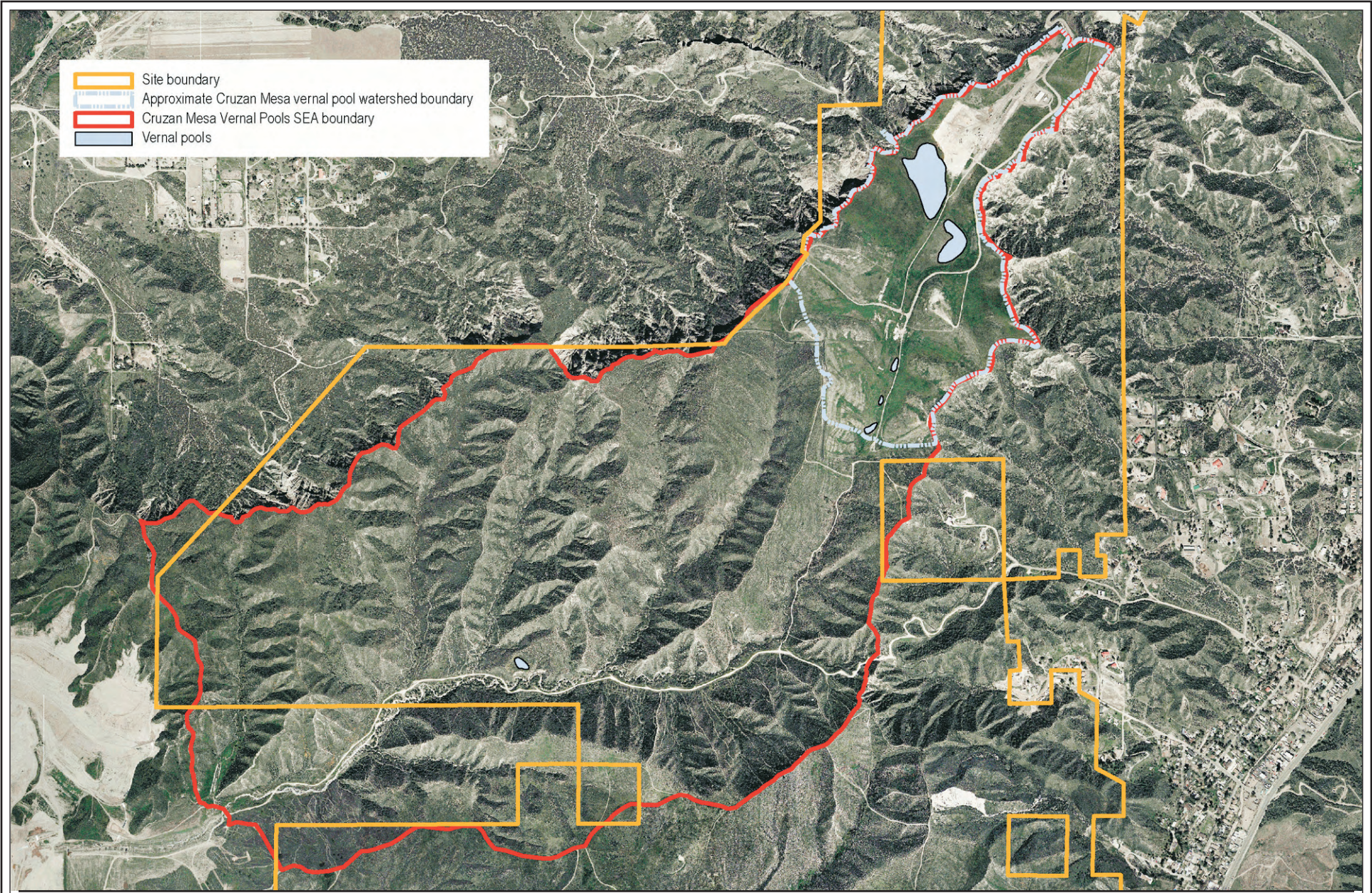
The study area supports scrub oak; however, no scrub oak shrubs with a dbh greater than eight inches (consistent with the County Oak Tree Ordinance) were observed within the study area.

(4) Significant Ecological Areas

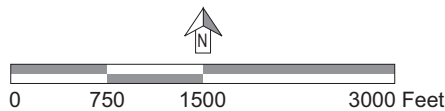
The study area is not within a current SEA.¹⁷ However, the proposed **Cruzan Mesa Vernal Pools SEA**¹⁸ would encompass 958 acres in and adjacent to the northern half of Skyline Ranch, extending from the Plum Canyon watershed north to the escarpment above Bouquet Canyon and northeast along the escarpment to include Cruzan Mesa proper (refer to Figure 4.C-2, Proposed Cruzan Mesa SEA, on page 4.C-16). It includes mesas, canyons, interior slopes, and a seasonally flowing wash. This portion of the study area has been identified as a proposed SEA due to the presence of two vernal pool areas: the Cruzan Mesa vernal pool complex and the smaller Plum Canyon vernal pool. The Cruzan Mesa vernal pools are within a topographically enclosed basin atop an eroded foothill mesa, and the Plum Canyon vernal pool appears to be the result of a landslide that left a depression on a hillside terrace. The two vernal pool areas are hydrologically distinct; however, based on their proximity and shared species diversity they can be viewed as an ecologically functional unit. The vernal pools, and the proposed Cruzan Mesa Vernal Pool SEA,

¹⁷ *County of Los Angeles. Countywide General Plan, 1980.*

¹⁸ *PCR Services Corporation, Biological Resources Assessment of the Proposed Cruzan Mesa Vernal Pools Significant Ecological Area, Prepared for the County of Los Angeles, November 2000.*



- Site boundary
- Approximate Cruzan Mesa vernal pool watershed boundary
- Cruzan Mesa Vernal Pools SEA boundary
- Vernal pools



Source: Natural Resources Consultants, January 2007.

Figure 4.C-2
Proposed Cruzan Mesa SEA

are located to the north and outside of the Skyline Ranch Project's proposed 620-acre development area.

Vernal pools are regionally unique biotic communities that may support a variety of special status plant and animal species. Specifically, the Cruzan Mesa and Plum Canyon vernal pools support the Federally and State endangered California Orcutt grass, as well as the Federally threatened spreading navarretia and vernal pool fairy shrimp (*Branchinecta lynchi*), and provide potential habitat for several additional special status species that are not currently listed as threatened or endangered by the State and Federal wildlife resource agencies, such as the western spadefoot (*Spea hammondi*). In addition to the vernal pools, the proposed Cruzan Mesa SEA supports coastal sage scrub and holly-leaved cherry scrub (unique stand), both of which are considered sensitive/declining vegetation communities by the CDFG.

Other than the federally listed vernal pool species listed above, no additional threatened or endangered plant or wildlife species have been detected within the study area. Non-listed special status species that have been recorded in these communities within the SEA include slender mariposa lily (*Calochortus clavatus* var. *gracilis*), coast horned lizard (*Phrynosoma coronatum*), loggerhead shrike (*Lanius ludovicianus*), northern harrier (*Circus cyaneus*), golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*).

The proposed **Santa Clara River SEA** encompasses 37,774 acres located along the length of the Santa Clara River in Los Angeles County. This proposed SEA extends from Kentucky Springs/Aliso Canyon in the east along the Santa Clara River watershed to the Ventura County line in the west. The proposed SEA includes the existing Santa Clara River SEA (SEA #23), San Francisquito Creek (currently SEA #19), which extends to the north, and significant portions of Elsmere, Whitney, Placerita, and Bear canyons to the south. The existing Santa Clara River SEA (SEA #23) is 5,410 acres and covers the last major unchanneled river system in Los Angeles County providing habitat for the federally endangered unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*). The proposed Santa Clara River SEA supports a variety of special status biological resources and is subject to urban pollutants due to the increasing development in the area. However, as this proposed SEA is located approximately one mile south of the study area at its closest approach, these resources do not represent a significant constraint to development of the study area.

(5) Existing Jurisdictional Waters

A jurisdictional delineation was conducted within the study area and adjacent off-site areas by GLA.¹⁹ Approximately 152,072 linear feet of jurisdictional streambed were delineated within the study area within 30 drainage systems (Plum Canyon Creek plus 29 additional unnamed drainage systems) as shown in Figure 4.C-3, Jurisdictional Features, on page 4.C-19. The study area supports 10.50 acres of ACOE jurisdictional waters of the U.S., none of which consist of jurisdictional wetlands, 22.70 acres of RWQCB waters of the State which includes all areas within Corps jurisdiction as well as vernal/artificial pools, and 14.94 acres of CDFG jurisdictional streambed, of which 3.02 acres is vegetated riparian habitat. All of the drainages within the study area are characterized as ephemeral in nature. GLA identified 0.65 acre of Corps and RWQCB jurisdiction within the adjacent off-site areas, none of which consists of jurisdictional wetland, and 0.76 acre of CDFG jurisdiction, of which 0.13 acre consists of vegetated riparian habitat.

The most prominent drainage systems on-site include Plum Canyon in the northern portion of the study area and an unnamed drainage system (referred to by GLA as Drainage 5) in the southern portion of the study area. Mint Canyon occurs off-site to the south and east. Plum Canyon and its tributaries support 1.22 acres of ACOE jurisdictional waters of the U.S. and 1.30 acres of CDFG jurisdictional streambed, of which 0.08 acre is vegetated riparian habitat. Plum Canyon is characterized as ephemeral in nature. A majority of Plum Canyon and its tributaries are unvegetated and dominated by large, cobbly rock within the streambed. The headwaters of Plum Canyon are dominated by upland vegetation consisting of coastal sage scrub species such as scrub oak, black sage, white sage, California buckwheat, laurel sumac (*Malosma laurina*), chamise, our Lord's candle, mountain mahogany, yerba santa, toyon, California sagebrush, and California lilac. There are also isolated patches and/or individual plant species of Mexican elderberry, holly-leafed cherry, mule fat, arroyo willow (*Salix lasiolepis*), and Fremont's cottonwood.

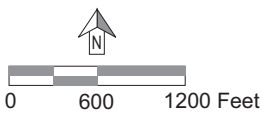
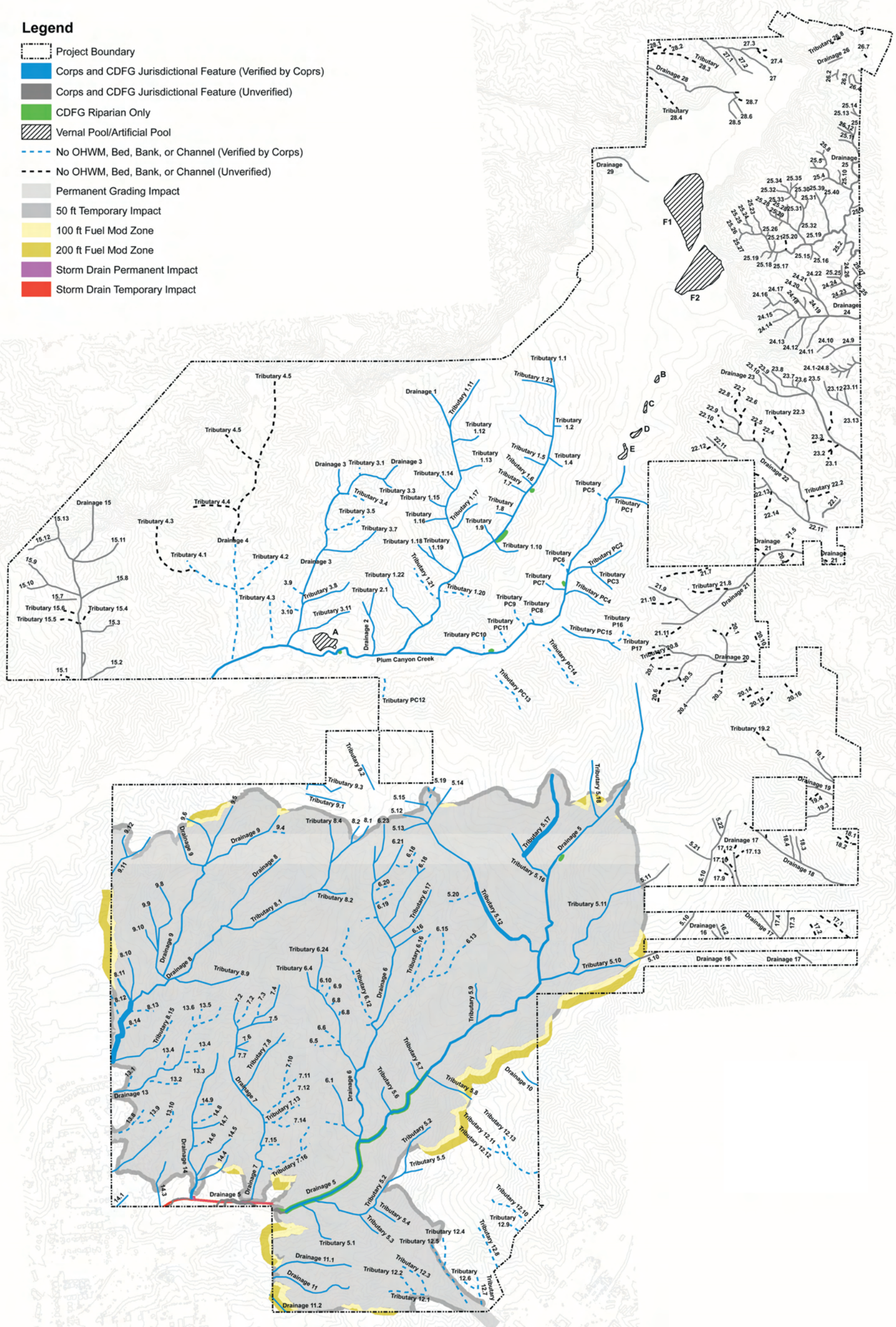
Drainage 5 and its tributaries support 3.57 acres of ACOE jurisdictional waters of the U.S. and 6.82 acres of CDFG jurisdictional streambed, of which 2.75 acres consist of vegetated riparian habitat. The upstream portion of Drainage 5 and the tributaries of Drainage 5 are unvegetated and dominated by large, cobbly rock within the streambed. The banks of these

¹⁹ *Glenn Lukos Associates, Jurisdictional Delineation of the 2,173-Acre Skyline Ranch Residential Development Project, Los Angeles County, California, Technical Letter Report, Prepared for Hugh Hewitt, Revised May 5, 2009 and included in Appendix D-3.*

Glenn Lukos Associates, Jurisdictional Delineation of the Skyline Ranch Road Impact Area and the 78-Inch Storm Drain Study Area, Two Off-Site Facilities Associated with the Skyline Ranch Project in the City of Santa Clarita, Los Angeles County, California, Technical Letter Report, Prepared for Hugh Hewitt, Revised May 5, 2009 and included in Appendix D-4.

Legend

- Project Boundary
- Corps and CDFG Jurisdictional Feature (Verified by Coprs)
- Corps and CDFG Jurisdictional Feature (Unverified)
- CDFG Riparian Only
- Vernal Pool/Artificial Pool
- No OHWM, Bed, Bank, or Channel (Verified by Corps)
- No OHWM, Bed, Bank, or Channel (Unverified)
- Permanent Grading Impact
- 50 ft Temporary Impact
- 100 ft Fuel Mod Zone
- 200 ft Fuel Mod Zone
- Storm Drain Permanent Impact
- Storm Drain Temporary Impact



Source: Glenn Lukos Associates, May 2009

Figure 4.C-3
Jurisdictional Features

drainages are dominated by coastal sage scrub species similar to those species listed above for Plum Canyon. The downstream portion of Drainage 5 supports riparian habitat dominated by western sycamore, Fremont cottonwood, Mexican elderberry, mule fat, and holly-leaved cherry within, or adjacent to, the drainage.

The details of the remaining drainage systems within the study area and adjacent off-site areas are included in the technical letter reports prepared by GLA (November 29, 2006, revised May 5, 2009 and November 13, 2006, revised May 5, 2009). These reports are included as Appendices D-3 and D-4, respectively, of this Draft EIR.

The vernal pool located north of Plum Canyon is not included in these acreages as it was determined to be outside both ACOE and CDFG jurisdiction, as verified by both agencies.²⁰ Verification of the jurisdictional delineation by the ACOE occurred December 9, 2002²¹ and included a smaller study area than is currently proposed (refer to Figure 4.C-3). The CDFG verified the jurisdictional delineation of the same study area in January 2003.²² The vernal pools and artificial pools²³ on the Cruzan Mesa have not yet been verified by the ACOE or CDFG. As previously indicated, the vernal pools and artificial pools are located outside the proposed project's development area.

(6) Wildlife

Wildlife diversity within the study area is moderate, commensurate with the rather homogeneous nature of the coastal sage scrub- and grassland-covered slopes and ridges that comprise most of the study area. The highest species diversity occurs in Plum Canyon, which supports a complex plant community structure and diverse habitat types. Cruzan Mesa, with its complex of vernal pools and extensive grassland, offers additional habitat for a different array of species, and the long escarpment along the northern end of the property provides suitable nesting habitat for several species of raptors and suitable roosting areas for several bat species. The pools also offer resting and foraging habitat for a number of migratory waterfowl and shorebirds in the spring and early summer.

²⁰ *Glenn Lukos Associates, Jurisdictional Delineation of the 2,173-Acre Skyline Ranch Residential Development Project, Los Angeles County, California, Technical Letter Report, Prepared for Hugh Hewitt, Revised November 29, 2006, Revised May 5, 2009 and included in Appendix D-3.*

²¹ *Department of the Army. Jurisdictional Delineation Verification Letter from David J. Castanon, Chief, North Coast Section, Regulatory Branch of the Monasabian Property. Prepared for Pardee Homes c/o Glenn Lukos Associates. December 30, 2002.*

²² *Serr, Eryn. Glenn Lukos Associates. E-mail communication. October 25, 2005.*

²³ *Artificial pools include four man-made pools in the northern portion of the study area.*

(a) Invertebrates

The amount of relatively homogeneous scrubland within the study area is expected to sustain healthy populations of many native, upland scrub invertebrate species. Although focused surveys for terrestrial invertebrates were not conducted, incidental observations of invertebrate species were recorded in field notes. The butterfly fauna within the study area was characterized more thoroughly than that of other invertebrate groups simply because butterflies are diurnal, conspicuous, and for the most part are readily identifiable. Representative common butterfly species observed within the study area include Sara orangetip (*Anthocharis sara sara*), common white (*Pontia protodice*), acmon blue (*Icaricia acmon acmon*), Behr's metalmark (*Apodemia mormo virgulti*), and painted lady (*Vanessa cardui*). The vernal pools located in the northern portion of the study area, when ponded, form an aquatic habitat that supports a diverse assemblage of aquatic invertebrate fauna, including the Federally listed vernal pool fairy shrimp.

A list of all invertebrate species observed within the study area is presented in the BRA included as Appendix D-1 of this Draft EIR.

(b) Amphibians

Amphibians are relatively common throughout the study area, especially in shaded canyons and in the vernal pools. The widespread Pacific treefrog (*Hyla regilla*) and California toad (*Bufo boreas halophilus*) are well represented. The western spadefoot, a CDFG species of special concern, occurs in the vernal pools and perhaps other seasonally aquatic areas of the study area. Sensitive amphibian species are discussed further in Section 10, Sensitive Biological Resources.

(c) Reptiles

Reptiles, as a group, occupy a much broader spectrum of habitats than amphibians. While relatively few species were observed in this study, a number of species are likely to occur within the study area. The most frequently observed reptiles were western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), coast horned lizard, coastal whiptail (*Cnemidophorus tigris stejnegeri*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*). Other species likely to occur within the study area, but not detected, are San Diego banded gecko (*Coleonyx variegates abboti*), yucca night lizard (*Xantusia vigilis vigilis*), Skilton's skink (*Eumeces skiltonianus skiltonianus*), silvery legless lizard (*Anniella pulchra pulchra*), San Diego alligator lizard (*Elgaria multicarinata webbia*), western blind snake (*Leptotyphlops humilis*), desert rosy boa (*Charina trivirgata gracia*), red racer (*Masticophis flagellum piceus*), chaparral whipsnake (*Masticophis lateralis lateralis*), coast patch-nosed snake (*Salvadora hexalepis virgulata*), San Diego gopher snake (*Pituophis catenifer annectens*),

California kingsnake (*Lampropeltis getula californiae*), and night snake (*Hypsiglena torquata*). Sensitive reptile species are discussed further in Section 10, Sensitive Biological Resources.

(d) Birds

Bird diversity is moderately high, especially when transient species are considered. In addition to the relatively high diversity of resident species, the Cruzan Mesa vernal pools and associated grasslands attract a number of non-resident species during migration, and the riparian communities in the canyons attract a number of wintering and migrant songbird species. The most common resident coastal sage scrub and chaparral species observed were: California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), Costa's hummingbird (*Calypte costae*), western scrub jay (*Aphelocoma californica*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), wrenit (*Chamaea fasciata*), northern mockingbird (*Mimus polyglottos*), California thrasher (*Toxostoma redivivum*), spotted towhee (*Pipilo maculatus*), California towhee (*Pipilo crissalis*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Amphispiza belli belli*), song sparrow (*Melospiza melodia*), house finch (*Carpodacus mexicanus*), and lesser goldfinch (*Carduelis psaltria*). Nuttall's woodpecker (*Picoides nuttallii*), northern flicker (*Colaptes auratus*), and oak titmouse (*Baeolophus inornatus*) reside in the woodland and scrub communities in the canyons. On Cruzan Mesa, the horned lark (*Eremophila alpestris*), savannah sparrow (*Passerculus sandwichensis*), red-winged blackbird (*Agelaius phoeniceus*), and western meadowlark (*Sturnella neglecta*) are common, and an occasional loggerhead shrike (*Lanius ludovicianus*) was observed. During winter, the white-crowned sparrow (*Zonotrichia leucophrys*) is numerous throughout, and the yellow-rumped warbler (*Dendroica coronata*) is most common in the canyons. The most common summer-only residents are western kingbird (*Tyrannus verticalis*), black-headed grosbeak (*Pheucticus melanocephalus*), and lazuli bunting (*Passerina amoena*). During periods of migration, Cruzan Mesa attracts moderately large numbers of swallows (five species observed) as well as several species of waterfowl in spring. The wooded canyons attract a number of species of migrant wood-warblers (eight species observed).

Raptors are well-represented within the study area. Raptor species observed include turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), American kestrel (*Falco sparverius*), Swainson's hawk (*Buteo swainsoni*), merlin (*Falco columbarius*), and great horned owl (*Bubo virginianus*). No raptor nests were observed within the study area during the course of ornithological surveys. Sensitive bird species are discussed further in Section 10, Sensitive Biological Resources.

(e) Mammals

Most mammals are either nocturnal, reclusive, or both, and are more often detected by their sign, denning sites, etc., or through live-trapping (rodents). Only five species were actually observed: Audubon's cottontail (*Sylvilagus audubonii*), San Diego black-tailed jackrabbit, California ground squirrel (*Spermophilus beecheyi*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*). Other species, such as pocket gopher (*Thomomys bottae*), woodrat (*Neotoma* sp.) and bobcat (*Lynx rufus*) were detected by their various sign. No bats were observed within the study area; however, several species may forage over the study area or roost locally in abandoned buildings and along the escarpment at the north end of the study area. Sensitive mammal species are discussed further in Section 10, Sensitive Biological Resources.

(7) Wildlife Movement

With existing developed areas in the City of Santa Clarita to the south of the study area and new large-scale residential communities now being built immediately to the west, the study area does not serve as a component of a significant regional wildlife movement corridor per se, nor does it serve as a linkage between two or more larger habitat areas. Additionally, the study area is outside of any identified Missing Linkages in the San Gabriel Mountains/Castaic design.²⁴ Plum Canyon and the unnamed canyon to the south may have once served as travel routes for the more mobile terrestrial animals, as they linked the study area with Bouquet Canyon and the Santa Clara River downstream. These two drainages undoubtedly still serve as local travel routes for terrestrial mammals and other more mobile species, but they no longer tie in directly with wildlife habitats off-site to the south. The study area, however, is still directly linked to the Angeles National Forest through Vasquez Canyon to the north. The vernal pools on Cruzan Mesa are isolated, high resource-value sites, providing a habitat linkage for migrating waterfowl and, potentially, shorebirds. They provide feeding grounds for these long-distance migrants, as well as for many resident species. However, the ponds do not lie within any identified terrestrial movement routes for wildlife. Nevertheless, they may serve as seasonal watering sites for species moving through and across the Plum Canyon divide between Mint and Bouquet canyons.

(8) Regional Significance of the Study Area

The northern portion of the study area is within the boundaries of the proposed Cruzan Mesa Vernal Pools SEA, which includes the Cruzan Mesa and the upper Plum Canyon watershed. This SEA has not yet been designated as such through the Los Angeles County General Plan.

²⁴ South Coast Wildlands Project. November 2, 2000. *Missing Linkages: Restoring Connectivity to the California Landscape*.

South of the study area and the City of Santa Clarita is the Santa Clara River SEA. Biologically it is not closely tied to the Skyline Ranch study area, although the canyons within the study area drain into the Santa Clara River via Bouquet Canyon.

Plum Canyon and the unnamed canyon to the south offer topographically defined landscape linkages with Cruzan Mesa to the north, but no longer with Bouquet Canyon to the west, as the lower reaches of these drainages have now been channelized with the development of these areas. These canyons have not been designated by the County of Los Angeles or other resource protection agencies as regionally important habitat linkages or wildlife movement corridors.

The vernal pools within the study area offer a habitat-type that is unique in the region and rare statewide. The nearest known vernal pool complex is approximately 25 miles to the southwest in the vicinity of the former Carlsberg Ranch, near the City of Moorpark in Ventura County. The only other known vernal pool complex in Los Angeles County is at LAX Airport approximately 35 miles to the south. Aerial photograph review suggests that there may be one vernal pool south of Vasquez Canyon, approximately one mile west of Cruzan Mesa and an additional vernal pool south of the 14 Freeway just east of Fair Oaks Ranch.²⁵

(9) Critical Habitat

Portions of the Skyline Ranch study area fall within the current Critical Habitat boundaries for the spreading navarretia,²⁶ as shown in Figure 4.C-4, Designated and Proposed Critical Habitat, on page 4.C-25. The study area is not within recently designated Critical Habitat for the coastal California gnatcatcher²⁷ and is not within the Critical Habitat boundaries for the Riverside fairy shrimp²⁸ or any other threatened or endangered species.

(10) Sensitive Biological Resources

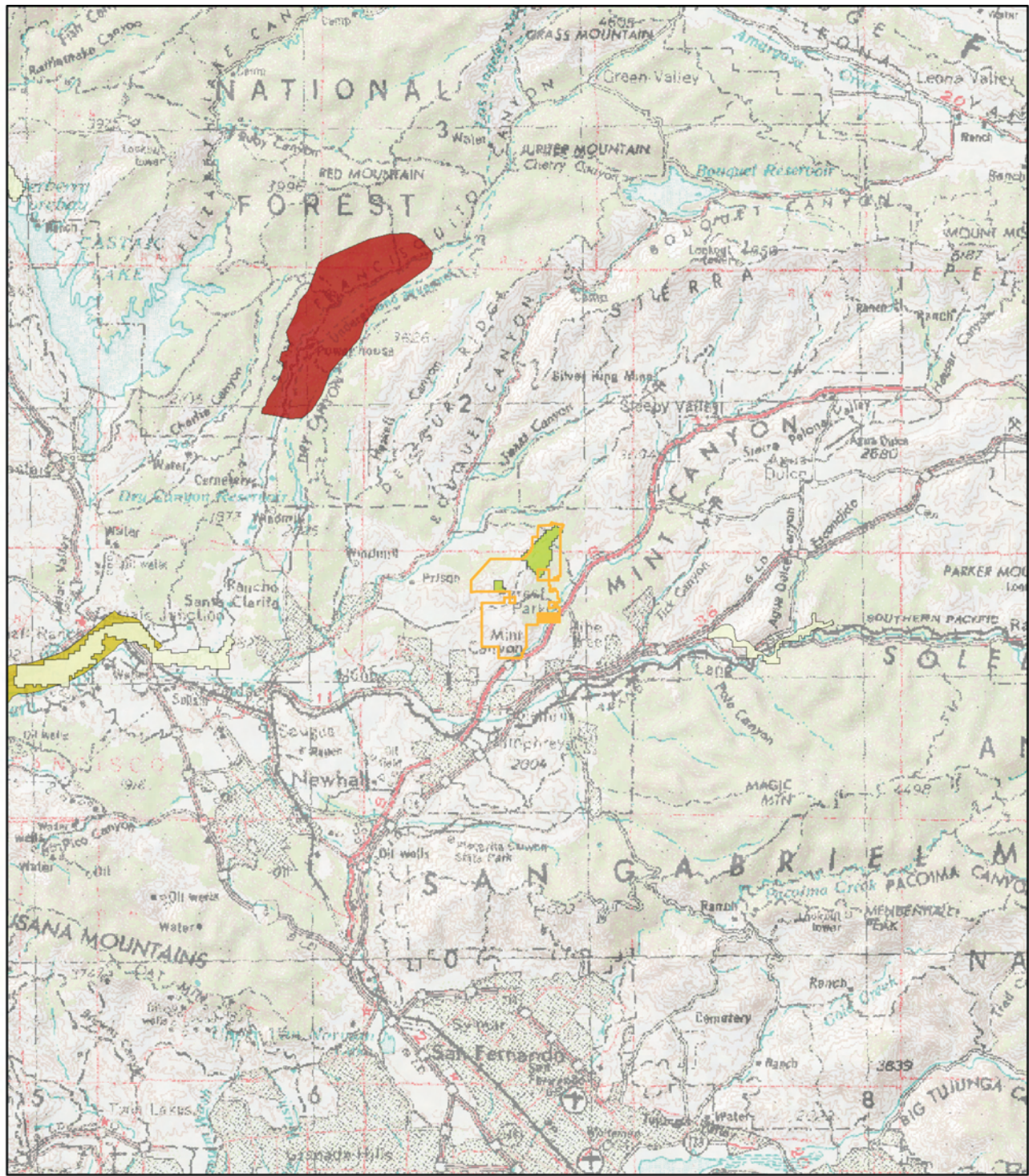
Special status, or sensitive, biological resources include declining habitats as well as species that have been afforded special recognition by Federal, State, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise sensitive, principally due to the species' declining or limited range, usually resulting from habitat loss. Watch lists of

²⁵ Joe Decruyenaere, County of Los Angeles, personal communication, July 26, 2006.

²⁶ U.S. Fish and Wildlife Service (USFWS), October 18, 2005. *Designation of Critical Habitat for Navarretia fossalis (Spreading Navarretia); Final Rule. Federal Register. Vol. 70, No. 200. 60658-60694.*

²⁷ U.S. Fish and Wildlife Service (USFWS), *Final Determination of Critical Habitat for the Coastal California Gnatcatcher, Federal Register 72 (243): 72010-72058, 2007.*

²⁸ U.S. Fish and Wildlife Service (USFWS), *Final Designation of Critical Habitat for the Riverside Fairy Shrimp (Streptocephalus woottoni); Federal Register 70 (69): 19154-19204, 2005.*



Marcus C. England, Natural Resource Consultants, 6 May 2009, Skyline_RanchGIS/Critical_Habitat.mxd

-  Skyline Ranch Boundary
-  Arroyo Toad Excluded Essential Habitat
-  Least Bell's Vireo (1994)
-  Spreading Navarretia (2005)
-  California Red-legged Frog (Proposed)
-  California Red-legged Frog (2006)

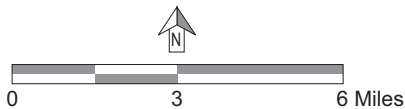


Figure 4.C-4
Designated and Proposed
Critical Habitat

Source: Natural Resources Consultants, May 2009

such resources are maintained by the CDFG, the USFWS, and groups such as the California Native Plant Society (CNPS).

(a) Sensitive Resource Classification

(i) Federal Protection and Classifications

A **Federally endangered species** is a species of invertebrate, plant, or wildlife formally listed by the USFWS under the ESA as facing extinction throughout all or a significant portion of its geographic range. A **Federally threatened species** is one formally listed by the USFWS as likely to become endangered within the foreseeable future throughout all or a significant portion of its range. “Take” of a Federally endangered or threatened species or, in some cases, its habitat is prohibited by Federal law without a special permit. The term “take,” under the ESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Harm is defined by the USFWS to encompass “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.”

A **Federal species of concern** is an informal term that refers to a species that the USFWS believes might be declining and in need of concentrated conservation actions to prevent decline. These species receive no legal protection, and the use of the term does not mean that they will eventually be proposed for listing. The Federal species of concern status has not been maintained on a statewide basis, so this designation has been removed from CDFG’s “Special Animals” list. Some USFWS field offices (e.g., Sacramento) maintain lists of Federal species of concern. The Ventura Fish and Wildlife Office does not maintain such a list for their jurisdiction, which includes Santa Cruz, San Benito, Monterey, Santa Barbara, Ventura, Mono and Inyo counties and portions of San Luis Obispo, Kern, Los Angeles, and San Bernardino counties. Nevertheless, species formerly with this designation are listed in the NRC BRA as “former Federal species of concern”; therefore, this term is also used in this Draft EIR.

(ii) State of California Protection and Classifications

The State of California considers an **endangered species** one whose prospects of survival and reproduction are in immediate jeopardy; a **threatened species** is one present in such small numbers throughout its range that it is considered likely to become an endangered species in the near future in the absence of special protection or management; and a **rare species** is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. The designation “rare species” applies only to California native plants. State threatened and endangered species include both plants and wildlife but do not include

invertebrates and are legally protected against “take” as this term is defined in the California Endangered Species Act.²⁹

Species of special concern is an informal designation used by the CDFG for some declining wildlife species that are not officially listed as endangered, threatened, or rare.^{30,31} This designation does not provide legal protection, but signifies that these species are recognized as vulnerable by CDFG.

Species that are **California fully protected** include those protected by special legislation for various reasons, such as the white-tailed kite (*Elanus leucurus*).

(iii) California Native Plant Society

The CNPS is a statewide resource conservation organization that has developed an inventory of California’s special status plant species.³² This inventory is a summary of information on the distribution, rarity, and endangerment of California’s vascular plants. This rare plant inventory consists of four lists. **CNPS List 1A** plant species are presumed extinct in California because they have not been seen in the wild for many years. **CNPS List 1B** plants are considered as rare, threatened, or endangered throughout their range. **List 2** plant species are considered rare, threatened, or endangered in California, but more common in other states. Plant species on lists 1A, 1B, and 2 generally meet the CDFG criteria for endangered, threatened, or rare listing.³³ Plant species for which CNPS requires additional information in order to properly evaluate their status are included on **List 3**. **List 4** plant species are those of limited distribution in California whose susceptibility to threat is considered low at this time, or for which more survey data must be acquired within the State to adequately assess whether the species is rare in California.

The CNPS recently added “threat ranks” which parallel the ranks used by the CNDDDB. These ranks are added as a decimal code after the CNPS List (e.g., List 1B.1). The threat codes are as follows: .1 – Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat); .2 – Fairly endangered in California (20-80% occurrences

²⁹ *California Fish & Game Code, Section 2050 et seq.*

³⁰ *Remsen, J. V., Bird Species of Special Concern in California: An Annotated List of Declining or Vulnerable Bird Species, Non-Game Wildlife Investigations, Wildlife Management Branch, California Department of Fish and Game Administrative Report No. 78-1, Sacramento, CA, 1978.*

³¹ *California Department of Fish and Game (CDFG) and Point Reyes Bird Observatory (PRBO), California Bird Species of Special Concern: Draft List and Solicitation of Input, (www.prbo.org/BSSC/draftBSSClist.pdf), 2001.*

³² *CNPS, Inventory of Rare and Endangered Plants of California (sixth edition), Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor, California Native Plant Society, Sacramento, California, x+388pp, 2001.*

³³ *Ibid.*

threatened); and .3 – Not very endangered in California (<20% of occurrences threatened or no current threats known).

The following sections indicate the habitats, as well as plant and animal species, present or potentially present within the study area that have been afforded special recognition. Sources used to determine the potential occurrence of special status resources in the vicinity of the study area include USFWS,³⁴ CDFG,³⁵ CNPS,³⁶ California Natural Diversity Data Base,³⁷ California Wildlife Habitat Relationships Database System,³⁸ Remsen,³⁹ CDFG and PRBO,⁴⁰ Jennings and Hayes,⁴¹ and Williams.⁴²

³⁴ U. S. Fish and Wildlife Service (USFWS), *Endangered and Threatened Wildlife and Plants, Federal Register 50, CFR Part 17.11 and 17.12*, U. S. Department of the Interior, Washington, DC, 1997.

³⁵ State of California, The Resources Agency, Department of Fish and Game, Habitat Conservation Division, Wildlife & Habitat Data Analysis Branch, *California Natural Diversity Database, State and Federally Listed Endangered and Threatened Animals of California*, 12 pp., October 2007; State of California, The Resources Agency, Department of Fish and Game, Habitat Conservation Division, Wildlife & Habitat Data Analysis Branch, *California Natural Diversity Database, State and Federally Listed Endangered, Threatened, and Rare Plants of California*, 16 pp., October 2007; State of California, The Resources Agency, Department of Fish and Game, Wildlife and Habitat Data Analysis Branch, *California Natural Diversity Database, Special Animals List, Sacramento*, 55 pp., October 2007; California Department of Fish and Game, *Natural Diversity Database, Special Vascular Plants, Bryophytes, and Lichens List, Quarterly publication, Mimeo*, 69 pp., October 2007; State of California, The Resources Agency, Department of Fish and Game, Wildlife Habitat Data Analysis Branch, *California Natural Diversity Database, List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database*, September 2003.

³⁶ CNPS, *Inventory of Rare and Endangered Plants of California (sixth edition)*, Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor, California Native Plant Society, Sacramento, California, x+388pp., 2001.

³⁷ California Natural Diversity Data Base, *Data Base Record Search for Information on Threatened, Endangered, Rare, or Otherwise Sensitive Species and Communities in the Vicinity of Mint Canyon, USGS 7.5 Minute Quadrangle*, State of California Resources Agency, California Department of Fish and Game, Natural Heritage Division, Sacramento, CA, 2007.

³⁸ California Department of Fish and Game, *California Wildlife Habitat Relationships Database System*, State of California Resources Agency, Natural Heritage Division, Sacramento, CA, 1991.

³⁹ Remsen, J. V., *Bird Species of Special Concern in California: An Annotated List of Declining or Vulnerable Bird Species, Non-game Wildlife Investigations, Wildlife Management Branch, California Department of Fish and Game Administrative Report No. 78-1*, Sacramento, CA, 1978.

⁴⁰ California Department of Fish and Game (CDFG) and Point Reyes Bird Observatory (PRBO), *California Bird Species of Special Concern: Draft List and Solicitation of Input*, (www.prbo.org/BSSC/draftBSSClist.pdf), 2001.

⁴¹ Jennings, M. R., and Hayes, M. P., *Amphibian and Reptile Species of Special Concern in California*, Department of Fish and Game, Inland Fisheries Division, Sacramento, CA, 1994.

⁴² Williams, D. F., *Mammalian Species of Special Concern in California, Non-game Wildlife Investigations, Wildlife Management Branch, California Department of Fish and Game, Administrative Report No. 86-1*, 1986.

(b) Sensitive Plant Communities

The study area supports several plant communities or habitat types considered sensitive by the CDFG's CNDDDB due to their scarcity and/or because they support State and/or Federal listed endangered, threatened, or rare vascular plants and animals. These communities are the southern vernal pools, coastal sage scrub, sycamore riparian woodland, southern willow scrub, and holly-leaved cherry scrub (unique stand). These communities are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes. These communities are described previously, and the reasons for their special status designations are given below.

The **southern vernal pools** and artificial pools within Cruzan Mesa and north of Plum Canyon are regionally unique biotic communities within Los Angeles County with several plants found only in these limited habitat types, including the Federal and State endangered California Orcutt grass and the Federal threatened spreading navarretia. They also support the Federally threatened vernal pool fairy shrimp, the special status western spadefoot, and at least one vernal pool endemic ground beetle species⁴³. The pools also serve as concentrated breeding areas for several species of amphibians, including the western spadefoot, and they attract an array of waterfowl and shorebird species seasonally, mostly species migrating through the area that use the pools for resting and foraging. While other open water systems attract and support these same species, the vernal pools on-site are located in a remote upland area well away from other such freshwater features. Approximately 12.2 acres of southern vernal pools and artificial pools have been mapped within the on-site portions of the study area.

Coastal sage scrub and **disturbed coastal sage scrub** are the dominant plant communities within the study area (totaling 1,237.1 acres on-site and 15.4 acres off-site), covering most of the ridges and south-facing slopes, and **coastal sage-chaparral scrub** (totaling 324.5 acres on-site and 1.2 acres off-site) on much of the north-facing slopes. These communities are considered sensitive because they are declining in southern California and they support a number of special status species within the study area including the coastal whiptail, coast horned lizard, southern California rufous-crowned sparrow, Bell's sage sparrow, and San Diego black-tailed jackrabbit. Coastal sage scrub does not support the Federally threatened coastal California gnatcatcher within the study area based on the negative results of focused surveys.

Sycamore riparian woodland and **southern willow scrub** are considered of high priority for inventory in the CNDDDB due to their decline in the State and are therefore

⁴³ Hovore, Frank. *Personal Communication with H. Lee Jones.*

considered sensitive. A total of 4.6 acres of sycamore riparian woodland and 0.6 acre of southern willow scrub occur within the on-site portions of the study area.

Holly-leaved cherry scrub is considered of high priority for inventory in the CNDDDB due to its limited distribution and scarcity in the State and is therefore considered sensitive. A total of 12.8 acres of holly-leaved cherry scrub occur within the study area (12.7 acres on-site and 0.1 acre off-site).

(c) Sensitive Plant Species

Several listed plant species associated with vernal pools have been reported from the Cruzan Mesa. Table 4.C-2, Sensitive Plant Species, on page 4.C-31 provides a summary of the special status plants occurring or potentially occurring within the study area based upon their known geographic ranges, distributions, and preferred habitats. Additional species, such as coast live oak, are protected under local ordinances but are not included here.

Rare plant surveys were conducted in 2003 and 2005 to accommodate the blooming periods of various species found in the region, or previously reported by the CNDDDB. The focus of these surveys was for locating San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*), slender-horned spineflower (*Dodecahema leptoceras*), and vernal pool indicator species. Neither spineflower was observed within the study area. Two species of threatened or endangered plants previously known to occur within the study area were recorded, spreading navarretia and California Orcutt grass. Additionally, several non-listed species variously designated by the CNPS were found on-site, slender mariposa lily (*Calochortus clavatus* var. *gracilis*), club-haired mariposa lily (*C. c. clavatus*), Pierson's morning-glory (*Calystegia peirsonii*), Palmer's grappling hook (*Harpagonella palmeri*), and Paso Robles navarretia (*N. jaredii*). These and other species potentially occurring within the study area are discussed below.

Locations of three of the sensitive plant species observed, spreading navarretia, California Orcutt grass, and slender mariposa lily, are shown on Figure 4.C-5, Sensitive Plant Locations, on page 4.C-40. Two of these plants, spreading navarretia and California Orcutt grass, are Federally listed and CNPS List 1B.1 species and are restricted to the vernal pools in the northern portion of the study area. The third species, slender mariposa lily, is a CNPS List 1B.2 species and occurs within coastal sage-chaparral scrub and chaparral throughout the study area. Details of the observations of these species can be found in Table 4.C-2.

The remaining sensitive plant species observed, Paso Robles navarretia (CNPS List 4.3), Peirson's morning glory (CNPS List 4.2), Palmer's grappling hook (CNPS List 4.2), and club-haired mariposa lily (CNPS List 4.3), were detected within grassland and coastal sage scrub habitat. Table 4.C-2 notes the general location of the observations of these species within the

Table 4.C-2
Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
ANGIOSPERMS (DICOTYLEDONS)								
Asteraceae	Sunflower Family							
<i>Aster (=Symphyotrichum) greatae</i>	Greata's aster	Jun-Oct	NONE	NONE	1B.3	Broadleafed upland forest, chaparral, cismontane woodland, and riparian woodland.	Central and northern Los Angeles and Ventura counties, at elevations from 1,000-6,500 ft (300-2,010 m).	NE
Comments: Not detected within the study area. Nearest known occurrence is approximately 3 miles to the southeast of the study area.								
<i>Deinandra minthornii</i>	Santa Susana tarplant	Jul-Nov	NONE	SR	1B.2	Chaparral and rocky coastal scrub.	Los Angeles and Ventura counties between 900 and 2,500 ft (280-760 m) elevation.	NE
Comments: Not detected within the study area. Nearest known occurrence is approximately 6 miles to the southwest of the study area.								
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	Aug-Oct	NONE	NONE	1A	Marshes and swamps.	Historical records from Los Angeles, San Bernardino, and Orange counties at elevations of 30-5,500 ft. (10-1,675 m).	NE
Comments: Not detected within the study area. No suitable habitat is present.								
<i>Senecio aphanactis</i>	rayless ragwort	Jan-Apr	NONE	NONE	2.2	Chaparral, coastal scrub and cismontane woodland.	Coastal slope of California from Alameda County south to Baja, at elevations from 50 to 2600 ft (15-800 m).	NE
Comments: Not detected within the study area. Nearest known occurrence is approximately 5 miles to the southwest of the study area.								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
Berberidaceae	Barberry Family							
<i>Berberis nevinii</i>	Nevin's barberry	Mar-Apr	FE	SE	1B.1	Evergreen shrub found in riparian scrub, coastal scrub, chaparral, and cismontane woodland on sandy to gravelly soils.	Los Angeles County to sw. San Bernardino, w. Riverside, and inland San Diego counties between 965 and 2,705 ft (295–825 m) elevation.	NE
Comments: Not detected within the study area. Nearest known occurrence is approximately 4 miles to the northwest of the study area.								
Boraginaceae	Borage Family							
<i>Harpagonella palmeri</i>	Palmer's grappling hook	Mar-May	FSC	NONE	4.2	Chaparral, coastal scrub, valley and foothill grassland, clay soils.	In California, Los Angeles, Orange, Riverside, and San Diego counties, and on Santa Catalina Island between 65 and 2,725 ft (20–830 m).	OB
Comments: Found in many localities on relatively gentle, mostly south-facing slopes and ridges. The highest concentrations were in the southern portion of the study area at elevations ranging from 1,550 to 2,300 feet (460–700 m). The plants were observed in relatively sparsely vegetated or open areas within coastal sage scrub and grassland, and occurred on sandy clay soils with gravel, stones, and rocks. All plants were fruiting at the end of May.								
Cactaceae	Cactus Family							
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-jointed beavertail cactus	Apr-Jun	NONE	NONE	1B.2	Chaparral, Joshua tree woodland, Mojave Desert scrub, pinyon-juniper woodland.	Los Angeles and San Bernardino counties between 1,400 and 5,900 ft (425–1,800 m).	NE
Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. The variety of cactus within the study area is nominate <i>basilaris</i> .								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
Convolvulaceae								
Morning-glory Family								
<i>Calystegia peirsonii</i>	Peirson's morning-glory	May-Jun	FSC	NONE	4.2	Sage scrub, saltbush scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest.	Los Angeles County between 100 and 4,950 ft (30–1,500 m).	OB
Comments: Found in many localities on relatively gentle slopes. The highest concentration of populations was in the northeastern portion of the study area at elevations ranging from 2,000 to 2,300 feet (610–700 m). The plants were associated with various grassland and coastal sage scrub species, and occurred on sandy clay soils with gravels and stones. Most plants were in vegetative form; some were flowering during the surveys.								
Geraniaceae								
Geranium Family								
<i>Erodium macrophyllum</i>	round-leaved filaree	Mar-May	NONE	NONE	1B.1	Grasslands and cismontane woodland.	Coastal slope of California from Alameda County south to Baja at elevations from 50-4,000 ft. (15-1,200 m).	NE
Comments: Not detected within the study area. The nearest known occurrence is approximately 7 miles to the northwest of the study area.								
Lamiaceae								
Mint Family								
<i>Acanthomintha obovata</i> ssp. <i>cordata</i>	heart-leaved thorn-mint	Apr-Jul	NONE	NONE	4.2	Openings in chaparral, valley and foothill grassland, cismontane woodland, pinyon-juniper woodland; heavy clay and alkaline soils, serpentinite.	Monterey, San Luis Obispo, Santa Barbara, Ventura, and Los Angeles counties between 2,575 and 5,050 ft (785–1,540 m).	NE
Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. Though suitable habitat exists, the entire study area is below the known elevation limits of this species.								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
Malvaceae								
Mallow Family								
<i>Malacothamnus davidsonii</i>	Davidson's bush mallow	Jun-Jan	NONE	NONE	1B.2	Deciduous shrub found in chaparral, cismontane woodland, coastal scrub, and riparian woodland.	California endemic found in Los Angeles, Monterey and San Luis Obispo counties between 600 and 2,800 ft (185–855 m).	NE
Comments: Not detected within the study area. Nearest known occurrence is approximately 7 miles to the south of the study area.								
Polemoniaceae								
Phlox Family								
<i>Navarretia fossalis</i>	spreading navarretia	Apr-Jun	FT	NONE	1B.1	Vernal pools, saltbush scrub, shallow freshwater marshes.	North of Baja California, scattered locations in San Luis Obispo, Los Angeles, Riverside, and San Diego counties from 100–2,000 ft (30–600 m).	OB
Comments: Widespread throughout the vernal pools on Cruzan Mesa and the Plum Canyon drainage. The plants occurred on relatively flat terrain in drying clay soils near the central deeper parts of the pool, and also extended into the upland fringe vegetation. The elevations ranged from 1,875 to 1,880 feet. Most plants were flowering at these locations at the end of May 2003								
<i>Navarretia jaredii</i>	Paso Robles navarretia	Apr-Jul	NONE	NONE	4.3	Cismontane woodland, valley and foothill grassland; clay and serpentinite soils.	Monterey and San Luis Obispo counties south to Ventura (and apparently northern Los Angeles) County between 650 and 2,000 ft (200–600 m).	OB
Comments: Populations were localized in a few areas in the northeastern part of the study area, on relatively flat terrain to gentle, mostly north-facing slopes. The plants were observed in open vegetation with non-native grasses and herbs, particularly with fascicled tarweed. They occurred on sandy clay soils at elevations of 2,150 to 2,250 feet (655–685 m). Most plants were flowering and fruiting at the end of May.								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
Polygonaceae	Buckwheat Family							
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley spineflower	Apr-Jun	FC	SE	1B.1	Sandy soil in openings between shrubs associated with coastal sage scrub habitat.	Two recently discovered sites, the Grapevine Mesa/Newhall Ranch area of the Santa Clarita Valley in western Los Angeles County and the Laskey Mesa/Ahmanson Ranch area in southeastern Ventura County. Prior to its rediscovery in 1999, thought to be long extinct.	NE
Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. Marginally suitable habitat occurs, but comprehensive surveys conducted during the blooming season failed to detect this species.								
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	Apr-Jun	FSC	NONE	3.2	Openings and clearings in coastal sage scrub, chaparral, dry slopes and flat ground; sandy soils.	San Diego, western Riverside, and possibly Los Angeles counties between 130 and 5,600 ft (40–1,705 m).	NE
Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. There are no CNDDDB records for this species within the Mint Canyon quadrangle.								
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	Apr-Jun	NONE	NONE	1B.2	Mojave desert scrub and pinyon and juniper woodland.	Los Angeles, Riverside and San Bernardino counties between 980 and 3,900 ft (300–1,200 m).	NE
Comments: Does not occur within the study area as no appropriate habitat is present.								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Apr-Jun	FE	SE	1B.1	Grows exclusively in sandy-gravelly soil within alluvial floodplains of broad seasonally flooded washes.	Isolated populations in Los Angeles, western Riverside, and southwestern San Bernardino counties between 650 and 2,500 ft (200–760 m).	NE
Comments: A population is known from Bee Canyon approximately two miles away. Focused plant surveys in 2003 and 2005 did not detect this species within the study area. There is a limited amount of marginally suitable habitat.								
Ranunculaceae Buttercup Family								
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	Mar-Jun	FSC	NONE	3.1	Alkaline vernal pools.	Locally in Oregon and California.	NE
Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. There are no CNDDDB records for this species within the Mint Canyon quadrangle.								
Rubiaceae Madder Family								
<i>Galium grande</i>	San Gabriel bedstraw	Jan-Jul	NONE	NONE	1B.2	Deciduous shrub found in broadleafed upland forest, chaparral, cismontane woodland and lower montane coniferous forest.	Known from fewer than 15 occurrences in Los Angeles County between 1,400 and 4,900 ft (425–1500 m) elevation.	NE
Comments: Not detected within the study area. Nearest known occurrence is approximately 8 miles to the northwest of the study area.								
ANGIOSPERMS (MONOCOTYLEDONS)								
Juncaceae Rush Family								
<i>Juncus acutus</i> var. <i>leopoldii</i>	southwestern spiny rush	May-Jun	NONE	NONE	4.2	Mesic coastal dunes, alkali seeps in meadows, coastal salt marshes, swamps.	In California, San Luis Obispo and Santa Barbara counties west of the mountains to the Mexican border.	NE
Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. No habitat within the study area.								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
Liliaceae		Lily Family						
<i>Allium howellii</i> var. <i>clokeyi</i>	Mt. Pinos onion	Apr-Jun	NONE	NONE	1B.3	Great Basin scrub, pinyon and juniper woodland.	Los Angeles (?), Santa Barbara and Ventura counties between 4,265 and 6,070 ft (1300–1850 m).	NE
Comments: No habitat for this species is present within the study area and the study area is well below the minimum elevation limit for this species. The CNPS inventory lists records of this species for Los Angeles County as questionable.								
<i>Calochortus clavatus</i> var. <i>gracilis</i>	slender mariposa lily	Mar-Jun	FSC	NONE	1B.2	Openings within coastal sage scrub and chaparral, especially in foothill canyons, on clay soils with gravel, stones, or rocks, generally in shade.	San Gabriel Mountains in Los Angeles County between 1,180 and 3,280 ft (360–1,000 m). Prior to the current survey only nine occurrences were known (but see below).	OB
Comments: Approximately 5,300 plants in roughly 60 locations within the study area, with the vast majority in and north of Plum Canyon. About 10 percent were in the unnamed drainage south of Plum Canyon. Found generally on north-facing slopes and ridges, at elevations of 1,450 to 2,300 feet (440–700 m). Except on Cruzan Mesa, individuals of this species found within the study area were closer to var. <i>gracilis</i> than to nominate <i>clavatus</i> , which is a CNPS List 4 plant.								
<i>Calochortus clavatus</i> var. <i>clavatus</i>	club-haired mariposa lily	May-Jun.	NONE	NONE	4.3	Chaparral, coastal scrub, valley and foothill grassland and cismontaine woodlands, typically in serpentine, clay or sandy soils.	Los Angeles, Santa Barbara, San Benito, San Luis Obispo, and Ventura counties at elevations ranging from 245-4,300 ft (75-1300 m).	OB
Comments: Approximately 5,300 specimens of <i>Calochortus clavatus</i> were found in roughly 60 locations within the study area, with the vast majority in and north of Plum Canyon. Except on Cruzan Mesa, individuals of this species found were closer to var. <i>gracilis</i> , a CNPS List 1B plant.								

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS																																						
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site																														
<i>Calochortus plummerae</i>	Plummer's mariposa lily	May-Jul	FSC	NONE	1B.2	Sage scrub, valley and foothill grassland, yellow pine forest; dry, rocky or sandy sites, granitic or alluvial soils.	Ventura, Los Angeles, Orange, and western San Bernardino and Riverside counties between 330 and 5,600 ft (100–1,700 m).	NE																														
<p>Comments: Focused plant surveys in 2003 and 2005 did not detect this species within the study area. There are no CNDDDB records for this species within the Mint Canyon quadrangle.</p>																																						
Poaceae	Grass Family																																					
<i>Orcuttia californica</i>	California Orcutt grass	Apr-Aug	FE	SE	1B.1	Vernal pools.	North of Baja California, Ventura, Los Angeles, Riverside, and San Diego counties between 50 and 2,150 ft (15–660 m). Known from fewer than 20 occurrences.	OB																														
<p>Comments: Found in two locations, relatively close to each other, within the vernal pools on Cruzan Mesa and in the Plum Canyon drainage. The plants occurred in the deepest part of the pool on relatively flat terrain in drying clay soils. The elevations of the two locations were 1,875 and 1,880 feet, respectively. Most plants were flowering at these locations at the end of May 2003.</p>																																						
<p>Key to Species Listing Status Codes</p> <table border="0"> <tr> <td>FE</td> <td><i>Federally Listed as Endangered</i></td> <td>SE</td> <td><i>State Listed as Endangered</i></td> <td>SFP</td> <td><i>State Fully Protected</i></td> </tr> <tr> <td>FT</td> <td><i>Federally Listed as Threatened</i></td> <td>ST</td> <td><i>State Listed as Threatened</i></td> <td>CSC</td> <td><i>California Special Concern Species</i></td> </tr> <tr> <td>FPE</td> <td><i>Federally Proposed as Endangered</i></td> <td>SCE</td> <td><i>State Candidate for Endangered</i></td> <td></td> <td></td> </tr> <tr> <td>FPT</td> <td><i>Federally Proposed as Threatened</i></td> <td>SCT</td> <td><i>State Candidate for Threatened</i></td> <td></td> <td></td> </tr> <tr> <td>FSC^a</td> <td><i>Former Federal Species of Concern</i></td> <td>SR</td> <td><i>State Rare</i></td> <td></td> <td></td> </tr> </table>									FE	<i>Federally Listed as Endangered</i>	SE	<i>State Listed as Endangered</i>	SFP	<i>State Fully Protected</i>	FT	<i>Federally Listed as Threatened</i>	ST	<i>State Listed as Threatened</i>	CSC	<i>California Special Concern Species</i>	FPE	<i>Federally Proposed as Endangered</i>	SCE	<i>State Candidate for Endangered</i>			FPT	<i>Federally Proposed as Threatened</i>	SCT	<i>State Candidate for Threatened</i>			FSC ^a	<i>Former Federal Species of Concern</i>	SR	<i>State Rare</i>		
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FSC ^a	<i>Former Federal Species of Concern</i>	SR	<i>State Rare</i>																																			

Table 4.C-2 (Continued)

Sensitive Plant Species

VASCULAR PLANTS								
Scientific Name	Common Name	Flowering Period	Federal	State	CNPS List	Preferred Habitat	Distribution	Occurrence On Site
<i>California Native Plant Society (CNPS)</i>								
<i>List 1A: Presumed extinct in California.</i>								
<i>List 1B: Rare, threatened, or endangered throughout their range.</i>								
<i>List 2: Rare, threatened, or endangered in California, but more common in other states.</i>								
<i>List 3: Plant species for which additional information is needed before rarity can be determined.</i>								
<i>List 4: Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.</i>								
<i>CNPS Threat Codes</i>								
<i>.1 Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)</i>								
<i>.2 Fairly endangered in California (20-80% occurrences threatened)</i>								
<i>.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)</i>								
^a <i>Federal species of concern is an informal term that refers to those species that the USFWS believes might be declining and may be in need of concentrated conservation actions to prevent decline. These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing or that they have been designated as candidate for listing. The Federal Species of Concern has not been maintained on a statewide basis, so this designation has been removed from CDFG's "special plants" list. Species formerly with this designation are listed as "former federal species of concern."</i>								

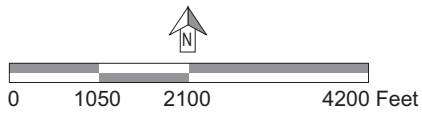
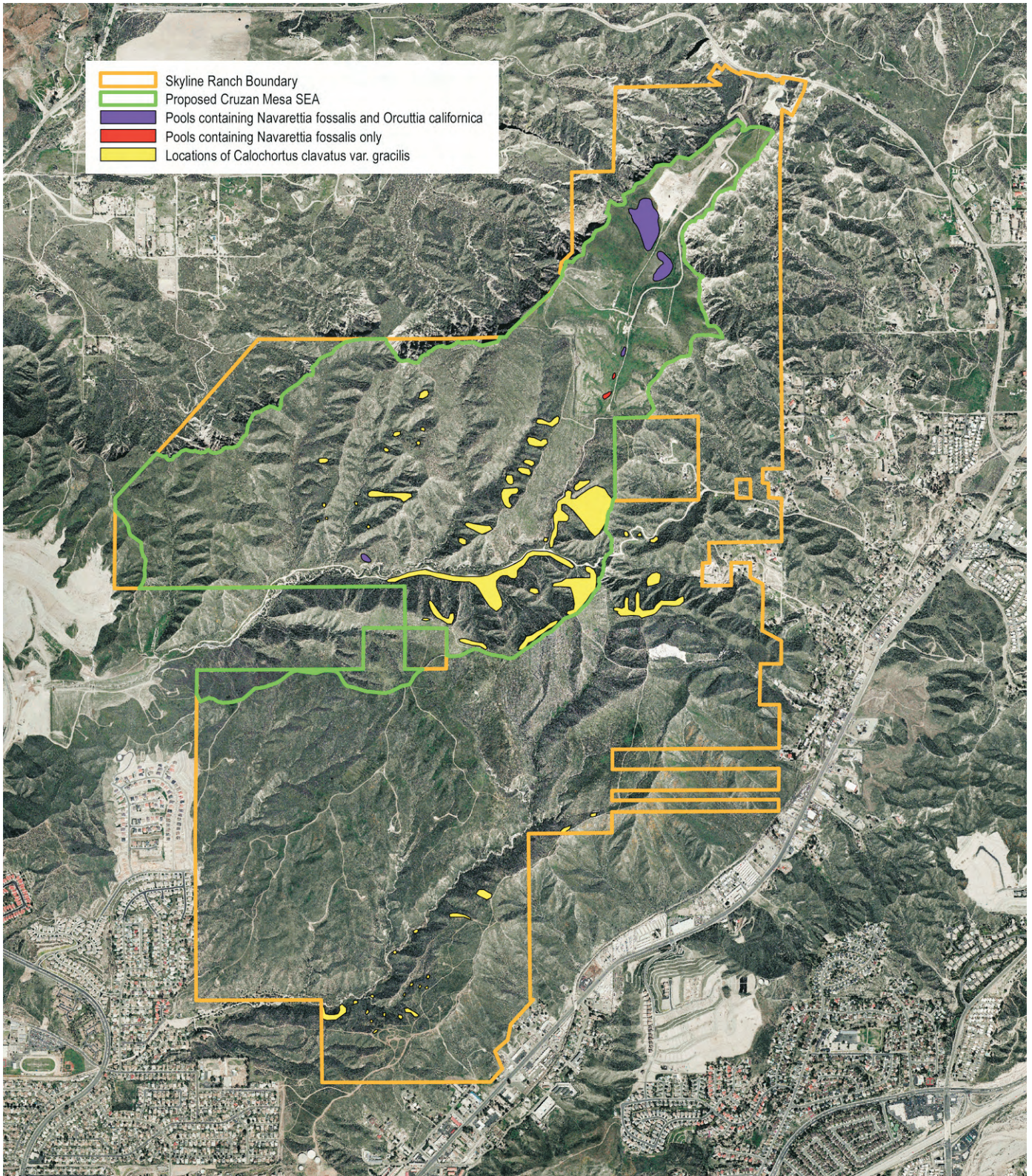


Figure 4.C-5
Sensitive Plant Locations

Source: Natural Resources Consultants, January 2007.

study area; however, locations were not specifically mapped during field surveys due to the low sensitivity status.

(d) Sensitive Wildlife Species

Twenty-two sensitive wildlife species, including the Federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and State threatened Swainson's hawk (*Buteo swainsoni*), have been reported within the study area. The vernal pool fairy shrimp is associated with the existing vernal pools and manmade impoundments in the northern portion of the study area. As described in the USFWS's Proposed Rule for Critical Habitat Designation for the vernal pool fairy shrimp,⁴⁴ the basins and associated watershed comprise the "primary constituent elements" for the vernal pool fairy shrimp. The Swainson's hawk was observed flying over the study area during coastal California gnatcatcher surveys. It did not land on-site. No other State or Federally listed endangered or threatened wildlife species have been recorded within the study area.

Additional sensitive wildlife species observed include the western spadefoot (*Spea hammondi*), coast horned lizard (*Phrynosoma coronatum*), coastal whiptail (*Cnemidophorus tigris stejnegeri*), white-tailed kite, northern harrier (*Circus cyaneus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), golden eagle (*Aquila chrysaetos*), prairie falcon (*Falco mexicanus*), merlin (*Falco columbarius*), Vaux's swift (*Chaetura vauxi*), California horned lark (*Eremophila alpestris actia*), loggerhead shrike (*Lanius ludovicianus*), yellow warbler (*Dendroica petechia*), yellow-breasted chat (*Icteria virens*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Amphispiza belli belli*), grasshopper sparrow (*Ammodramus savannarum*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) as summarized in Table 4.C-3, Sensitive Wildlife Species, on page 4.C-42.

An additional 21 sensitive wildlife species are reported in the CNDDDB as occurring in the vicinity of the study area but have not been detected. These species are also included in Table 4.C-3, which provides a summary of the sensitive wildlife species occurring or potentially occurring within the study area based upon their known geographic ranges, distributions, and preferred habitats. Three species of fish occurring in freshwater streams are included in the table although no habitat is present within the study area for these species.

⁴⁴ U.S. Fish and Wildlife Service (USFWS), *Critical habitat determination for four vernal pool crustaceans and eleven vernal pool plants in California and southern Oregon*, *Federal Register*, 67 (185): 59884-59932, 2002.

Table 4.C-3

Sensitive Wildlife Species

INVERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
CRUSTACEA						
Anostraca	Fairy Shrimp					
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE	NONE	Vernal pools.	Ventura, Los Angeles, western Riverside, Orange, and San Diego counties; also northwestern Baja California.	NE
Comments: Not detected during focused surveys within the study area. Studies by GLA (2003) have not found evidence of this species and there are no records of this species in either the CNDDDB or the USFWS species occurrence database (USFWS 2004). The SEA document for Cruzan Mesa states that the species was detected in vernal pools on-site, but any detailed information regarding this alleged sighting is absent from the SEA report and has not been made available.						
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT	NONE	Vernal pools.	In California, the Central Valley from Shasta to Tulare County, and in the central and southern coast ranges from n. Solano to Los Angeles and Ventura Counties. Disjunct populations are found in three areas in Riverside County, and in Oregon in one area.	OB
Comments: Occurs within the Cruzan Mesa and Plum Canyon vernal pools.						
<i>Branchinecta sandiegoensis</i>	San Diego fairy shrimp	FE	NONE	Vernal pools.	Coastal southern California (Orange and San Diego counties) south to northwestern Baja California, Mexico.	NE
Comments: Not detected during focused surveys within the study area.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
FISH						
Cyprinidae	Minnows and Carp					
<i>Rhinichthys osculus</i> ssp.3	Santa Ana speckled dace	NONE	CSC	Shallow cobble and gravel riffles within permanently flowing streams.	Headwaters of the Santa Ana and San Gabriel Rivers.	NE
Comments: No suitable habitat occurs within the study area.						
Catostromidae	Suckers					
<i>Catostomus santaanae</i>	Santa Ana sucker	FT	CSC	Small, shallow streams that are subject to periodic, severe flooding.	Currently known from three populations; Big Tujunga Creek, the San Gabriel River, and the Santa Ana River.	NE
Comments: No suitable habitat occurs within the study area.						
Gasterosteidae	Sticklebacks					
<i>Gasterosteus aculeatus williamsoni</i>	unarmored threespine stickleback	FT	CSC, SFP	Slow-moving portions of coastal streams that lack turbidity.	Currently restricted to the upper Santa Clara River drainage in Los Angeles and Ventura counties, San Antonio Creek on Vandenberg Air Force Base, San Luis Obispo County, and an isolated population in San Felipe Creek in San Diego County.	NE
Comments: No suitable habitat occurs within the study area.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
AMPHIBIANS						
Bufonidae	True Toads					
<i>Bufo californicus</i>	arroyo toad	FE	CSC	Restricted to open riparian woodlands and alluvial habitats, where it breeds in shallow, gravelly, slow moving streams and pools. It is a habitat specialist, requiring exposed shallow, gravel- or sand-based pools with low current velocity and little marginal vegetation in streams free of predatory fishes.	Foothill regions in southern California from San Luis Obispo County to Baja California. It historically occurred along the length of drainages, including coastal areas, but now survives generally in the headwaters as small isolated populations. The nearest known extant population is along the Santa Clara River east of Bee Canyon.	NE
Comments: Not detected within the study area. The study area provides no breeding or over-wintering habitat for the species, and the study area is not included within Federally designated critical habitat for this species.						
Pelobatidae	Spadefoot Toad Family					
<i>Spea hammondi</i>	western spadefoot	FSC	CSC	Arid and semi-arid regions in the lowlands and foothills (below 4,500 feet) in washes, river floodplains, alluvial fans, playas, and alkali flats.	Primarily in Central Valley and adjacent foothills, and in the Coast Ranges from Redding to northwestern Baja California. Now believed to be extirpated from most of southern California.	OB
Comments: Found in vernal pools on Cruzan Mesa and in vernal pool in Plum Canyon in 2003.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
Ranidae	True Frog Family					
<i>Rana aurora draytonii</i>	California red-legged frog	FT	CSC	Quiet pools of streams, marshes, and occasionally ponds.	West of the Sierra Nevada from Shasta County (formerly?) to San Diego County, though now nearly extirpated from southern California south of Ventura County.	NE
Comments: Not detected within the study area. No habitat is present.						
REPTILES						
Gekkonidae	Geckos					
<i>Coleonyx variegates abbotti</i>	San Diego banded gecko	FSC	NONE	Rocky areas, crevices, canyon walls.	Ventura to San Diego counties west of the mountains; also in northern half of Baja California.	NE
Comments: Not detected within the study area. Habitat is limited, and the study area is at the edge of this species' known range.						
Iguanidae	Iguanid Lizards					
<i>Phrynosoma coronatum</i> (blainvillei population)	coast horned lizard	FSC	CSC	Generally occurs in sage scrub and chaparral, but can also be found in coniferous forest and broadleaf woodland. It is usually found in sandy areas, especially where harvester ants are found.	West of the Sierra Nevada, Coast, and Peninsula ranges in California from Butte County south to the Mexican border; also throughout most of Baja California.	OB
Comments: Present in the scrub habitats throughout the study area.						
Teiidae	Whiptails and Relatives					
<i>Cnemidophorus tigris stejnegeri</i>	coastal whiptail	FSC	NONE	Arid and semi-arid scrub to open woodland, where vegetation is relatively sparse.	Los Angeles, Orange, and San Diego counties south to central Baja California.	OB
Comments: Present in the scrub habitats throughout the study area.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
<i>Cnemidophorus hyperythrus</i>	orange-throated whiptail	NONE	CSC	Low elevation coastal scrub, chaparral and hardwood habitats.	North of Baja California found in extreme s. Los Angeles County, w. San Diego County, Orange County, w. Riverside County, and extreme sw. San Bernardino County.	NE
Comments: This species is reported in the CNDDDB from the area. However, the record is considered an error. The study area is outside of the range of the orange-throated whiptail; therefore, it is not expected to occur within the study area..						
Anniellidae	Legless Lizard Family					
<i>Anniella pulchra pulchra</i>	silvery legless lizard	FSC	CSC	Sparsely vegetated loose soil (for burrowing), leaf litter; on sand dunes, in washes, oak woodland, chaparral, open woodland.	Coastal slope of southern California from San Francisco Bay to n. Baja California.	P
Comments: Not detected within the study area, but suitable habitat is present in the two major drainages. Species is difficult to detect.						
Boidae	Boas					
<i>Charina trivirgata roseofusca</i>	coastal rosy boa	FSC	NONE	Rocky shrublands west of the desert, usually near water.	Los Angeles County (away from the coast) south through w. Riverside, Orange, and San Diego counties to n. Baja California.	P
Comments: Not detected within the study area. The study area is at the limit of its range and offers limited suitable habitat. It may occur in small numbers in the two major drainages but has not been detected.						
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	FSC	CSC	Inhabits a variety of habitats comprised of brushy or scrubby vegetation, including chaparral and sage scrub.	Coastal southern California from approximately San Luis Obispo County south to northwestern Baja California.	P
Comments: Not detected within the study area. The study area is at the margins of this species' known range, but like most snakes, is difficult to detect.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
<i>Thamnophis hammondi</i>	two-striped garter snake	FSC	CSC	Perennial and intermittent streams having rocky beds and bordered by willow thickets or other dense vegetation. May also inhabit shallow rivers and stockponds bordered by thick riparian vegetation.	Coastal slope from Monterey County to northern Baja California and up to 4,500 feet elevation.	NE
Comments: Not detected within the study area. No habitat present.						
BIRDS						
Accipitridae	Hawks					
<i>Elanus leucurus</i>	white-tailed kite	NONE	SFP	Requires open habitats such as grasslands, croplands and marshes; nests primarily in riparian areas with sycamores, oaks, willows and cottonwoods, and hunts in adjacent open spaces.	Uncommon to locally fairly common resident along the coastal slope of southern California.	OB, F
Comments: Observed foraging within the study area but not likely to nest. Populations declined to very low levels early in the 20th Century but had risen substantially by the mid-1970s. Population sizes locally continue to fluctuate however, perhaps in large part to fluctuating cricetine rodent populations. Along with these fluctuations, there has been an apparent geographic range expansion to the north and east. The instability in population sizes indicates that the kites may continue to be affected by human-induced environmental changes in ways that are not fully understood.						
<i>Circus cyaneus</i>	northern harrier	NONE	CSC	Grasslands, fresh- and brackish-water marshes.	Throughout most of the United States and all of California below the mountains; however, breeding records in Southern California are sparse.	OB, F
Comments: Forages along ridgelines and on Cruzan Mesa, primarily in winter; however, it may occur sporadically in summer.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
<i>Accipiter striatus</i>	sharp-shinned hawk	NONE	CSC	Riparian and oak woodlands and coniferous forests.	Fairly common winter visitor in the coastal lowlands and rare summer resident in the mountains of southern California.	OB, F
Comments: Occurs as a transient and uncommon winter visitor, primarily in canyons with trees and arborescent shrubs.						
<i>Accipiter cooperii</i>	Cooper's hawk	NONE	CSC	Nests primarily in fairly dense oak and riparian woodlands.	Fairly common winter visitor and uncommon summer resident throughout most of southern California.	OB, F
Comments: Occurs as a transient and uncommon winter visitor, primarily in canyons with trees and arborescent shrubs.						
<i>Buteo regalis</i>	ferruginous hawk	NONE	CSC	Grasslands, agricultural areas, and deserts.	An uncommon winter visitor in the arid interior regions of southern California.	OB, F
Comments: Occasional winter visitor, most likely to be seen on Cruzan Mesa.						
<i>Buteo swainsoni</i>	Swainson's hawk	NONE	ST	Grasslands, agricultural areas, riparian areas, and deserts.	Primarily a spring and fall transient in southern California.	OB, F
Comments: A migrant Swainson's hawk was observed flying over the study area during 2007 coastal California gnatcatcher surveys..						
<i>Aquila chrysaetos</i>	golden eagle	B/GEA	CSC, SFP	Inhabits open areas including grasslands, brushy or open wooded areas. It typically nests in more remote, rugged, mountainous areas.	Uncommon resident in southern California.	OB, F
Comments: A fairly regular visitor year-round; probably nests in nearby mountains.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
Falconidae	Falcons					
<i>Falco columbarius</i>	merlin	NONE	CSC	Coastlines, open savannas, open grasslands, woodlands, lakes, wetlands, edges and early successional stages.	Uncommon winter migrant throughout southern California from September to May.	OB, F
Comments: The merlin was observed flying over the study area during 2007 coastal California gnatcatcher surveys.						
<i>Falco mexicanus</i>	prairie falcon	NONE	CSC	Desert mountains and arid mountains and hills west of the desert, rarely to the coast. Ranges over a broader area in winter, but generally not migratory.	Throughout the western U. S. and California except for the humid northwest.	OB, F
Comments: Forages within the study area in winter on occasion.						
Strigidae	True Owl Family					
<i>Asio otus</i>	long-eared owl	NONE	CSC	Within its southern California range, inhabits riparian woodlands or other groves of trees, typically nesting in oaks.	An uncommon resident of the interior areas of southern California and a rare breeder along the coastal slope. Some movement occurs during the winter season, and fairly large concentrations occasionally occur at winter roosting sites.	P
Comments: Not detected within the study area. Potential roosting habitat is limited.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
<i>Athene cunicularia hypugia</i>	western burrowing owl	FSC	CSC	Inhabits relatively flat and open areas such as grasslands, coastal dunes and agricultural areas; requires the presence of burrows for nesting and roosting activities.	An uncommon to locally common resident in southern California.	P
Comments: Not detected within the study area. Limited habitat occurs on Cruzan Mesa and in the southern third of the study area; however, burrowing mammals (a source of burrows for the owl) are relatively uncommon. Burrowing owl may potentially occur as a wintering species only and is not expected to be resident or breed within the study area.						
Apodidae	Swifts					
<i>Chaetura vauxi</i>	Vaux's swift	NONE	CSC	Prefers redwood and Douglas-fir habitats for breeding. Found in a variety of habitats during migration.	Summer resident of northern California. Breeds fairly commonly in the coast ranges from Sonoma County north and very locally to Santa Cruz County, in the Sierra Nevada, and probably in the Cascade Range.	OB
Comments: The Vaux's swift was observed foraging over the study area during 2007 coastal California gnatcatcher surveys.						
Tyrannidae	Tyrant Flycatchers					
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE	SE	Dense riparian vegetation approximately 4–7 meters (m) (13–23 feet) tall, often with a high percentage of canopy cover. Historically nested primarily in willows, with a scattered overstory of cottonwood.	Southwestern US from coastal California east to western Texas.	NE
Comments: Not detected within the study area. No suitable nesting or breeding habitat.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
Alaudidae	Larks					
<i>Eremophila alpestris actia</i>	California horned lark	NONE	CSC	Requires open fields and grasslands for breeding.	A year-round resident that generally occurs in the coastal region of California, from Sonoma County south to Baja California (Grinnell and Miller, 1944).	OB
Comments: Breeds on Cruzan Mesa.						
Hirundinidae	Swallow Family					
<i>Riparia riparia</i>	bank swallow	NONE	ST	For breeding, "soft" sandstone banks and cliffs of sand, sandy loam, or clay, usually over water.	Throughout most of the Northern Hemisphere. In California, now restricted to the northern part of the state. No known breeding colonies remain in southern California; however may occur as a migrant.	P
Comments: Not detected within the study area. Potential breeding habitat occurs on the cliffs below Cruzan Mesa, but the species is not known to breed in southern California. A few may occur in with other swallows that congregate over Cruzan Mesa in spring migration, but to date none have been observed.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
Sylviidae						
Old World Warblers, Gnatcatchers						
<i>Poliptila californica californica</i>	coastal California gnatcatcher	FT	CSC	Principally, the various associations of coastal sage scrub (Venturan, Riversidian, Diegan, Maritime, etc.), but also nests in chamise chaparral, especially where it occurs in association with sage scrub, and occasionally utilizes other habitats outside the breeding season.	Ventura County (locally), Los Angeles County (locally, primarily in the southern portion), extreme southwestern San Bernardino County, western Riverside County, Orange County, and San Diego County west of the mountains. Also found throughout much of Baja California.	NE
<p>Comments: No coastal California gnatcatchers were detected within the study area during focused protocol-level surveys conducted by NRC in 2003, 2005, 2006, and 2007. This species has not been reported from the study area in the past (CNDDDB 2004). Based on the fact that this species has not been observed within the study area, and the lack of any historical records of breeding gnatcatchers from north of the Santa Clara River since the 1920's, it is NRC's opinion that this species is absent from the study area. According to historical data, one coastal California gnatcatcher, possibly a dispersing bird, was reported from Plum Canyon west (downstream) and outside the boundaries of the Skyline Ranch study area (circa 1998) (Farris 2003 pers. comm.), another historical record exists from Mint Canyon (approximately 1920), and the species has been observed in nearby off-site areas south and southeast of the study area (Golden Valley, Robinson Ranch) in 2001. The study area is not included within the designated critical habitat for this species (USFWS 2007).</p>						
Laniidae						
Shrike Family						
<i>Lanius ludovicianus</i>	loggerhead shrike	FSC	CSC	Generally occupy open habitats with scattered large shrubs, trees, or fencelines.	An uncommon, though widespread, resident throughout southern California.	OB
<p>Comments: Confined to Cruzan Mesa within the study area. This species has decreased sharply throughout California in the past fifteen years, a pattern consistent with populations elsewhere in the United States. Shrikes had become scarce in the Northeast as early as the 1960s and in the Southeast by the late 1970s. In some states where they were once common, they are now virtually extirpated. The reasons for these declines are largely speculative, although the trend toward extensive areas of monoculture cultivation and associated heavy use of pesticides is likely to be a contributing factor.</p>						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
Vireonidae	Vireos					
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE	SE	Riparian scrub and riparian woodland along river and stream courses, preferring dense willow thickets for nesting.	Summer season resident of central and southern California and Baja CA.	NE
Comments: Not detected within the study area and not expected to occur due to the lack of suitable habitat.						
Parulidae	Wood-warblers					
<i>Dendroica petechia</i>	yellow warbler	NONE	CSC	For breeding, usually riparian woodlands, but occasionally in montane chaparral and coniferous forests with dense ceanothus and manzanita understory.	Throughout most of North America. In California, formerly bred nearly throughout in appropriate habitat; now restricted mostly to northern California and locally in southern California in Coast Ranges.	OB
Comments: Does not breed within the study area (very limited suitable habitat) but occurs as a migrant.						
<i>Icteria virens</i>	yellow-breasted chat	NONE	CSC	For breeding, riparian scrub and woodland with dense cover; occasionally in non-riparian dense scrub.	Throughout much of North America. In California, breeds nearly throughout in appropriate habitat.	OB
Comments: Does not breed within the study area (lack of suitable habitat), but may occur occasionally as a migrant.						
Emberizidae	Emberizids					
<i>Aimophila ruficeps canescens</i>	southern California rufous-crowned sparrow	FSC	CSC	Most foothill slopes and ridges with low-growing shrub cover, typically coastal sage scrub and non-arborescent types of chaparral. Inhabits rocky slopes, often intermixed with grassy areas.	Occurs west of the deserts from Ventura County south into Baja California.	OB
Comments: A common resident over most of the study area.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
<i>Amphispiza belli belli</i>	Bell's sage sparrow	FSC	CSC	Arid and semi-arid foothill slopes and ridges with low-growing shrub cover, typically coastal sage scrub and non-arborescent types of chaparral.	Found west of the mountains from Trinity County, California south to northwestern Baja California.	OB
Comments: A common resident over most of the study area.						
<i>Ammodramus savannarum</i>	grasshopper sparrow	NONE	NONE	Grasslands with scattered small shrubs.	Throughout much of the U.S. including California.	OB
Comments: Occurs on the Cruzan Mesa, although breeding is not confirmed.						
MAMMALS						
Vespertilionidae	Evening Bats					
<i>Antrozous pallidus</i>	pallid bat	NONE	CSC	Scrubland, woodland, and grassland at low elevations; uses rocky areas for roosting.	Throughout much of the West, including all of California except for the Sierra Nevada and the Pacific Northwest.	P
Comments: Not detected within the study area. Suitable roosting habitat does not occur, but it may use the study area for foraging.						
<i>Corynorhinus (=Plecotus) townsendii pallescens</i>	pale big-eared bat	NONE	CSC	Found in a wide variety of habitats from grasslands to conifer woodlands. Roosting sites include limestone caves, mine tunnels, buildings, and other man-made structures.	All of California west of the deserts.	P
Comments: Not detected within the study area. Suitable roosting habitat does not occur, but it may use the study area for foraging.						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
Molossidae	Free-tailed Bats					
<i>Eumops perotis</i>	western mastiff bat	NONE	CSC	Favors rugged, rocky areas at low elevations in the coastal basins where suitable crevices for roosting are found. This species has very specific roosting structure needs, such as crevices that open downward and are at least 5 cm wide and 30 cm deep. They must also be high, as the bat needs 2-3 m of drop space to launch itself into flight. It feeds extensively on bees and wasps and has a large foraging range, which may extend up to 9.3 km from its daytime roost.	Butte County south through the Southern California coastal mountains and portions of the southeastern desert region.	P
Comments: Not detected within the study area. Suitable roosting habitat does not occur; however, it may use the study area for foraging.						
Leporidae	Hares and Rabbits					
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	FSC	CSC	Prefers open areas, typically occurring in alluvial sage scrub and open sage scrub.	Occurs in coastal southern California from approximately Santa Barbara County south into Baja California.	OB
Comments: Fairly common resident.						
Muridae	Mice, Rats, and Voles					
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	FSC	CSC	Open coastal sage scrub, mixed chaparral, and riparian areas.	Throughout southern California except coastal areas north of Orange County.	P
Comments: Not detected within the study area. Uncommon outside desert habitats and the Central Valley (CDFG 2002).						

Table 4.C-3 (Continued)

Sensitive Wildlife Species

VERTEBRATES						
Scientific Name	Common Name	Federal	State	Preferred Habitat	Distribution	Occurrence On Site
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	FSC	CSC	Found in a variety of arid and semi-arid habitats from sea level to 8,500 ft in elevation.	Occurs along the coast from northwest Baja California to San Luis Obispo County.	P
Comments: Not detected within the study area. Though this species occurs in a variety of habitats, the study area is at the edge of this subspecies' range.						
Key to Species Listing Status Codes						
FE	<i>Federally Listed as Endangered</i>	SE	<i>State Listed as Endangered</i>			
FT	<i>Federally Listed as Threatened</i>	ST	<i>State Listed as Threatened</i>			
FSC ^a	<i>Former Federal Special Concern Species</i>	SCE	<i>State Candidate for Endangered</i>			
FPE	<i>Federally Proposed as Endangered</i>	SCT	<i>State Candidate for Threatened</i>			
FPT	<i>Federally Proposed as Threatened</i>	SFP	<i>State Fully Protected</i>			
FPD	<i>Federally Proposed for Delisting</i>	CSC	<i>California Special Concern Species</i>			
B/GEA	<i>Bald Eagle and Golden Eagle Act</i>					
<p>^a <i>Federal species of concern is an informal term that refers to those species that the USFWS believes might be declining and might be in need of concentrated conservation actions to prevent decline. These species receive no legal protection and the use of the term does not mean that they will eventually be proposed for listing or that they have been designated as candidates for listing. The Federal Species of Concern has not been maintained on a statewide basis, so this designation has been removed from CDFG's "special animals" list. Species formerly with this designation are listed as "former federal species of concern."</i></p>						

3. PROJECT IMPACTS

a. Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines (as amended through December 1, 2008) is used by public agencies in determining whether a project may have a significant impact on biological resources. Under Appendix G, a project may have a significant impact on biological resources if it would:

1. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the CDFG or USFWS.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in the City or regional plans, policies, or regulations by the CDFG or USFWS.
3. Have a substantial adverse effect on Federally protected wetlands as defined by Section 404 of the Clean Water Act (possibly including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
5. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan.

In addition, Section 15065(a) of the *State CEQA Guidelines* establishes that a significant impact may occur if the project has the potential to:

- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of an endangered, rare or threatened species.

The biological resources of the project were evaluated on the basis of the above criteria in determining whether or not the proposed project would cause one or more significant impacts. The evaluation of whether an impact to biological resources would be significant considered the resource and how that resource fits into a regional or ecological context.

The definition of “significant,” as applied for this assessment, considered both the local and regional status of each resource. Significant impacts are those that would diminish or result in the loss of an important biological resource, or those that would obviously conflict with local, State, or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant because, although they would result in an adverse alteration of existing local conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population-wide or region-wide basis. In the case of this analysis the region is defined as Interstate 5 and the Castaic Valley to the west, the ridge of the San Gabriel Mountains separating the San Fernando Valley from the Santa Clarita Valley to the south and east, and the 3,000 foot elevation level of the Angeles National Forest to the north.

b. Methodology

Project-related impacts to biological resources take two forms, direct and indirect. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e., vegetation or plant communities), which in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as “edge effects” and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

The determination of impacts in this analysis is based on both the features of the proposed project and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Relevant project features (e.g., limits of grading and fuel modification) were supplied by the applicant. Much of this information was supplied in digital format and impacts were calculated using GIS technology in order to maximize the accuracy of the assessment. Project design features that avoid or preserve biological resources are taken into

consideration and specifically described below prior to the assessment of potential adverse impacts.

The biological values of resources within, adjacent to, and outside the area to be affected by the project were determined by consideration of several factors. These included the overall size of habitats to be affected, the current level of disturbance of the habitats within the study area, the study areas surrounding environment and regional context, the study area's biological diversity and species abundance, the presence of sensitive and special-status plant and wildlife species, the study area's importance to regional populations of these species, and the degree to which habitats within the study area are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves. Whereas this assessment is comprehensive, the focus is on sensitive plant communities/habitats, resources that play an important role in the regional biological systems, and special-status species.

c. Relevant Project Features

As further described in Chapter 2.0, Project Description, the Skyline Ranch Project includes an approximately 622-acre development area in the southern portion of the study area, with nearly three quarters or approximately 1,551 acres in the northern portion of the study area to remain undeveloped. Approximately 1,355 acres of this northern area, representing 62 percent of the study area, would be dedicated or designated as natural open space and managed through the proposed establishment of the Skyline Ranch Conservation Area (SRCA) (which includes the Plum Canyon vernal pool and four artificial pools on the southern portion of Cruzan Mesa). A total of 166 acres is designated as a Non-Development/Continuing Use Area, which would remain undeveloped with restrictions placed on the use of the land to prevent buildings from being established. The Non-Development/Continuing Use Area supports the large, bisected vernal pool on the Cruzan Mesa. The remaining nine acres of undeveloped area in the northern portion of the site would be designated as open space without conservation easements or restrictions.

The SRCA would be managed by an as yet undetermined agency, non-profit organization, conservation-oriented entity, or other entity approved by the County of Los Angeles with experience in the area of natural resource conservation. The SRCA would have associated with it an on-going maintenance and management program to insure the long-term persistence of the area's biotic resources. Direct and indirect degradation of habitat would be prevented in part through steep topography that separates the SRCA from the proposed development area and through the prohibition or restriction of uses within the SRCA. The SRCA would include signage and other management practices where appropriate to discourage off-road vehicles, domestic pets, and other activities harmful to natural lands. Following project approval, any use of lands within the proposed SRCA would be subject to approval by the SRCA

habitat manager and restricted to uses that are not incompatible with the resource conservation objectives of the SRCA.

The Non-Development/Continuing Use Area would remain as natural open space and a Declaration of Restrictions (or similar, recorded land use restriction) would be placed over the 166-acre area to prevent buildings from being established within this area. Filming and film-making activities, which have historically occurred within the area, may continue.

Additionally, the project would provide approximately 21.6 acres for preservation as a “Mitigation Exchange Area” for 21.6 acres of preserve area that would be disturbed within the adjacent recorded Tract 46018 due to the construction of Skyline Ranch Road.

d. Impact Analysis

Those impacts determined to be less than significant include impacts to biological resources that are relatively common or exist in a degraded or disturbed state rendering them less valuable as habitat or impacts that do not meet or exceed the significance thresholds defined previously. Those impacts determined to be significant are those that do meet the thresholds of significance defined above. Conclusions are based on both the features of the proposed project and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Specific considerations included the overall size of habitats to be affected, the study area’s previous land uses and disturbance history, the study area’s surrounding environment and regional context, the study area’s biological diversity and abundance, the presence of sensitive and special-status plant and wildlife species, the study area’s importance to regional populations of these species, and the degree to which habitats within the study area are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves.

(1) Sensitive Plant Species

Two agency-listed plant species, spreading navarretia and California Orcutt grass, associated with the Plum Canyon and Cruzan Mesa vernal pools, were located within the study area but are well outside the proposed development footprint and would not be affected by project development.

The slender mariposa lily was found commonly in the northern portion of the study area with smaller scattered locations in the southern portion of the study area. Approximately 5,300 plants in roughly sixty locations were mapped within approximately 43 acres of occupied habitat. Approximately one acre (or two percent) of the occupied habitat within the study area would be impacted by the proposed project which would remove approximately 100 plants. A

total of 42 acres (or 98 percent) of the habitat occupied by slender mariposa lily would be preserved.

Several issues relate to the determination of potential impacts to slender mariposa lily. These issues include the preservation of genetic variability, the overall distribution of the species, and its sensitivity. Slender mariposa lily is not Federally or State listed as threatened or endangered; however, it is a CNPS List 1B plant species. This species is known only from Los Angeles County and prior to surveys for this project, was presumed to be limited to the San Gabriel Mountains. Although limited in its distribution, the removal of only two percent of the population is not expected to threaten the regional population of this species. Moreover, ninety-eight percent of the population would be avoided and preserved within the SRCA, augmenting additional records within the Angeles National Forest and ensuring the continued existence of this species in the region. Because impacts to the slender mariposa lily would not drop the species below self-perpetuating levels, impacts do not exceed Threshold 1 as defined above in Section 3a; and impacts are considered less than significant.

Three CNPS List 4 plant species were detected within the study area: Paso Robles navarretia (CNPS List 4.3), Peirson's morning-glory (CNPS List 4.2), and Palmer's grappling hook (CNPS List 4.2). CNPS List 4 species typically are not considered rare for purposes of analysis under CEQA; however the CNPS strongly recommends that impacts to List 4 species be addressed during the CEQA process. The List 4 status denotes that a species is of limited distribution or is infrequent throughout a broader area in California and its vulnerability or susceptibility to threat appears to be low; moreover, the designation denotes that more survey data is needed before a conclusion ought to be drawn regarding the species' limits in California.⁴⁵ List 4 plants cannot be called "rare" from a statewide perspective; however, they are uncommon enough that they should be monitored regularly. Many CNPS List 4 plants are of local interest. Paso Robles navarretia was restricted to the vicinity of Cruzan Mesa and would not be affected by the proposed project. Peirson's morning-glory and Palmer's grappling hook were fairly widespread within proposed development areas. Although these List 4 species may have a limited distribution in California, their susceptibility to threat is considered low, as indicated by their List 4 status, and the existing data on these species do not support a conclusion that these species are rare. The loss of these species resulting from the proposed project is not expected to reduce regional population levels such that their existence is threatened (as defined above in Threshold 1). Therefore, impacts to Peirson's morning-glory and Palmer's grappling hook are considered less than significant.

⁴⁵ CNPS, *Inventory of Rare and Endangered Plants of California (sixth edition)*, Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor, California Native Plant Society, Sacramento, California, x + 388pp., 2001.

(2) Sensitive Wildlife Species

One Federally listed species, the vernal pool fairy shrimp, was observed within the study area and one State listed species, the Swainson's hawk, was observed flying over the study area. The vernal pool fairy shrimp occurs within the Plum Canyon and Cruzan Mesa vernal pools, outside of the proposed development area, and would not be impacted by the proposed project. Therefore, no impacts to vernal pool fairy shrimp are expected to occur. The Swainson's hawk was observed flying-over the study area and the proposed land-use plan would not adversely affect their migratory passage. Therefore, no impacts would occur to the Swainson's hawk. Focused surveys for additional listed species, Riverside fairy shrimp, San Diego fairy shrimp, and coastal California gnatcatcher, did not detect any of these species within the study area; therefore, no impacts are expected to occur. One listed species, bank swallow, may occur within the study area as a migrant but was not observed. No other listed species are expected to occur due to the lack of suitable habitat or the negative results of focused surveys.

One sensitive wildlife species, the western spadefoot, was observed on-site but is not expected to occur within the development area due to the lack of suitable habitat. Therefore, no impacts are expected to occur to this species.

Nineteen additional special-status, but not listed, species were observed within the study area including, coast horned lizard, coastal whiptail, white-tailed kite, northern harrier, Cooper's hawk, sharp-shinned hawk, ferruginous hawk, golden eagle, prairie falcon, merlin, loggerhead shrike, Vaux's swift, California horned lark, yellow warbler, yellow-breasted chat, southern California rufous-crowned sparrow, Bell's sage sparrow, grasshopper sparrow, and San Diego black-tailed jackrabbit. These species are not Federally or State listed and considerable habitat for these species would be preserved on-site within the 1,551 acres of open space. Impacts of the proposed project are not expected to threaten regional populations of these species (as defined above in Threshold 1) and are therefore less than significant.

Ten additional special-status species were not observed but have the potential to occur due to the presence of suitable habitat including, silvery legless lizard, coastal rosy boa, coast patch-nosed snake, burrowing owl, long-eared owl, western mastiff bat, pallid bat, pale big-eared bat, southern grasshopper mouse, and San Diego desert woodrat. Similar to the discussion in the previous paragraph, these species are not Federally or State listed and suitable habitat for these species would be preserved within the 1,551 acres of open space within the study area. Therefore, potential impacts of the proposed project are not expected to threaten regional populations of these species (as defined above in Threshold 1) and are therefore less than significant.

(3) Plant Communities

As shown in Table 4.C-4, Impacts to Vegetation Communities, on page 4.C-64 and Figure 4.C-6, Impacts to Vegetation Communities, on page 4.C-65, project development would result in the loss of approximately 84.8 acres of annual grassland (83.9 acres on-site and 0.9 acre off-site) and 37.2 acres of disturbed/barren/developed areas (20.0 acres on-site and 17.2 acres off-site). An additional estimated 4.7 acres of annual grassland (3.3 acres on-site and 1.4 acres off-site) and 2.2 acres of disturbed/barren/developed areas (1.1 acres on-site and 1.1 acres off-site) would be impacted within fuel modification zones (calculated at 200 feet beyond the limits of grading). These plant communities do not represent sensitive plant communities. Non-native grassland is a common habitat that is dominated by non-native, weedy species. Approximately 146.23 acres of this habitat type would remain within open space areas of the proposed project, 46.8 acres within the SRCA and an additional 99.43 acres within the Non-Development/Continuing Use Area. Further, as shown below in Section 5, Cumulative Impacts, an additional 511 acres are subject to long-term preservation in the region. Due to the dominance of non-native species, relatively low value as habitat (compared to surrounding native habitats), and the preservation of similar habitat on-site and within the region, impacts are considered less than significant. Impacts to disturbed/barren/developed areas, which contain no native vegetation and provide no meaningful value as wildlife habitat, are also considered less than significant.

No impacts would occur within chaparral habitat. Potential impacts to sensitive plant communities; sycamore riparian woodland, southern willow scrub, southern vernal pool, holly-leaved cherry scrub, coastal sage scrub (including disturbed coastal sage scrub), and coastal sage-chaparral scrub, are discussed below in Section (5), Sensitive Plant Communities.

(4) Wildlife Movement

Proposed development would be relegated to the southern third of the Skyline Ranch study area, contiguous with existing development to the southwest, south and southeast. Proposed open space areas in the northern portion of the study area would continue to foster wildlife movement between areas of the Angeles National Forest to the north and west (i.e., Lake Hughes, San Francisquito Canyon, Bouquet Canyon) and areas to the east and south (i.e., Placerita Canyon State Park, Tujunga Wash). In addition to the project's proposed SRCA, the proposed project avoids impacts to the Cruzan Mesa, which contributes additional resources (i.e., water, foraging areas, vegetative cover) to facilitate wildlife movement. As such, development of the proposed project would not have a significant adverse effect on any known or suspected wildlife movement corridors. The proposed project would not affect the vernal pools on Cruzan Mesa and within Plum Canyon, thus habitat linkages for migrating waterfowl and other mobile wildlife species using vernal pool resources would not be adversely affected by the project.

Table 4.C-4

Impacts to Vegetation Communities

Vegetation Community	Existing (Acres)	Onsite Impacts		Offsite Impacts	
		Grading (Acres)	Fuel Modification	Grading (Acres)	Fuel Modification
Coastal Sage Scrub	906.5	252.2	9.6	2.7	4.1
Disturbed Coastal Sage Scrub	330.6	188.9	1.8	11.9	0.1
Coastal Sage-Chaparral Scrub	324.5	70.0	6.2	0.3	0.9
Chaparral	261.9	0.0	0.0	0.0	0.0
Non-native Grassland	231.4	83.9	3.3	0.9	1.4
Disturbed	57.3	19.4	1.1	17.2	1.1
Barren	24.1	0.6	0.0	0.0	0.0
Holly-leaved Cherry Scrub	12.7	2.1	0.6	0.0	0.1
Southern Vernal Pool	12.2	0.0	0.0	0.0	0.0
Developed	6.6	0.0	0.0	0.0	0.0
Sycamore Riparian Woodland	4.6	4.6	0.0	0.0	0.0
Southern Willow Scrub	0.6	0.0	0.0	0.0	0.0
Total	2,173.0	621.7	22.6	33.0	7.7

Source: NRC 2007.

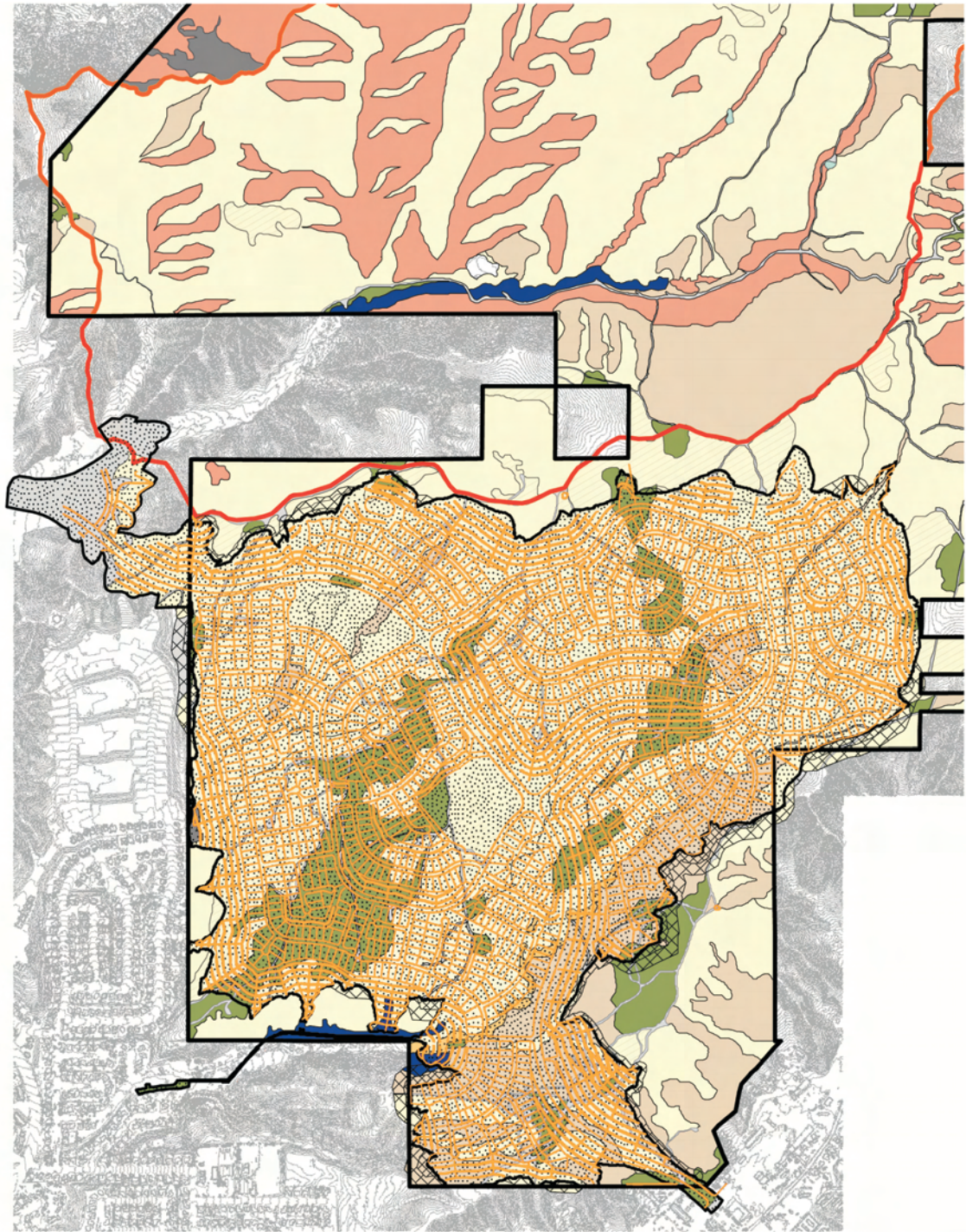
Additionally, impacts to the unnamed canyon in the southern portion of the study area would not significantly impact regional wildlife movement as this canyon is currently fragmented from open space areas to the south. Effects on wildlife movement would be a less than significant impact of the proposed project (as defined by Threshold 4 above in Section 3.a.)

(5) Sensitive Plant Communities

As shown in Table 4.C-4, project development would result in the loss of approximately 254.9 acres of coastal sage scrub (252.2 acres on-site and 2.7 acres off-site), 200.8 acres of disturbed coastal sage scrub (188.9 acres on-site and 11.9 acres off-site), 70.3 acres of coastal sage-chaparral scrub (70.0 acres on-site and 0.3 acre off-site), 4.6 acres of sycamore riparian woodland, and 2.1 acres of holly-leaved cherry scrub (all on-site) due to grading.

An additional 12.7 acres of coastal sage scrub (8.9 acres on-site and 3.8 acres off-site), 2.7 acres of disturbed coastal sage scrub (2.6 acres on-site and 0.1 acre off-site), 5.7 acres of coastal sage-chaparral scrub (5.1 acres on-site and 0.6 acre off-site), and 0.5 acre of holly-leaved cherry scrub (0.4 acre on-site and 0.1 acre off-site) would be impacted due to vegetation trimming for fuel management.

The proposed project may also result in temporary impacts to vegetation communities within a 50-foot grading buffer zone surrounding the permanent grading impact footprint due to



Marcus C. England, Natural Resource Consultants, 11 May 2009

- | | | | |
|--|--------------------------------|--|---------------------------|
| | 100ft Fuel Management Zone | | Non-native Grassland |
| | 200ft Fuel Management Zone | | Holly Leaved Cherry Scrub |
| | Grading Area | | Sycamore Woodland |
| | Proposed Cruzan Mesa SEA | | Southern Willow Scrub |
| | Chaparral | | Vernal Pool |
| | Coastal Sage - Chaparral Scrub | | Disturbed/Developed |
| | Coastal Sage Scrub | | Barren |
| | Disturbed Coastal Sage Scrub | | |

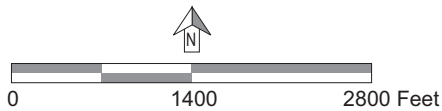


Figure 4.C-6
Impacts to Vegetation Communities

Source: Natural Resources Consultants, May 2009

circumstances that may arise where equipment or construction activities need to extend beyond the permanent grading impact footprint. Vegetation communities located within this buffer zone that could be affected during construction include coastal sage scrub (10.7 acres), disturbed coastal sage scrub (6.1 acres), coastal sage-chaparral scrub (3.3 acres), non-native grassland (1.8 acres), disturbed (0.8 acres), holly-leaved cherry scrub (0.7 acres) and sycamore riparian woodland (0.2 acres). These areas fall within the proposed SRCA and would be restored to pre-project conditions following project grading.

These native vegetation communities are representative of the native character and natural history of this area and provide habitat for a variety of plant and wildlife species, including a number of sensitive species. Therefore, impacts to sensitive plant communities including sycamore riparian woodland, holly-leaved cherry scrub, coastal sage scrub, disturbed coastal sage scrub, and coastal sage-chaparral scrub are significant prior to mitigation (as defined in Threshold 2 above).

The proposed project would not impact southern vernal pool or southern willow scrub habitat because the project does not include development or grading in the northern portion of the study area where these resources occur.

As shown in Table 4.C-5, Vegetation Community Preservation, on page 4.C-67, approximately 1,355 acres would be preserved within the SRCA including 248.6 acres of coastal sage-chaparral scrub, 623.9 acres of coastal sage scrub, 115.8 acres of disturbed coastal sage scrub, 1.5 acres of southern vernal pool, and 10.6 acres of holly-leaved cherry scrub. The lands preserved within the SRCA include sufficient acreage to offset project impacts on various plant communities associated with the Skyline Ranch project.

(6) Jurisdictional Areas

As shown in Figure 4.C-3, Jurisdictional Features, on page 4.C-19, the proposed project would impact 5.22 acres of “waters of the U.S.” under the jurisdiction of the ACOE and RWQCB and 9.30 acres of streambed under the jurisdiction of the CDFG, including 2.71 acres of vegetated riparian habitat. No wetlands were identified within the study area; therefore, no wetlands would be impacted by the proposed project.

All impacts would occur within the southern portion of the study area and would result in impacts to a series of ephemeral drainages, many of which are degraded, and one drainage which supports high-quality sycamore riparian woodland. Impacts to sycamore riparian woodland would result in the removal of 96 western sycamore trees and nine Fremont cottonwood trees. Due to the extent of impacts, including the removal of 2.71 acres of vegetated riparian habitat

Table 4.C-5

Vegetation Community Preservation

Vegetation Community	Existing (Acres)	Impacts On-site^a (Acres)	Acres Preserved in the SRCA^{b,c,d}
Coastal Sage Scrub	906.5	252.2	623.9
Disturbed Coastal Sage Scrub	330.6	188.9	115.8
Coastal Sage-Chaparral Scrub	324.5	70.0	248.6
Chaparral	261.9	0.0	260.3
Non-native Grassland	231.4	83.9	46.8
Disturbed	57.3	19.4	20.9
Barren	24.1	0.6	23.2
Holly-leafed Cherry Scrub	12.7	2.1	10.6
Southern Vernal Pool	12.2	0.0	1.5
Developed	6.6	0.0	2.4
Sycamore Riparian Woodland	4.6	4.6	0.0
Southern Willow Scrub	0.6	0.0	0.6
Total	2,173.0	621.7	1,354.6^d

^a Includes grading impacts only.

^b The SRCA preservation land includes 22.6 acres that will be subject to fuel modification. This includes 9.6 acres of coastal sage scrub, 1.8 acres of disturbed coastal sage scrub, 6.2 acres of coastal sage-chaparral scrub, 3.3 acres of non-native grassland, 1.1 acres of disturbed, and 0.6 acre of holly-leafed cherry scrub. Although vegetation thinning will occur, it is assumed that these areas will retain some habitat value.

^c Portions of the SRCA will be impacted by the installation of an underground 78" drainage pipeline during project construction. Installation of the pipeline will impact 0.45 acres of Holly-leaved Cherry Scrub (0.43 acres on-site, 0.03 acres off-site), 0.02 acres of Coastal Sage Scrub (0.02 acres on-site, 0 acres off-site), 0.02 acres of Barren (0 acres on-site, 0.02 acres off-site) and 0.73 acres of Non-native Grassland (0 acres on-site and 0.73 acres off-site).

^d The total preserved acreage does not include the 166-acre Non-Development/Continuing Use Area in the northern portion of the study area on the Cruzan Mesa or the 21.6-acre Mitigation Exchange Area that would be preserved as replacement habitat for the 21.6 acres of preserve area that would be disturbed within Tract 46018 due to the proposed construction of Skyline Ranch Road.

Source: NRC 2007.

supporting a large number of native trees this impact is considered significant (as defined by Threshold 2) and mitigation is provided below.

Project implementation would also cause temporary impacts to 0.14 acre of ACOE and RWQCB jurisdiction, none of which consists of jurisdictional wetlands, and 0.27 acre of CDFG jurisdiction, of which 0.04 acre consists of vegetated riparian habitat. The temporary impacts would result from the 50-foot grading buffer zone that would surround the permanent grading impact footprint and a smaller grading buffer zone associated with construction of the 78-inch

storm drain. However, this would be restored to pre-project conditions following grading and all on-site areas will become part of the SRCA. Thus, as these impacts would be temporary and would be restored to the existing conditions after project development, impacts to jurisdictional waters off-site are considered less than significant.

(7) Nesting Birds

The Skyline Ranch study area provides habitat for a variety of native bird species. Disturbance to any of these species during the nesting season (approximately mid-February to mid-August) would be a violation of the Migratory Bird Treaty Act of 1918. Nests and eggs of these species are also protected under Fish and Game Code Section 3503. Prior to mitigation, the anticipated impact to nesting birds is considered significant as defined by Threshold 4.

(8) Regulated Trees

Project development would result in the removal of up to two coast live oak trees, in the County of Los Angeles and one in the City of Santa Clarita. Within the County of Los Angeles, oak trees that are 8 inches dbh or greater are regulated by the County's oak tree ordinance. The oak tree located onsite (within the County) has a dbh of 32 inches. Therefore, the removal of this oak tree is considered significant (as defined by Threshold 5) and mitigation is provided below. Oak trees that are five inches dbh or greater and are within a woodland plant community are regulated under SB 1334. This coast live oak tree on-site is not within an oak woodland and would not be regulated under SB 1334. The second coast live oak, which may be removed, is located off-site in the City of Santa Clarita. Project development may result in the removal of the second coast live oak due to the installation of a proposed 78-inch storm drain. While the second coast live oak is not located within the alignment the storm drain, trenching required for the installation of the storm drain falls within the drip line of the tree and could damage the root system. Therefore, while this tree would not be removed by the storm drain installation, it may be adversely affected by trenching for the pipeline resulting in a potentially significant impact. As with the coast live oak tree to be removed onsite, due to the potential loss of the off-site oak tree, the applicant would be required to obtain an oak tree removal permit from the City of Santa Clarita prior to initiation trenching and construction for the pipeline as discussed in the Mitigation Measure 4.C-4 below.

Although not regulated by the County, impacts would occur to a number of native trees. Impacts to western sycamore and Fremont cottonwood trees are addressed above in Section 3.d.(6), Jurisdictional Areas, and mitigation is provided below in Mitigation Measure 4.C-2. In addition, two California juniper trees would be impacted. Although not considered a significant impact, mitigation is provided as described below in Mitigation Measure 4.C-4.

(9) Indirect Impacts

Cruzan Mesa – The project would have no direct impacts on the proposed Cruzan Mesa SEA as no development or disturbance in this area would occur as a result of the proposed project. Project grading extends to the ridgeline that separates the southern flank of the Plum Canyon watershed from the northern flank of the unnamed canyon watershed as shown in Figure 4.C-6 on page 4.C-65. Project grading is separated topographically and hydrologically from the watershed of Cruzan Mesa and the vernal pool resources located there and the proposed project would not drain to the open space areas of the Cruzan Mesa. The Cruzan Mesa is located on the north side of a ridge system that separates the development area from preserved open space. In addition to the topographic separation provided by the ridgeline, a buffer, averaging approximately 300 feet and consisting of primarily landscaped slopes, would separate the development from the areas to the north that are proposed for preservation as open space.

The potential for the proposed project to result in indirect impacts to biological resources as a result of construction activities and development of the study area is evaluated with a focus on effects associated with drainage (increased urban run-off and pollutant concentration), lighting, noise, barriers, invasive species, and introduced humans and pets. These areas with the potential to result in indirect effects on biological resources are discussed independently below.

The Non-Development/Continuing Use Area, which comprises the majority of Cruzan Mesa, would remain as natural open space, and a Declaration of Restrictions (or similar, recorded land use restriction) would be placed over the 166-acre area to ensure that the area remains as open space. Filming and film-making activities have historically occurred within and adjacent to this area, and they might continue to occur.

Drainage—As further described in Section 4.B, Hydrology and Water Quality, during construction and as mitigation for potential project impacts, an Erosion Control Plan and a Storm Water Pollution Prevention Plan will be prepared. These plans will incorporate Best Management Practices (BMPs) to mitigate potential effects associated with erosion and sedimentation and construction related pollutants to less than significant levels. Furthermore, as mitigation to address potential effects associated with discharge of urban-related pollutants following development, a Stormwater Quality Management Plan is currently being prepared, incorporating BMPs for non-point source pollution to address pollutants from such sources as roofing materials, atmospheric deposition of air pollution, grease, oil, suspended solids, metals, solvents, phosphates, fertilizers and pesticides. In addition, the proposed project would not have an adverse effect on downstream habitat due to changes in hydrology, in particular a section of sycamore woodland located south of the study area along the unnamed drainage (Drainage Area 5) that leads to a concrete channel. The proposed project would decrease the amount of runoff from 999 cubic feet per second (cfs) to 877 cfs during a major storm event (a 12 percent decrease) and incorporates a number of project features and BMPs to protect the downstream

habitat including desilting basins, a detention basin, catch basins, energy dissipaters, trash and debris screening, and incorporation of landscaped/natural areas. Although there would be a decrease in runoff during major storm events, the sycamore woodland downstream is mature and not expected to be completely dependent upon surface runoff within Drainage 5. Therefore, a 12 percent decrease in storm event runoff is not expected to adversely affect the downstream sycamore woodland. In addition, increases in dry weather flows due to irrigation and other urban runoff from the study area may, after mitigation to address non-point source pollution, support further plant growth within the off-site sycamore woodland. With these design features and BMPs, these indirect effects on drainages would be less than significant and no additional mitigation is required.

Lighting—As further described in Chapter 2.0, Project Description, and 4.E, Visual Qualities, lighting associated with the project would be shielded and directed downward and away from the undeveloped area. Remnant night lighting would not be a nuisance to surrounding wildlife due to the topographic separation of the development area and interceding buffer areas. Therefore, impacts are less than significant.

Noise—Sources of urban noise (project construction, daily traffic) associated with the project would create a less than significant nuisance to surrounding wildlife resources due to the topographic separation of the development area and the proposed open space areas.

Habitat Linkage Barriers—The proposed project is not an obstruction to any recognized habitat linkages for large- or medium-sized mammals, birds, or reptiles. Further, study area development would not adversely affect wildlife movement between or within regionally important open space areas (i.e., Angeles National Forest). Barriers to human and domestic animal intrusion, such as low fencing and trail markers, would be incorporated into the project design and the SRCA to limit and control public access into sensitive open space areas. Therefore, impacts are less than significant.

Invasives—As indicated in Chapter 2.0, Project Description, landscaping would consist of a mix of native, drought-tolerant, low-fuel, and non-invasive plant species that would provide a transition between natural open space areas and improved areas of the study area while supporting biological resource, aesthetic, and fire safety priorities. Although this landscape design feature would sufficiently address potential indirect effects of invasive plants, it has been conservatively concluded that prior to mitigation proposed in Mitigation Measure 4.C-5, potential indirect impacts would be potentially significant.

Addition of Humans and Pets—Due to the close proximity of the proposed development to the SRCA, there is the potential for indirect impacts to sensitive biological resources from the introduction of humans and pets. Indirect effects include trampling, trash, and mortality of wildlife by unleashed pets. As stated above in Habitat Linkage Barriers, fencing

and trail markers would be incorporated into the project design and the SRCA to limit and control public access into sensitive open space areas. Furthermore, the topographic separation between the proposed development area and the SRCA would limit the potential for uncontrolled access by humans and pets. Based on the above, impacts on sensitive biological resources associated with uncontrolled access by humans and pets are considered less than significant.

4. MITIGATION MEASURES

The following mitigation measures address the potentially significant impacts of the proposed project on sensitive natural resources.

a. Sensitive Vegetation Communities

4.C-1 *Mitigation for grading and fuel modification impacts (calculated 200 feet beyond the limits of grading) to 467.9 acres of combined **coastal sage scrub** and **disturbed coastal sage scrub** (452.3 acres within on- and off-site, and 15.6 acres within on- and off-site fuel modification zones), 77.0 acres of **coastal sage-chaparral scrub** (69.9 acres within on- and off-site grading and 7.1 acres within on- and off-site fuel modification zones), and 2.8 acres of **holly-leaved cherry scrub** (2.1 acres within on-site grading and 0.7 acre within on- and off-site fuel modification zones) shall be provided by establishing a 1,355 acre conservation area [Skyline Ranch Conservation Area (SRCA)] within the northern portion of the study area as shown in Figure 2-3, Aerial View-Development and Conservation Area. The applicant shall cause the preservation of this 1,355-acre area through either a Declaration of Restrictions or a Conservation Easement, or dedication or transfer of the land to a conservation organization committed to the preservation of the land in perpetuity. A Declaration of Restrictions, Conservation Easement, or similar recorded instrument shall be placed and recorded in this area to ensure its long-term preservation. The applicant shall arrange for the long-term management of the property to ensure the long-term persistence of the property's biological resources through a non-profit organization, conservation-oriented entity, or entity with experience in biological resource conservation approved by the County. The applicant shall provide long-term funding to assure the management of the property to protect its biological resources in perpetuity. The SRCA includes approximately 623.9 acres of coastal sage scrub, 115.8 acres of disturbed coastal sage scrub, 248.6 acres of coastal sage-chaparral scrub, and 10.6 acres of holly-leaved cherry scrub. This area shall be preserved as natural open space. These 1,355 acres provide substantial ecological value based on the quantity, quality, and regional value of the habitats preserved.*

Establishment of the 1,355-acre SRCA shall achieve the following performance standards:

- 1. Provision of sufficient quantity of habitat to offset vegetation impacts associated with the proposed project. When considering coastal sage scrub, disturbed coastal sage scrub, coastal sage-chaparral scrub, and holly-leaved cherry scrub collectively, this 1,355-acre area will provide close to 2:1 preservation of like and contiguous habitats [1,354.6 acres preserved vs. 642.1 acres impacted (621.7 acres impacted by grading and 20.4 acres impacted by fuel modification)]. Preserved habitats are similar to those impacted by the project and most vegetation communities (with the exception of sycamore woodland), regionally common species, and special status plant and wildlife species impacted by the project are represented within the SRCA.*
- 2. An on-going maintenance and management program shall be adequately funded and implemented to ensure the long-term integrity of biological resources within the 1,355-acre SRCA. Direct and indirect degradation of habitat shall be prevented in part through steep topography that separates the SRCA from the proposed development area and through the prohibition or restriction of uses within the SRCA.*
- 3. The SRCA shall include signage, where appropriate, and other management practices to discourage off-road vehicles, domestic pets, and other activities harmful to natural lands.*
- 4. Any continued use of lands within the SRCA (such as film-making) shall be subject to approval by the SRCA habitat manager and restricted to uses that are not incompatible with the resource conservation objectives of the SRCA.*
- 5. A 21.6-acre Mitigation Exchange Area shall be provided to replace the 21.6 acres of preserve area that would be disturbed within Tract 46018 due to the construction of Skyline Ranch Road. This shall be established separately from the SRCA through an agreement between the applicant, Shapell-Monteverde Partnership (owner of the recorded Tract 46018), the Army Corps of Engineers, and the County of Los Angeles.*
- 6. Following grading operations any areas that have been disturbed within the 50-foot grading buffer zone; which includes coastal sage scrub (10.7 acres), disturbed coastal sage scrub (6.1 acres), coastal sage-chaparral scrub (3.3 acres), non-native grassland (1.8 acres), disturbed (0.8 acres), holly-leaved cherry scrub (0.7 acres) and sycamore riparian woodland (0.2 acres), shall be restored to pre-graded conditions by a qualified biologist. Restoration shall be designed to provide the same vegetation resources and habitat value as those removed within the buffer zone. At*

the end of all project grading, proposed restoration actions within the buffer zone (if necessary) shall be presented in a restoration plan provided to the County. Following approval by the County, restoration shall be initiated and completed according to the approved restoration plan.

*Mitigation for impacts to **sycamore riparian woodland** (including 96 sycamore trees and nine Fremont cottonwood trees) is discussed in Mitigation Measure 4.C-2.*

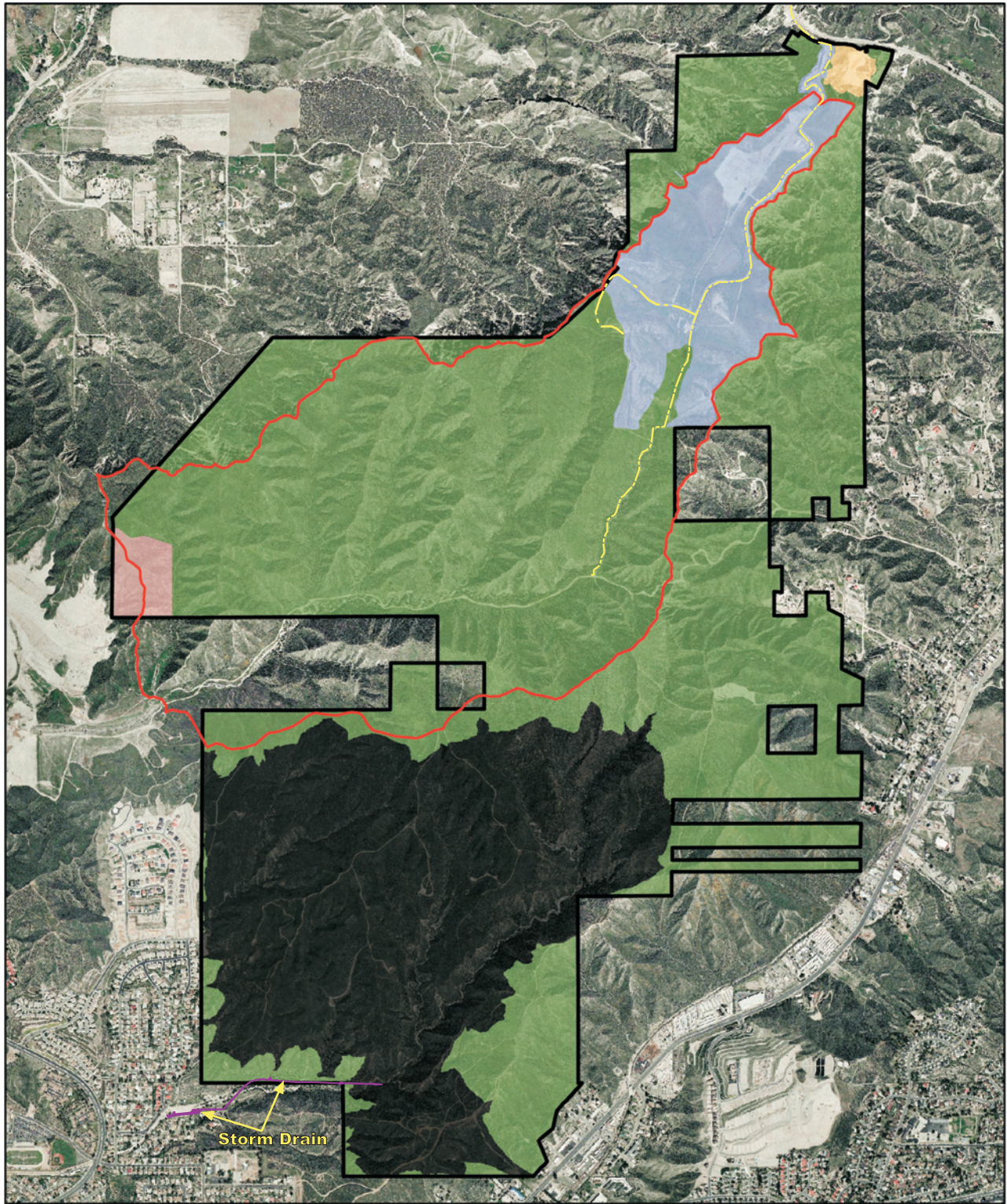
b. Jurisdictional Areas

4.C-2 *As detailed in the Habitat Mitigation and Monitoring Plan (HMMP) prepared by GLA, mitigation for impacts to 5.22 acres of Army Corps of Engineers (ACOE) and RWQCB jurisdiction, none of which consists of jurisdictional wetlands, and 9.30 acres of California Department of Fish and Game (CDFG) jurisdiction (of which 2.91 acres is vegetated riparian habitat) shall be accomplished by the applicant through the following:*

- 1. The preservation of 1,355 acres of natural open space within the SRCA through the use of a conservation easement or the dedication of such land to a qualified conservation organization. This 1,355-acre area includes approximately 5.35 acres of ACOE and RWQCB jurisdiction, none of which consists of jurisdictional wetlands and approximately 5.71 acres of CDFG jurisdiction (of which 0.31 acre is vegetated riparian habitat).*
- 2. The preservation of 1.53 acres of southern vernal pool and artificial pool habitats within the SRCA subject to RWQCB jurisdiction.*
- 3. On-site establishment of 7.27 acres of sycamore/cottonwood riparian woodland within Plum Canyon.*

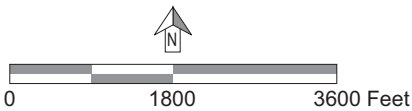
As described further in the HMMP, the proposed 7.27-acre sycamore riparian woodland (mitigation site) will be established within portions of Plum Canyon on-site within the SRCA as shown in Figure 4.C-7, Proposed Conservation and Mitigation Areas, on page 4.C-74. Hydrology is currently present at the mitigation site and the mitigation site supports Cortina sandy loam and Saugus loam which are conducive to the establishment of sycamore riparian woodland. An ACOE-approved reference site will be used prior to implementation of the mitigation program to provide the necessary data to measure the performance of the mitigation site.

The plant palette for the proposed mitigation site includes the planting of two riparian species; 727 one-gallon containers of Fremont cottonwood and



Marcus C. England, Natural Resource Consultants, 11 May 2009.

- | | |
|----------------------------|---|
| Skyline Ranch Boundary | Mitigation Exchange Area 22 acres |
| Proposed Cruzan Mesa SEA | Non-Development/Continuing Use Area 166 acres |
| Proposed Land Use | Open Space 9 acres |
| Development Area 622 acres | Skyline Ranch Conservation Area 1,355 acres |
| | Proposed County Trail |



Source: Natural Resources Consultants, May 2009

Figure 4.C-7
Proposed Conservation
and Mitigation Areas

1,818 one-gallon containers of western sycamore. One-gallon upland buffer species will also be planted including chamise, hoaryleaf ceanothus, California buckwheat, deerweed, coast prickly pear, snake cholla, scrub oak, white sage, black sage, and our Lord's candle. A seed mix of 12 native shrub and herbaceous species will also be used.

The planting of a sycamore riparian woodland in the vicinity of the holly-leaved cherry woodland is not intended to, nor is it expected to, result in an inadvertent conversion of the riparian area from holly-leaved cherry to sycamore woodland. The creation of 7.27 acres of sycamore riparian woodland within Plum Canyon within the SRCA is expected to provide an overstory on the edges of the holly-leaved cherry woodland that replicates the conditions currently found in Drainage 5 (where impacts are proposed). On-site occurrences of both species indicate that they can exist concomitantly without the risk of conversion from one type to another altogether. With appropriate spacing and the use of drip irrigation on the planted sycamores, the existing swath of holly-leaved cherry will not be adversely affected by the addition of the sycamore riparian woodland.

The HMMP includes a number of features to ensure the success of the mitigation site including supervision by a qualified habitat restoration specialist, a 5-year qualitative and quantitative monitoring program, contractor education, the use of mycorrhizal fungi, supplemental irrigation, regular maintenance (e.g., exotic vegetation control, pest control, trash removal), and adaptive management assurances.

The Hybrid Functional Assessment (HFA) conducted by GLA (2009) concluded that the proposed project, considering off-setting mitigation measures, would result in a 25 percent increase in the total functionality of the aquatic features remaining within the SRCA after project implementation.

In addition to the measures proposed above, the project will require permits from the ACOE under section 404 of the Clean Water Act (CWA), from the Regional Water Quality Control Board (RWQCB) under section 401 of the CWA, and from the CDFG under section 1602 of the State Fish and Game Code. Should the ACOE, RWQCB, and/or CDFG impose additional or greater mitigation measures on the project for these impacts, those measures – to the extent that they exceed what is required by the measures contained herein – may be substituted for the measures set forth herein, as the County does not intend to require the project to mitigate twice for the same impact once the project has already mitigated the impact below a level of significance.

c. Nesting Birds

- 4.C-3** *In order to avoid impacts to nesting birds protected by the Migratory Bird Treaty Act and raptors protected by State Fish and Game Code, project grading and vegetation removal should take place outside of the nesting season, roughly defined as mid-February to mid-August. If grading or vegetation removal is to take place during the nesting season, a biologist acceptable to Los Angeles County shall be present during vegetation clearing operations to search for and flag active nests so that they can be avoided. A raptor survey will also be required in the unnamed canyon prior to the fill of that drainage. An avoidance buffer of 100 to 500 feet (exact radius to be determined by the monitoring biologist) will be fenced around any active raptor nests and impacts to nests will be avoided until after the nesting season is over. After mitigation the anticipated impact on nesting birds is less than significant. The results of the nesting bird construction monitoring will be provided in writing to the CDFG and County Department of Regional Planning (DRP).*

d. Trees

- 4.C-4** *To mitigate the loss of the coast live oak on-site (32 inches diameter at breast height [dbh]) in the southeastern section of the study area, an oak tree permit will be obtained from the County. The impacted oak tree will be replaced at a minimum ratio of 10:1 in the appropriate location at the interface between development and undeveloped areas. This ratio is in excess of the mitigation ratio set forth in the County ordinance, which is 2:1.*

No mitigation is necessary for oak woodlands regulated under SB 1334 because no oak woodlands occur within the study area.

The loss of two California junipers within mixed coastal sage chaparral scrub shall be replaced in the landscaping scheme along roadways and in parks and other recreational areas at a minimum ratio of 3:1. Trees grown from local area stock shall be used, along with salvaged trees from the development area where possible.

To mitigate the potential loss of the coast live oak off-site, the Applicant shall obtain an oak tree removal permit from the City of Santa Clarita for the coast live oak tree that may be adversely impacted by trenching for the proposed 78-inch pipeline installation, prior to initiation of pipeline trenching and construction. To the extent feasible, impacts to areas within the drip line (or root system) should be avoided during construction.

e. Indirect Impacts - Invasives

- 4.C-5** *To mitigate potentially significant indirect impacts to open space areas adjacent to fuel modification zones due to the possible spread of invasive plant species, the proposed project shall incorporate the use of native plant species to the maximum extent practicable and avoid the use of plant species known to be highly invasive adjacent to open space areas. The plant palette for the fuel modification areas adjacent to open space areas shall be consistent with the County of Los Angeles Fire Department Fuel Modification Plan Guidelines⁴⁶ and shall focus on native species provided in the table of desirable plant species.*

5. CUMULATIVE PROJECT IMPACTS

The intent of a cumulative impacts analysis and discussion is to understand cumulative project impacts in a regional context. CEQA Guidelines § 15130(a)(1) states that “a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” A significant cumulative impact, for example, may occur when individual projects each have a small and insignificant effect on a resource, however when viewed as whole, the additive effects of multiple projects in a region can have a marked effect on that same resource. Examples regarding biological resources include effects on the distribution or population numbers of plants or animals, the extent of vegetation communities, or the movement of wildlife populations.

This section discusses the added effects on resources when proposed development on the Skyline Ranch study area and other planned developments in the vicinity of the City of Santa Clarita are considered along with recently developed areas and presents a “worst case” scenario regarding impacts to biological resources. Details on the resources consulted, methods used, and the limitations of this cumulative analysis are available in Section 9.0 of the NRC BRA (included as Appendix D-1 in this Draft EIR).

A 205,683-acre cumulative impact study area was defined as the region of biological relevance to resources within the Skyline Ranch study area, incorporating much of the Santa Clarita Valley, which also forms much of the eastern Santa Clara River Subbasin (refer to Figure 4.C-8, Cumulative Impact Study Area, on page 4.C-78). The cumulative impact study area boundary is defined by the upper elevational limit of coastal sage scrub, which is 3,000 feet,

⁴⁶ *County of Los Angeles Fire Department, Fuel Modification Unit, Prevention Bureau, Forestry Division, Brush Clearance Section. Fuel Modification Plan Guidelines. January 1998. Available at <http://www.fire.lacounty.gov/Forestry/PDF/FuelModificationPlan.pdf>.*

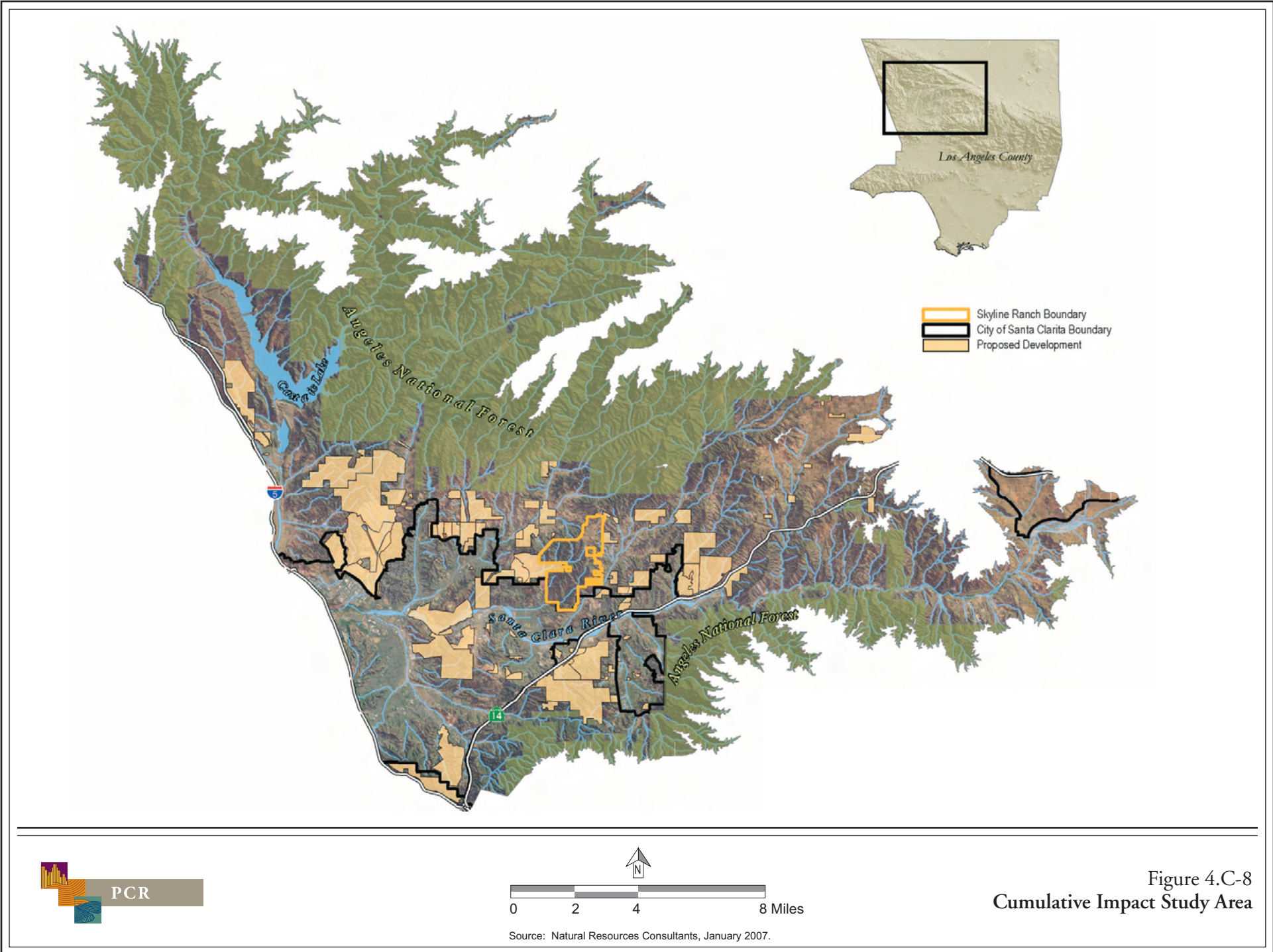


Figure 4.C-8
Cumulative Impact Study Area

Source: Natural Resources Consultants, January 2007.

as defined in Holland⁴⁷, truncated to the south by the southern limit of the Santa Clara River subbasin and to the west by Interstate 5 and development associated with the City of Santa Clarita, which acts as a blockade to free movement of many wildlife species. All areas below 3,000 feet were included in the cumulative impact study area including portions of the Angeles National Forest.

The cumulative impact study area includes all or portions of 103 pending, approved, and recorded parcel and tract maps, totaling approximately 18,136 acres.⁴⁸ Approximately 82 percent of the acreage within these proposed developments lies west of the Skyline Ranch study area and downstream of the Santa Clara River.

Approximately 43 percent of the cumulative impact study area is within the Angeles National Forest and is therefore expected to be preserved in the foreseeable future. Much of these protected lands are upslope from the developed areas along the Santa Clara River and would therefore be protected from indirect development effects such as regional changes in hydrological function.

Existing SEAs 19 (San Francisquito Canyon) and 23 (Santa Clara River) occur within the cumulative impact study area along the Santa Clara River. The proposed Santa Clara River SEA would include both of these existing SEAs. Although SEAs are not fully protected, proposed development impacts within them require a thorough review by the SEATAC and County of Los Angeles. The proposed Cruzan Mesa SEA is predominantly located in the northern part of the Skyline Ranch study area and would not be impacted by the proposed project.

a. Cumulative Impacts to Vegetation Communities

Impacts to vegetation communities in the study area that are also found on the Skyline Ranch study area were analyzed using a regional vegetation dataset created as part of the California Fire and Resource Assessment Program (FRAP),⁴⁹ with a spatial resolution of 100 meters. This dataset is a high resolution statewide vegetation dataset that has withstood several ground-truthing studies.

⁴⁷ Holland, R. F., *Preliminary Descriptions of the Terrestrial Natural Communities of California*, Unpublished Report, State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California, 1986 (updated in 1992).

⁴⁸ City of Santa Clarita. 2004. *Santa Clarita Valley Subdivision Activity Map*. City of Santa Clarita GIS Department.

⁴⁹ California Department of Forestry and Fire Protection (CDF). *Multi-source Land Cover Data (v02_2)*, GIS data, 2002.

(1) Coastal Scrub

Coastal scrub vegetation covers approximately 45,578 acres (22 percent) throughout the cumulative impact study area, and is analogous to coastal sage scrub as used earlier in this report. Many coastal scrub subtypes are considered sensitive and declining habitats. This series of vegetation communities is also habitat for many wildlife species. .

As noted in Table 4.C-6, Cumulative Impacts, on page 4.C-81, potential impacts to coastal scrub within the cumulative impact study area are approximately 7,785 acres (17 percent) of the existing vegetation, assuming 100 percent impact of vegetation within each project. This would be a significant cumulative adverse effect on this sensitive vegetation community. The proposed Skyline Ranch development contributes approximately 468 acres, or 6 percent, of the potential impact within the cumulative impact study area (taking into consideration both grading and fuel modification impacts to coastal sage scrub and disturbed coastal sage scrub within the Skyline Ranch project), again using a 100 percent impact scenario.

As discussed previously in Mitigation Measure 4.C-1, implementation of mitigation measures associated with the proposed Skyline Ranch project would provide for preservation of approximately 796 acres of coastal sage scrub and disturbed coastal sage scrub, thus mitigating potential project-specific impacts to a level that is less than significant and maintaining the viability of this vegetation community. Although the related projects within the cumulative impact study area may not preserve as large a portion of their on-site acreage as the proposed project (64 percent), preservation of coastal scrub habitat, especially if it is occupied by sensitive species, is generally considered a priority in development permitting, and it is expected that a large percentage of the acreage identified as potentially impacted by these projects would be avoided or otherwise mitigated. In addition, 12,799 acres (or 28 percent) of the existing coastal scrub within the cumulative impact study area would be preserved as open space in the Angeles National Forest. It is expected that impacts to coastal sage scrub after project and related project mitigation would not substantially diminish or threaten to eliminate the coastal scrub community on a regional basis; therefore, impacts to coastal scrub on a cumulative level are considered less than significant.

(2) Mixed Chaparral

Chaparral is perhaps the most wide-ranging native vegetation community in southern California. Mixed chaparral covers approximately 66,827 acres (33 percent) of the cumulative impact study area. Coastal sage-chaparral scrub, a community for which there are 77 acres

Table 4.C-6

Cumulative Impacts^a

Skyline Ranch Vegetation Communities	FRAP Analog	(A)	(B)	(C)	(D)
		Existing Acreage in Cumulative Study Area (Percentage of Total Study Area)	Potential Cumulative Impact Acreage (Percentage of Column A) ^b	Skyline Ranch Impact Acreage (Percent Contribution to Column B)	Acreage Subject to Long-term Preservation (Percentage of Column A) ^c
Coastal Sage Scrub	Coastal Scrub	45,578 (22 percent)	7,785 (17 percent)	468 (6 percent)	12,799 (28 percent)
Coastal Sage-Chaparral Scrub	Mixed Chaparral	66,827 (33 percent)	3,271 (5 percent)	77 (2 percent)	51,459 (77 percent)
Holly-leaved Cherry Scrub and Sycamore Riparian Woodland	Valley Foothill Riparian	447 (<1 percent)	11 (2 percent)	7 (63 percent)	116 (26 percent)
Non-Native Grassland	Annual Grassland	5,319 (2.6 percent)	1,951 (37 percent)	88 (4 percent)	511 (10 percent)

^a NRC's cumulative impact analysis assumes impacts to 100 percent of the natural lands within the project boundaries for the 103 projects included in their analysis. It is expected that all pending projects will be subject to local jurisdiction and regulatory agency review and at the time of approval will include substantial areas of conserved lands. These anticipated conservation areas were not available and not included in NRC's analysis. For pending projects like the 12,000-acre Newhall Ranch, conservation of coastal sage scrub and riparian woodland preservation areas are anticipated to be substantial. In addition, NRC's analysis did not identify areas within "approved" project boundaries where native vegetation is conserved. For these reasons this cumulative impact provides a "worst case" scenario.

^b Assumes 100 percent impact within the 103 projects included in the cumulative impact study area. Interpretation of these raw numbers is discussed in Section 9.4 of the NRC BRA.

^c Generally refers to communities located within the Angeles National Forest (approximately 43 percent of the cumulative impact study area).

Source: NRC, 2007.

impacted by the project, is one of the Holland⁵⁰ subcomponents of this California Wildlife Habitat Relationship Systems (CWHR)⁵¹ vegetation community. Potential cumulative impacts amount to 3,271 acres, or 5 percent of this community's total acreage in the cumulative impact study area, assuming 100 percent impact of this community within each project. Proposed development on Skyline Ranch would contribute approximately 77 acres of impacts, or 2 percent of the total cumulative impact. Given this community's abundance throughout the

⁵⁰ Holland, R. F., *Preliminary Descriptions of the Terrestrial Natural Communities of California*, Unpublished Report, State of California, The Resources Agency, Department of Fish and Game, Natural Heritage Division, Sacramento, California, 1986 (updated in 1992).

⁵¹ California Department of Fish and Game. 2002. *CWHR Version 8.0 personal computer program*. California Interagency Wildlife Task Group. Sacramento, CA.

region and its lack of sensitivity status, cumulative effects would not substantially diminish or threaten to eliminate the community on a regional basis; therefore cumulative impacts on mixed chaparral are considered less than significant.

(3) Valley Foothill Riparian

Valley foothill riparian, as mapped by FRAP, includes many different habitat types. The Skyline Ranch study area supports holly-leafed cherry scrub and sycamore riparian woodland. This community comprises approximately 447 acres within the cumulative impact study area. Assuming 100 percent impact of the acreage located within the boundaries of related projects, total cumulative impacts would amount to 11 acres, or 2 percent of the total acreage of this community. The Skyline Ranch contribution to the 11 acres or 2 percent cumulative impact would be 7 acres.

It is expected, however, that a substantial portion of the potential cumulative impact area associated with the project and related projects would either be avoided or mitigated through regulatory requirements for areas deemed under the jurisdiction of CDFG under California Fish and Game Code Section 1602. Enforcement of this statute effectively serves as a programmatic vehicle to keep cumulative impacts below a level of significance, with CDFG typically requiring mitigation through preservation, restoration or enhancement at a one-to-one or greater ratio. Therefore, the loss of what would be less than 2 percent of riparian communities within the cumulative study area would not substantially diminish or threaten to eliminate the community on a regional basis, and as a result, cumulative effects on riparian communities with incorporation of project and related project mitigation measures are considered less than significant.

As discussed above, the Skyline Ranch project mitigates impacts to sycamore riparian woodland with the planting of sycamore within a 7.27-acre area of Plum Canyon that will be preserved within the SRCA.

(4) Annual Grassland

Annual (non-native) grasslands cover approximately 5,319 acres (2 percent), mostly in the western portion of the cumulative impact study area. Approximately 1,951 acres (37 percent) of this community may be removed by combined project development. Annual grasslands, while having some wildlife value, are communities predominantly composed of non-native and often invasive species. Grasslands also tend to be the first community to appear after fires, therefore the extent and location of grasslands in any region tends to be in constant flux. As a habitat generally not considered under threat, adverse cumulative effects on annual (non-native) grassland communities are less than significant.

b. Cumulative Impacts to Plants and Wildlife

As evident by NRC's studies within the Skyline Ranch study area, the Santa Clarita Valley is an area marked by significant plant and wildlife diversity. Much of this diversity is protected in perpetuity within the Angeles National Forest, which contains most of the vegetation communities (and therefore, plant and wildlife habitats) characteristic of the rest of the valley.

(1) Special Status Plant Species

The two agency-listed plant species (spreading navarretia and California Orcutt grass) associated with vernal pools on-site would not be impacted by the proposed Skyline Ranch project and are not discussed further in the context of cumulative effects. For other sensitive plant species located within the study area, including the slender mariposa lily, Paso Robles navarretia, Peirson's morning-glory, Palmer's grappling hook, and club-haired mariposa lily, project-specific impacts on special status plants would be adverse but less than significant.

The results of sensitive plant surveys for proposed projects within the cumulative impact study area are not available; therefore, impacts are discussed in the context of impacts to suitable habitat that could support each species. It should be noted, however, that the majority of suitable habitat is unlikely to be occupied by any of these species.

Coastal sage scrub and chaparral, on certain soil types, are habitat for slender mariposa lily, Peirson's morning glory, Palmer's grappling hook, and club-haired mariposa lily. Impacts to these two habitat types within the cumulative impact study area total 11,056 acres - or 9 percent of the existing habitat - assuming 100 percent impact to these communities within each project. Significant populations of the slender mariposa lily, Peirson's morning glory, and club-haired mariposa lily would be preserved or remain within the SRCA and Non-Development/Continuing Use Area and these species are also known to occur in the Angeles National Forest, where they are expected to be preserved.

Annual grasslands provide habitat for Paso Robles navarretia, Palmer's grappling hook, and club-haired mariposa lily. Approximately 1,951 acres (37 percent) of this community may be impacted within the study area, however, this community is widespread, dominated by non-native species, and is often forms ephemerally after fires. As discussed previously, cumulative impacts to these annual grasslands are less than significant. The club-haired mariposa lily and Palmer's grappling hook are known to occur and are expected to be preserved within the Angeles National Forest. Paso Robles navarretia is not known from the Angeles National Forest but is known to occur within the cumulative impact study area. The majority of the populations of Paso Robles navarretia and club-haired mariposa lily within the Skyline Ranch study area would be preserved or remain within the SRCA and Non-Development/Continuing Use Area.

It can be expected that, through mitigation measures to preserve significant populations of sensitive plants on individual projects, as well as the retention of open space on public lands such as those found in the Angeles National Forest, that potential adverse cumulative effects on these plant species would be less than significant.

(2) Special Status Wildlife Species

The proposed project would not result in direct or indirect impacts to any State or Federally listed wildlife species. The Federally listed vernal pool fairy shrimp, and the western spadefoot, a State species of special concern, are associated with vernal pool habitats that would be avoided by the proposed project. As such impacts to these species will not be discussed further on a cumulative basis.

Coastal scrub provides habitat for coastal whiptail, coast horned lizard, golden eagle, prairie falcon, loggerhead shrike, southern California rufous-crowned sparrow, Bell's sage sparrow, and San Diego black-tailed jackrabbit. As previously discussed, potential impacts to coastal scrub within the cumulative study area (and outside of the Angeles National Forest) amount to approximately 7,785 acres (17 percent) of the existing vegetation, assuming 100 percent impact of vegetation within each project. It is expected, however, that impacts to coastal scrub after project and related project mitigation would not substantially diminish or threaten to eliminate the coastal scrub community on a regional basis, and would not represent a cumulatively significant impact to this community, and therefore, these wildlife species.

Mixed chaparral provides habitat for coastal whiptail, coast horned lizard, golden eagle, prairie falcon, loggerhead shrike, southern California rufous-crowned sparrow, Bell's sage sparrow. As previously discussed, potential cumulative impacts amount to 3,271 acres (5 percent) of this community's total acreage in the cumulative impact study area, assuming 100 percent impact of this community within each project. Proposed development on Skyline Ranch would contribute approximately 70 acres of impacts (2 percent) of the total cumulative impact. Given this community's abundance throughout the region and its lack of sensitivity status, cumulative adverse effects on mixed chaparral would not substantially diminish or threaten to eliminate the community on a regional basis, therefore impacts on mixed chaparral and the wildlife species which use this habitat are considered less than significant.

Valley foothill riparian provides habitat for coastal whiptail, Cooper's hawk, sharp-shinned hawk, yellow warbler, yellow-breasted chat. As previously discussed, assuming 100 percent impact of the acreage of this community within the boundaries of related projects, total cumulative impacts would amount to 11 acres (2 percent) of the total acreage of this community. The loss of what would be less than 2 percent of riparian communities within the cumulative study area would not substantially diminish or threaten to eliminate the community

on a regional basis, and as a result, cumulative effects on riparian communities and the wildlife species which utilize them are less than significant.

Annual grasslands provide habitat for northern harrier, ferruginous hawk, golden eagle, prairie falcon, loggerhead shrike, California horned lark, grasshopper sparrow. As previously discussed, approximately 1,951 acres (37 percent) of this community may be removed by project development within the cumulative impact area. For reasons discussed above, this habitat is one generally not considered under threat. Cumulative effects on annual (non-native) grassland communities, and the wildlife which use them, are less than significant.

(3) Wildlife Movement

As discussed previously, the proposed project would not have a significant adverse effect on any known or suspected wildlife movement corridors and would retain existing habitat linkages for migrating waterfowl and other mobile wildlife species using vernal pool resources. As a result, the project's contribution to cumulative impacts on wildlife movement corridors is not cumulatively considerable. Within the cumulative impact study area, proposed development in the Santa Clarita Valley would expand the urbanized zone of the City of Santa Clarita to fill much of the open space between the northern and southern units of the Angeles National Forest. Within the cumulative impacts study area, proposed development would further restrict wildlife movement from north to south through an area already highly disturbed by Interstate 5 and surrounding development. Maintenance of buffer zones along the Santa Clara River and continued preservation of land within the Angeles National Forest will maintain existing corridors for most wildlife species moving from east to west, thus, cumulative impacts to wildlife movement corridors are expected to be less than significant.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The proposed project, inclusive of the project features and mitigation measures described, would mitigate significant impacts to sensitive plant communities, nesting birds, oak trees, and jurisdictional features to a level below significance.

a. Sensitive Plant Communities

Mitigation for impacts to sensitive plant communities, coastal sage scrub, disturbed coastal sage scrub, coastal sage-chaparral scrub, and holly-leaved cherry scrub include the preservation of similar habitat types in the 1,355-acre SRCA. The preservation of the SRCA includes 248.6 acres of coastal sage-chaparral scrub (a preservation to impact ratio of more than 3:1), 739.7 acres of coastal sage scrub and disturbed coastal sage scrub (a preservation ratio of

1.6:1), and 10.6 acres of holly-leaved cherry scrub (3.8:1 preservation ratio). The preservation of these habitat types at these ratios and their conservation in perpetuity through restrictions on future land use would mitigate the impacts of the proposed project on these sensitive plant communities to a less than significant level.

Sycamore riparian woodland is discussed below in Section 6.d.

b. Nesting Birds

Preservation of the 1,355-acre SRCA would offer habitat for nesting birds. Mitigation for impacts to nesting birds includes the scheduling of vegetation clearing outside of the nesting season. If work must occur during the nesting season, a qualified biological monitor would be present to ensure that no nesting birds are impacted by construction activities. Habitat buffers would be used, as necessary, to keep construction activity away from nests. The presence of the monitor would ensure that no nesting birds are disturbed. Therefore, this impact would be reduced to less than significant with the implementation of the mitigation measure.

c. Oak Trees

One oak tree would be impacted by the proposed project in the County and one oak tree could potentially be impacted in the City of Santa Clarita. Mitigation for impacts to the oak tree in the County would include obtaining an oak tree permit from the County. The impacted oak tree would be replaced at a ratio of 10:1; therefore, a total of 10 oak trees would be planted at the interface between development and undeveloped areas. This impact would be mitigated to a less than significant level because the mitigation would exceed the County's recommended mitigation ratio of 2:1 as stipulated in the Oak Tree Ordinance. Similarly, compliance with the requirements of the City's oak tree removal permit or avoidance of the drip line during construction would reduce this potential impact within the City to a less than significant level.

d. Jurisdictional Features

The 1,355-acre SRCA provides for the preservation of 5.35 acres of ACOE and RWQCB jurisdiction (none of which consist of jurisdictional wetlands), 5.71 acres of CDFG jurisdiction (of which 0.31 acre is vegetated riparian habitat), and 1.53 acres of southern vernal pools and artificial pools. In addition to the proposed preservation within the SRCA, the HMMP includes the creation of 7.27 acres of sycamore riparian woodland within on-site portions of Plum Canyon. This includes re-contouring of Plum Canyon and the creation of sycamore riparian woodland with the planting of western sycamore and Fremont cottonwood trees (in addition to a number of upland buffer species) as deemed appropriate by the County, ACOE, and the CDFG.

Therefore, the proposed project provides 2.4:1 mitigation for impacts to ACOE jurisdiction [5.22 acres of impacts vs. 12.62 acres of mitigation (5.35 acres preserved and 7.27 acres created)] and 1.4:1 mitigation for CDFG jurisdiction [9.30 acres of impacts vs. 12.98 acres of mitigation (5.71 acres preserved and 7.27 acres created)]. In addition, the 1,355-acre SRCA includes 1.53 acres of southern vernal pool and artificial pool habitat. Although these 1.53 acres are not considered jurisdictional to the ACOE or CDFG, they support special-status species and provide wildlife habitat sufficient to be deemed a water of the State pursuant to the Porter-Cologne Act. Therefore, the proposed project provides 2.7:1 mitigation for impacts to RWQCB jurisdiction [5.22 acres of impacts vs. 14.15 acres of mitigation (6.88 acres preserved and 7.27 acres created)]

Further, the HFA concluded that the proposed project, considering the proposed mitigation measures, would result in a 25 percent increase in the total functionality of the aquatic features within the study area.

With the implementation of the proposed habitat creation and preservation within the SRCA, impacts to jurisdictional features are considered less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

D. CULTURAL AND PALEONTOLOGICAL RESOURCES

1. INTRODUCTION

This section discusses cultural and paleontological resources within the proposed project's Area of Potential Effect (APE), addressing existing conditions, applicable regulations, and the potential for significant impacts associated with the project. The APE for purposes of analyzing potential impacts on cultural and paleontological resources, includes the proposed 622-acre Skyline Ranch development area, as well as road corridors and a storm drain and channel located off-site that would be graded, constructed and/or otherwise improved. The proposed road corridors are primarily in association with the project's proposed extension of Whites Canyon Road to Sierra Highway. The Skyline Ranch development area and the road corridor were evaluated in the Cultural and Paleontological Resources Assessment conducted by PCR in 2005 and included in Appendix E-1 of this Draft EIR. These areas are shown in Chapter 2, Project Description, Figure 2-3, and in the APE map (Figure 3) from the 2005 Assessment. The proposed storm drain and channel alignment footprint was assessed in an Addendum Report for Off-Site Storm Drain and Channel prepared by PCR in 2009 and contained in Appendix E-2 of this Draft EIR. The proposed storm drain and channel alignment is shown on Figures 2 and 3 of the 2009 Addendum Report. The results and recommended mitigation are similar for both studies; therefore, these areas will be collectively referred to as the APE in this Section.

This analysis is based on an archival records search conducted at the California State University, Fullerton, Archaeological Information Center in November 2004, archaeological studies prepared by W&S Consultants in 2003 and 2004, and PCR in 2004, 2005, 2006, and 2009, and a paleontological records search, prepared by the Los Angeles Museum of Natural History in November 2004. These documents and references are also provided in Appendix E-1 and Appendix E-2 of this Draft EIR.

Cultural resources include prehistoric resources, Native American resources, and historic resources. Prehistoric resources are physical properties resulting from human activities that predate written records and are generally identified as isolated finds or sites. Prehistoric resources can include village sites, temporary camps, lithic (stone tool) scatters, roasting pits/hearths, milling features, rock features, and burials.

Native American resources are sites, areas, and materials important to Native Americans for religious, spiritual, or traditional reasons. These resources may include villages, burials, rock art, rock features, or spring locations. Fundamental to Native American religions is the belief in

the sacred character of physical places, such as mountain peaks, springs, or burials. Traditional rituals may also prescribe the use of particular native plants, animals, or minerals that may be found in certain locations. Development that may affect sacred areas, their accessibility, or the availability of materials used in traditional practices are considered when identifying these resources.

Historic resources consist of physical properties, structures, or built items resulting from human activities after the time of written records. Historic resources can include archaeological remains and architectural structures. Historic archaeological site types include town sites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military use of the land. Historic architectural resources can include houses, cabins, barns, lighthouses, early military structures, and local structures, such as missions, post offices, and meeting halls.

Paleontology is a branch of geology that studies the life forms of the past, especially prehistoric life forms, through the study of plant and animal fossils. Paleontological resources represent a limited, non-renewable, and impact-sensitive scientific and educational resource. As defined in this section, paleontological resources are the fossilized remains or traces of multi-cellular invertebrate and vertebrate animals and multi-cellular plants, including their imprints from a previous geologic period. Fossil remains such as bones, teeth, shells, and leaves are found in the geologic deposits (rock formations) where they were originally buried. Paleontological resources include not only the actual fossil remains, but also the collecting localities, and the geologic formations containing those localities.

2. EXISTING CONDITIONS

a. Regulatory Framework

Numerous laws and regulations require Federal, State, and local agencies to consider the effects a project may have on cultural resources and paleontological resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (e.g., State Historic Preservation Office and the Advisory Council on Historic Preservation).

The National Historic Preservation Act (NHPA) of 1966, as amended; the California Environmental Quality Act (CEQA); and the California Register of Historical Resources, Public Resources Code (PRC) 5024, are the primary Federal and State laws governing and affecting preservation of cultural resources of National, State, regional, and local significance.

(1) Federal Level**(a) Archaeological Resources****(i) National Register of Historic Places**

First authorized by the Historic Sites Act of 1935, the National Register of Historic Places (National Register) was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment.”¹ The National Register recognizes properties that are significant at the National, State and local levels.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria:²

- a. Are associated with events that have made a significant contribution to the broad patterns of our history;
- b. Are associated with the lives of persons significant in our past;
- c. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing.³

¹ *Code of Federal Regulations (CFR), 36 Section 60.2.*

² *U.S. Department of the Interior, National Park Service, National Register Bulletin: How to Apply the National Register Criteria for Evaluation (Washington, DC: National Park Service, 1995).*

³ *Exceptional Significance as defined by National Register Criteria Consideration G: Properties That Have Achieved Significance Within the Past Fifty Years. National Register Bulletin: How to Apply the National Register Criteria for Evaluation (Washington, DC: National Park Service, 1995).*

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance.”⁴ The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance.⁵ The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

(b) Paleontological Resources

Federal protection for significant paleontological resources would apply to the project if any construction or other related project impacts occurred on federal owned or managed lands. Federal legislative protection for paleontological resources stems from the Antiquities Act of 1906 (PL 59-209; 16 United States Code 431 *et. seq.*; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. Because the proposed project is on privately owned land, this federal statute is not applicable.

(2) State Level

(a) Archaeological Resources

The State implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State’s jurisdictions.

(i) California Register of Historical Resources

The California Register of Historical Resources (California Register) is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change.”⁶ The criteria for eligibility for the California Register are based upon National Register criteria.⁷ Certain resources are determined by the statute to be automatically included in the California

⁴ *National Register Bulletin 15, p. 44.*

⁵ *Ibid.*

⁶ *California Public Resources Code § 5024.1(a).*

⁷ *California Public Resources Code § 5024.1(b).*

Register, including California properties formally determined eligible for, or listed in, the National Register of Historic Places.⁸

To be eligible for the California Register of Historical Resources, a pre-historic or historic property must be significant at the local, State, and/or Federal level under one or more of the following criteria:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register of Historic Places and those formally Determined Eligible for the National Register of Historic Places.
- California Registered Historical Landmarks from No. 770 onward.
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

⁸ *California Public Resources Code § 5024.1(d).*

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5.⁹
- Individual historical resources.
- Historical resources contributing to historic districts.
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

(b) Paleontological Resources

Paleontological resources are also afforded protection by environmental legislation set forth under CEQA. Appendix G (part V) of the *State CEQA Guidelines* provides guidance relative to significant impacts on paleontological resources, stating that “a project will normally result in a significant impact on the environment if it will ...disrupt or adversely affect a paleontologic resource or site or unique geologic feature, except as part of a scientific study.” Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for damage or removal of paleontological resources.

(i) California Environmental Quality Act

The CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources. CEQA is codified at Public Resources Code Section 21000 et seq. As defined in Section 21083.2 of CEQA a “unique” archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.

⁹ *Those properties identified as eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, and/or a local jurisdiction register.*

- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

In addition, the *State CEQA Guidelines* recognize that certain historical resources may also have significance. The Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *State CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the *State CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which is a unique archaeological resource. The *State CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. (*State CEQA Guidelines* Section 15064.5(c)(4)).

(3) Local Level

Historic resources located within unincorporated areas of Los Angeles County fall within the jurisdiction of the County's Historical Landmarks and Records Commission. The Commission is responsible for considering and recommending to the Los Angeles County Board of Supervisors local historical landmarks deemed worthy of registration either as "California Historical Landmarks" or as "Points of Historical Interest," and may consider and comment for the Board on applications relating to the National Register of Historic Places. At the County level, relevant regulations related to historical landmarks include Chapter 3.30 of the Los Angeles County Code as amended which recognizes the *State CEQA Guidelines* Section 15064.5 as a threshold for the identification and protection of historic resources.

b. Environmental Setting

(1) Cultural Resources

(a) Prehistoric Setting

According to McIntyre (1990), the prehistory of the region containing the APE parallels that of the Santa Barbara Channel/southern California coastal zone. As such, William Wallace's (1955) cultural historical framework may be used as an appropriate chronological system of reference for this region.

Using Wallace's framework, the earliest evidence for human occupation in the general inland southern California region is known as the Early Millingstone Period (or, alternatively, the Early Horizon). Currently, this is dated from about 7000 to 3500 years before present (B.P.). During the Early Millingstone Period, subsistence and adaptation are believed to have emphasized the collecting and processing of hard seeds, particularly grass seeds. Inland site tool-kits or artifact assemblages from this time period are dominated by *manos* (a stone held in one's hand used for grinding) and *metates* (larger flat stones used as the stone surface for grinding).

There is little direct evidence for an Early Millingstone occupation of the Upper Santa Clara River region, as only two sites have been recorded. Both of these are located near Vasquez Rock, dated to the period solely because there were a small number of Olivella shell barrel beads (McIntyre 1990). Some archaeologists do not accept these shell beads as conclusive evidence for Early Millingstone occupation of the area. Proven unreliable as a temporal indicator, these beads cast doubt on human inhabitation of this region before about 3500 years ago. To support this, recent excavations at one of these early locales (the Escondido Canyon Site) failed to uncover evidence for occupation prior to about 2700 years B.P. (Love 1990).

The Intermediate Period (or Middle Horizon), currently dated from about 3500 to 1500 years B.P., is the second temporal unit in Wallace's chronology. The hallmark of the Intermediate Period is the presence of the *mortar* and *pestle*, along with large spear or dart projectile points (arrowheads). These finds suggest a change in the basic diet, moving from hard seeds to the acorn, and an increased emphasis on hunting. Population size appears to have increased dramatically during this period, with more temporary camps founded and new environments occupied. Evidence for Intermediate Period occupation of the Upper Santa Clara Valley region is substantial, has been found at a number of sites, and is supported by radiocarbon, obsidian hydration and typological dating (McIntyre 1990). The Agua Dulce village complex, for example, includes occupation extending back to the Intermediate Period, boasting a village population of 50 or more people (King et al n.d.).

Assuming that the Upper Santa Clara River Valley region was first significantly occupied during the Intermediate Period, as existing evidence now suggests, a parallel can be drawn with the inland Ventura County region, where a similar pattern has been identified (Whitley and Beaudry 1991), as well as possibly the Antelope Valley and western Mojave Desert (Sutton 1988a, 1988b). In all of these areas, a major expansion in settlement, the establishment of large site complexes, and an increase in the range of environments exploited appear to have occurred sometime roughly around 3000 years ago. Although most efforts to explain this expansion have focused on very local circumstances and events, it is increasingly clear that this was a major southern California-wide occurrence, and therefore explanation of it must be sought at a larger level of analysis.

There are similar characteristics between the inland regions during the Intermediate Period and the following period called the Late Prehistoric Period. This period lasted from 1500 years B.P. to historic contact, at about 200 years B.P. Site complexes first occupied in the Intermediate Period continued to be inhabited, although they increased in size, with more specialized and diversified sites added. The principal distinction between Intermediate and Late Prehistoric sites in the inland regions is a change in certain diagnostic artifact types (notably, projectile points, with a shift from spear points to bow and arrow points. For example, a large number of Late Prehistoric Period sites are known from the Upper Santa Clara River Valley/Agua Dulce region (cf. McIntyre 1990), with the Agua Dulce village complex estimated to have grown to a population of 200 to 300 people around A.D. 1500 - 1600 (King et al n.d.).

Sometime during this period, the Tataviam can be hypothesized to have occupied this region, although it is possible that they may have appeared somewhat earlier. During the Late Prehistoric Period, the patterns of lifeways recorded for the ethnographic period were fully in operation.

(b) Ethnographic Setting

During the ethnographic period (approximately A.D. 1521-1800), the upper Santa Clara River Valley region was by an inhabited by an ethnolinguistic group known as the Tataviam. Although very little information was recorded about the Tataviam, they are generally accepted as members of the Takic language of the Uto-Aztecan family (King and Blackburn 1978). They were linguistically related to other Native American occupants of the Los Angeles County region, which includes the Gabrielino/Fernandeno of the Los Angeles Basin proper to the south, and the Kitanemuk of the Antelope Valley to the north.

Based on the existing documentation, the Tataviam are believed to have inhabited the upper Santa Clara River drainage, with their territory extending from about Piru in Ventura County, on the west, eastwards to just beyond Vasquez Rocks and Agua Dulce. To the south, they are believed to have extended to Newhall. Their territory to the north included the middle

reaches of Piru Creek, the Liebre Mountains and the south westernmost fringe of the Antelope Valley (ibid; Kroeber 1925; Earle 1990; Johnson and Earle 1990). It is likely that their northern boundary ran along the northern foothills of the Liebre Mountains (i.e., the southern edge of the Antelope Valley), and then crossed to the southern slopes of the Sawmill Mountains and the Sierra Pelona, extending as far east as Soledad Pass (Earle 1990: 94). Ethnographically, at least, they do not appear to have controlled the Leona Valley or areas to the north and it is not certain if the Elizabeth Lake area was within their sphere of influence. To the south, their boundary is thought to have run along the crest of the western arm of the San Gabriel Mountains, north of San Fernando, and westward beyond Fremont and San Fernando Passes to the Santa Susana Mountains (Johnson and Earle 1990: 96).

Information about historical Tataviam village locations is provided by a few word lists and mission records collected during the initial period of Spanish occupation. Known villages include: *piirukung* and *akavaya*, both near modern Piru; *tsavayu(?u)ng*, Rancho San Francisco; *etseng*, *kuvung* and *huyung*, on Piru Creek above Piru; *tochonanga*, near the original Newhall town-site spring; and *kwarung*, Elizabeth Lake. At *kamulus*, near modern Rancho Camulos, a mixed Chumash-Tataviam population lived (King and Blackburn 1978: 535-6; Johnson and Earle 1990).

Tataviam religion almost unquestionably was similar if not identical to that of their surrounding neighbors. Shamanism assumes a direct and personal relationship between each individual, and the supernatural world functions as its central element. Personal relationships with the supernatural were enacted by entering a trance or hallucinatory state, usually based on the ingestion of psychoto-mimetic plants such as jimsonweed or native tobacco. Shamans were believed to maintain an unusual degree of and control over supernatural power, and served as ritual specialists. Ceremonies and rites were infrequent in occasion and limited in type. Most importantly, shamans served as healers or curers, with the etiology of disease as well as its cure held to lie in the supernatural world. Shamans are also known to have produced the rock art of this region (Whitley 1992, 1996), which depicted the hallucinations and spirits they observed during their vision quests.

The Tataviam were similar to their Fernandeno and Chumash neighbors (King and Blackburn 1978). Like these groups to the south and west, the Tataviam were hunter-gatherers, and their subsistence emphasized yucca, acorns, juniper berries, sage seeds and islay. Game was also hunted including rabbits/hares and rodents, probably representing more significant contributions of the overall meat than larger game, such as deer. While almost nothing is known of Tataviam social and political organization, using analogies with surrounding groups, it can be assumed that they were organized in a series of *tribelets*. Similar to the *naciones* described by Earle (1990) for the Antelope Valley, these social units are found to be characteristic of much of California aboriginal socio-political organization (cf. Kroeber 1925).

The *tribelet* represented an autonomous land-holding unit, minimally controlled by a head-chief or big-man. They usually included one large, ‘capital’ village, used by an aggregation of families during the spring, summer and fall. It is estimated that the Tatviam population was less than 1,000 people at the time of Euro-American contact, and that only two or three of the large *tribelet* villages existed throughout their territory (King and Blackburn 1978). It is possible that there was probably only two or three Tataviam *tribeleets* historically.

The Tataviam were one of the earliest groups contacted by Spanish missionaries, with a number of their villages briefly described by members of the Portola expedition of 1769. Nonetheless, a general lack of information on this group has survived. By 1810, all Tataviam had been baptized and moved to Mission San Fernando where they were quickly absorbed by other groups through intermarriage. The last speaker of Tataviam died in 1916 (King and Blackburn 1978).

During the Historic Period, the aboriginal population appears to have dropped considerably. This can be attributed to the effects of missionization and its relocation of the aboriginal population to centralized locales, along with the introducing of fatal Old World diseases. The Upper Santa Clara River Valley region appears to be one of those inland zones, like the Antelope Valley to the north, which quickly and completely lost its aboriginal population.

(c) Historical Background

Euro-American mention of this general region was reported in the chronicles of the Portolá expedition of 1769 which passed through the San Fernando Valley to Newhall, to the Castaic Junction area, and then down the Santa Clara River, to Ventura, on its way to Monterey (Cleland 1940). Although this Upper Santa Clara River Valley region was traversed by a number of Spanish explorers in subsequent years, it remained isolated due to rugged topography even though it had been suggested as a locale for a mission. With the establishment of Missions San Buenaventura, in 1782, and San Fernando, in 1797, late-18th century historical events largely occurred in areas to the west and south of the Upper Santa Clara River Valley proper.

As the missions increased in size and their herds grew, it became necessary for many of them to establish mission ranchos, or *estancias* to allow their cattle to graze some distance from the mission vineyards and fields. With this geographical expansion of mission influence and activities, the upper Santa Clara River Valley region became important, if not pivotal, in a number of events central to the development of southern California. Rancho San Francisco, comprising the upper reaches of the Santa Clara River Valley down to Piru, served as the *estancia* for Mission San Fernando (Cleland 1940; Smith 1977), and was established a few years after the founding of the mission itself. The headquarters of this estancia was located in a spot along the Santa Clara River, adjacent to modern Magic Mountain.

Rancho San Francisco remained an adjunct to Mission San Fernando until 1839 when it was granted to Antonio del Valle by Governor Alvarado. Six years later, the Ranch passed to his son Ygnacio. Antonio del Valle had served as majordomo and later administrator of Mission San Fernando and its lands from 1834 to 1837, and the family had made supplications to the governor in 1835 and 1837 to obtain a grant in the Santa Clara River Valley. When finally granted, the rancho contained slightly more than 46,000 acres.

Ygnacio del Valle ultimately became a prominent politician in southern California, serving as Alcalde (mayor) of Los Angeles during the Mexican period, as a member of the Territorial Deputation when California was admitted into the Union in 1850, and in the State Legislature. Forced to fight off efforts by Pedro Carrillo to obtain the western portions of Rancho San Francisco, Ygnacio built a corral at Camulos (the approximate site of the Chumash-Tataviam village of kamulus) in 1841, and finally the Camulos Adobe in 1864, as well as one of the first commercial wineries in the state in 1867 (Smith 1977). The Camulos Adobe, which became the del Valle family home, was visited by Helen Hunt Jackson in 1882, and served as the setting for her famous early California novel *Ramona*. The D.W. Griffith film "*Ramona*" starring Mary Pickford, was also filmed at the adobe in 1911. Furthermore, it was at Rancho San Francisco that the lead group of the Manly-Walker party - the "Death Valley '49ers" - first emerged out of the wilderness from their efforts to cross the Mojave Desert.

The Rancho San Francisco and the upper reaches of the Santa Clara River Valley figured in three other important episodes in southern California history, two of which are landmarks in the economic history of the state. The first of these is the discovery of gold. Although the history of gold discovery and exploitation in California is often linked with James Marshall's 1848 discovery of gold in John Sutter's Coloma mill-race, it is a well-known fact that gold was found in California 1842, in Placeritas Canyon by Francisco Lopez, Manuel Cota and Domingo Bermudez (Smith 1977; Outland 1986). It is not clear whether this well-documented incident represents the first true discovery of gold in the state. A variety of lines of evidence suggest that gold may have been mined in the Santa Clara River Valley region one or two decades earlier.

According to an account published by Outland (1986), a local tale indicates that a group of about 20 men led by Santiago Feliciano left Mission San Fernando in 1820 to explore the Castaic region. After reaching the Castaic Junction area, they headed up Hasley Canyon and traveled up it about 10 miles, placing them approximately on the modern Hathaway Ranch. There they discovered gold, and a mining camp called "San Feliciano" was born. The name of the camp is reported to be the way San Feliciano Canyon got its name. The region from San Feliciano to Soledad Canyon was subsequently prospected and mined mostly for placer deposits for a number of years. Few records survive, however, because of the legal complications involved in recording gold claims in Mexican California. While the granting of land for agricultural purposes could be effected by the Governor of California, the recording of a gold claim under Mexican law required a trip to Mexico City.

Although, as Outland notes, there is no clear verification for this tale (which ultimately derives from the prominent early settler and local historian S.P. Guiberson), there is fairly strong evidence that the Placeritas discovery in 1842 was not the first in this region (Smith 1977; Outland 1986). In 1832, for example, Ewing Young discovered an old ore smelting oven in San Emigdio Canyon (Outland 1986), suggesting that gold mining in the area had occurred for one or two decades prior to the 1842 event. A number of other sources indicate that the presence of gold in the area was known at least a few years prior to the famous 1842 Placeritas Canyon incident (Smith 1977). The 1842 discovery did have one important repercussion: it resulted in the granting of Rancho Temescal to Francisco Lopez and Jose Arellanes, in 1843. This included most of Piru Creek, as well as Placerita and San Feliciano Canyons, and totaled over 13,000 acres. Apparently, the legality of this grant under Mexican law has always been a point of some question for, as noted previously, the Governor of California only held the right to award agricultural but not mining grants. Thompson and West (1886:74) record that the area was worked by miners from Sonora, Mexico, between 1842 and 1846, and that they extracted between six and eight thousand dollars of gold per year during that period. About a dozen years later, Rancho Temescal was acquired by Ygnacio del Valle and was added to his Rancho San Francisco holdings.

In addition to being the first area in California where gold was discovered, it was also the first where true oil drilling occurred (Smith 1977). Oil drilling marks the second significant historical event that occurred in the region. Eventual discoveries of oil would occur at Rancho San Francisco and, ultimately, throughout the Santa Clara River Valley region. This first historic discovery of oil resulted when Ygnacio del Valle sold the majority of his Rancho San Francisco holdings to Thomas Bard, representing Senator Thomas A. Scott, for \$1.25/acre, in 1865. Del Valle retained only 1500 acres around Camulos. Seven weeks later, the first oil well came in on the south side of the Santa Clara River on property acquired by Bard near the del Valle adobe. This discovery was instrumental in the regional oil boom that ensued.

The third local event of historical importance was the collapse of the St. Francis Dam and the resulting flood of the Santa Clara River Valley on March 12 and 13, 1928. Because of the failure of dam near midnight on the 12th of March, water raged down San Francisquito Canyon to Castaic Junction, which it effectively leveled. The water moved on to Fillmore, Santa Paula and ultimately to the Pacific, causing great loss of life and destruction along the way. At Castaic Junction, the only survivor of the flood was George McIntyre, son of the owner of McIntyre's motel and gas station. George was washed northwards by a great arc of the floodwaters, towards Castaic Canyon, where he was able to grab hold of a power pole and avoid drowning. The bodies of his father and one brother were found in Santa Paula while another brother's body was never recovered. At least 336 deaths were caused by the flood (it is likely that more occurred but were never entered into coroner's statistics), 909 homes were destroyed, and countless acres of orchards were flattened (Outland 1963).

The Skyline Ranch APE falls outside of the area of the original rancho land grants; however, the project area was likely used for grazing and prospecting, as was much of the surrounding territory. A search of ownership records by PCR revealed that historic land uses included mining and ranching occurring in the 1930s-1950s although records of specific events are limited.¹⁰

(2) Paleontological Setting

The Santa Clarita Valley is composed of sedimentary rocks ranging from 30 million to about 1.8 million years old. The valley floor is composed of alluvium from rivers and streams. During the early Pleistocene, the valley was a much broader and shallower. The uplift that helped to create the Coast Ranges also caused the dissection of the older valley floor creating the many stream terraces visible along the side of the canyons. The San Gabriel Fault, an inactive branch of the San Andreas Fault system, can be traced through this area. The Mint Canyon Formation was formed by an ancient lake and delta during the Miocene Epoch. During this time the lake gradually filled up with silts, boulders and other deposits that were then compressed and thrust up during the Coast Range Orogeny (Late Pliocene mountain building and folding). The Mint Canyon Formation is composed of sandstone, siltstone and shale.

A records search was performed by the Los Angeles Museum of Natural History¹¹ to determine the paleontological sensitivity of the APE. All of the drainages in the proposed project area have surface deposits composed of soil laid on top of younger Quaternary Alluvium. These deposits usually do not contain significant vertebrate fossils, at least in the uppermost layers. There are no vertebrate fossil localities nearby from younger Quaternary Alluvium deposits. In the southwest portion of the project area, however, there are exposures of the terrestrial Pliocene Saugus Formation. The closest fossil vertebrate localities found in the Saugus Formation are fossil specimens of horse and camel located west-southwest of the proposed APE near Bouquet Junction. This formation, which is present within the project area, has a high sensitivity for encountering fossils.

Exposures of the terrestrial Late Miocene Mint Canyon Formation occur throughout the remainder of the APE. There is one fossil vertebrate locality located within the boundaries of the project area on the east side of Cruzan Mesa that produced a specimen of a fossil horse. Several other localities (fossil sites) are reported just outside of the project boundaries, while numerous other localities are located nearby. The Mint Canyon Formation is considered to have a high

¹⁰ *In-house research by Catharine M. Wood, Bureau of Land Management (BLM) land patent online records, and Los Angeles County Hall of Records, April 1 and April 4, 2005.*

¹¹ *Letter report on the Paleontological Sensitivity of the Skyline project. McLeod, 2004, Natural History of Los Angeles County.*

paleontological sensitivity and has already produced potentially significant fossil resources within the project area.

3. PROJECT IMPACTS

a. Thresholds of Significance

(1) Archaeological Resources

Appendix G, Section V, Cultural Resources, of the *State CEQA Guidelines* states that a project will have a significant effect if it will:

- Cause a substantial adverse change in the significance of a historical resource which is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources.
- Cause a substantial adverse change in the significance of a unique archaeological resources (i.e., an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it contains information needed to answer important scientific research questions, has a special and particular quality such as being the oldest or best available example of its type, or is directly associated with a scientifically recognized important prehistoric or historic event or person).

(2) Native American Resources

Project impacts on Native American resources are considered significant if:

- Project activities result in physical demolition, destruction, relocation, or alteration of an important Native American Resource or its immediate surroundings such that its significance would be materially impaired. A resource is “materially impaired” if those physical characteristics that convey its religious, spiritual or traditional significance are demolished or materially altered. Native American resources include but are not necessarily limited to villages, burials, rock art, rock features, or spring locations.
- Project activities disturb any human remains, including those interred outside of formal cemeteries.

(3) Paleontological Resources

Paleontological resources are considered to be significant if they provide new data on fossil animals, distribution, evolution, or other scientifically important information. Potential impacts to paleontological resources are generally associated with site clearing, grading, and excavation activities. Appendix G, Section V, Cultural Resources, of the *State CEQA Guidelines* states that a project will have a significant effect if the project will:

- Disturb or destroy a unique paleontological resource or site.

b. Methodology

(1) Archaeological Resources

An archival records search was conducted at the California State University, Fullerton, Archaeological Information Center (AIC), by AIC staff members to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the APE; (ii) if the project areas had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the field projects was known to contain archaeological sites and to thereby be archaeologically sensitive. Historical records in the form of the 1900 and 1940 San Fernando USGS 15' topographical quadrangles were also examined to determine whether historical resources might be present on these properties.

The records search determined that most of the APE was previously surveyed by qualified archaeologists as separate parcels. Areas that had not been examined included two ten-acre portions within the site boundaries, the proposed construction corridor for a road extension that connects the western portion of the project to Whites Canyon Road, and the footprint of the off-site storm drain and channel improvement. The two ten-acre parcels, the proposed roadway corridor, and the storm drain and channel improvement areas were surveyed by PCR in 2005, 2006, and 2009, respectively. Three prehistoric archaeological sites, one historic period archaeological site and five isolated finds were reported as a result of the previous work and recent survey by PCR. The prehistoric sites were subjected to subsurface testing and laboratory analysis to determine potential significance, and the one historic complex was the subject of a site-specific historical records search to develop a context for determining potential significance. The results of the testing and historical research are discussed below.

The Phase II testing conducted at prehistoric archaeological site CA-LAN-2007 involved mapping, surface collection of ground surface artifacts and archaeological indicators, and hand excavation of test pits, along with laboratory processing, cataloging, and analyses of the recovered artifact collection. The test pits determined there was no subsurface deposit present at

the location. A total of 12 archaeological specimens were recovered, yielding an artifact density of one specimen per about 350 square meters. Based on the recovered artifact assemblage, the site appears to represent a plant gathering and/or processing locale. No chronological indicators of any kind were found on the site and its temporal position is therefore undetermined. Based on a comparison to similar site types, however, it may date to sometime after 3500 years ago. As testing of the site determined there were no sub-surface artifacts, the site has a low probability of providing additional information. Because most of the information potential of the site has been exhausted, archaeological site CA-LAN-2007 is not considered a unique archaeological resource, and no additional work or recovery is recommended.

The second prehistoric site (CA-LAN-2310) was also subjected to a Phase II test to determine significance. Results of the testing suggest that CA-LAN-2310 was a small ephemeral camp used between AD 1400 - 1655, probably for the collecting of plant foods. The Phase II fieldwork indicated that the site lacked depth and was essentially limited to a surface archaeological deposit and did not warrant additional work. Because the site is not considered to have additional information potential, it is not considered a unique archaeological resource. As such, testing of CA-LAN-2310 served to mitigate any potential adverse impacts to the site that might result from development. No additional archaeological work or recovery was recommended for CA-LAN-2310.

The third prehistoric archaeological site (CA-LAN-1108) was also subjected to a Phase II evaluation to determine significance. The site was recorded by previous archaeological studies conducted within the project area, although a significance evaluation and testing had not been conducted. To determine significance, the site was relocated and subsurface testing was conducted by PCR in April 2005. Testing involved a pedestrian (on foot) survey to further refine site boundaries, and excavation of five shovel probes to determine if the site contained a significant subsurface component. Following relocation of the site, a midden deposit was observed in the Plum Canyon Creek fire road and in the north cutbank of Plum Canyon Creek immediately south of the site. Surface artifacts identified include less than 10 pieces of flaked stone, five groundstone *mano* fragments (small hand held stones used for grinding), and three portable *metates* (slabs of rock used as a grinding surface). Five shovel probes were excavated throughout the site with all material screened through 1/8th inch wire mesh. Only one probe unit produced subsurface materials, which included one quartzite flake in the 0 to 20 cm level. Results of testing suggest CA-LAN-1108 is a temporary campsite that was occupied seasonally when the Plum Canyon Creek and adjacent intermittent streams were flowing. The Phase II fieldwork indicated that the site lacked depth and was essentially limited to surface artifacts. Recording and testing of the site appears to have exhausted its information potential, and consequently, the site is not considered a unique archaeological resource. As such, no additional archaeological work or recovery is recommended for CA-LAN-1108.

In addition to the three prehistoric archaeological sites discussed above, PCR identified one historic site during 2005 fieldwork. The site is located within the APE, and the associated artifact scatter is distributed throughout the valley. The largest feature of the historic site complex is adjacent to the proposed access corridor and consists of two long courses of concrete platforms constructed side-by-side of a north and south-trending drainage that flows into Plum Canyon Creek. The concrete platforms have structural damage possibly from floods and/or earthquakes. The historic features and artifacts may be associated with a water conveyance system or aqueduct primarily because the platforms (that look like concrete sidewalks) are constructed on either side of a very distinct drainage channel. Historic and modern trash is present throughout the site area, with concentrations in the drainage south of the structure. The remains of a possibly pre-1940's automobile were observed approximately 50 feet southeast of the historic structure within the Plum Canyon Creek itself. Within the proposed road corridor, there are numerous rusted metal fragments that range in size from small nails to twisted cross-beams connected to metal siding in a jumble the size of a garden shed. Because of the severely weathered state of the metal remains, their original date of use and purpose are difficult to determine. Analysis of diagnostic historic bottle fragments collected from the site area complex suggests the area was occupied at least 1945-1958.

In order to develop a context for the site, and to determine the significance of the historic archaeological remains, PCR examined Bureau of Land Management (BLM) and General Land Office (GLO) maps, and conducted a chain-of-title search at the Los Angeles County Hall of Records (Norwalk, CA)¹². Results indicate that the area was leased to California Mineral Trust in 1933 for mining purposes, and to Stuart Cattle Company in 1935 for cattle ranching. Mention of the specific area or descriptions of the specific features were not found in the historic records consulted. With lack of specific references, it is possible the features and associated material remains were accumulated over many years, as a result of numerous activities. In summary, the results of PCR's field investigation and archival research failed to associate the site with any significant events or people important to the history of the area. Because the physical remains are in poor condition, and the artifacts are not likely to answer any pertinent research questions, the historic features found within and adjacent to the project area are not considered a unique archaeological resource. As such, fieldwork and archival research served to mitigate any potential adverse impacts to the site that might result from development. No additional archaeological work or recovery was recommended for this historic site.

(2) Native American Heritage Resources

To determine the presence of Native American Resources, the Native American Heritage Commission (NAHC) performed a records search of its Sacred Land Files for a one-mile radius

¹² *In-house records search by Catharine M. Wood, April 1 and 4, 2005.*

around the APE. The record search did not indicate the presence of Native American cultural resources in the area that may be impacted by the proposed project. The NAHC also forwarded a list of Native American groups or individuals that may have additional information on the project area. These groups or individuals were notified of the project and asked for input. There were no responses to the inquiry.

(3) Paleontological Resources

A records search was performed by the Los Angeles Museum of Natural History¹³ to determine the paleontological sensitivity of the APE. The records search determined there are exposures of the terrestrial Pliocene Saugus Formation near and within the project area. There are fossil vertebrate localities found in the Saugus Formation close to the project area and this formation is considered to have a high fossil sensitivity.

Exposures of the terrestrial Late Miocene Mint Canyon Formation (a formation which has high paleontological sensitivity), also occurs throughout the remainder of the APE and there is one fossil vertebrate locality within the boundaries of the project area on the east side of Cruzan Mesa that produced a specimen of a fossil horse. The locality was recorded as a fossil site without evidence of a formal survey. Several other localities (fossil sites) are reported just outside of the project boundaries, while numerous other localities are located nearby. Although PCR conducted a paleontological survey for the proposed storm drain and channel alignment footprint, there has not been a paleontological survey conducted within the majority of the APE. However, with the exception of shallow deposits within drainage areas, the overall paleontological sensitivity of the APE is considered high.

c. Impact Analysis

(1) Archaeological Resources

As indicated above under Methodology and Survey Results, the known archaeological resources within the APE have been subject to Phase II testing which included mapping, surface collecting of artifacts, hand excavation of test pits, laboratory testing, cataloging, analyses of the recovered artifact collection, and historical records searches. The results of these Phase II archaeological studies indicated a low probability for the sites to provide additional information to the extent that the sites are not considered unique archaeological resources as defined in Section 21083.2 of the PRC. As a result, and pursuant to *State CEQA Guidelines* Section 15064.5(c)(4), project impacts on these sites are considered less than significant.

¹³ Letter report on the Paleontological Sensitivity of the Skyline project. McLeod, 2004, *Natural History of Los Angeles County*.

Because archaeological resources have been found within the APE, there is potential for construction and grading to uncover unknown subsurface cultural material, particularly near or around discovered sites. This potential effect on as yet undiscovered archaeological resources is considered a significant impact.

(2) Native American Resources

Because there are no known Native American resources recorded near the project area, the project is not expected to have an impact on these resources.

(3) Paleontological Resources

Shallow excavations in the uppermost layers of soil and younger Quaternary Alluvium as exposed in the drainages in the project area are unlikely to uncover significant vertebrate fossils. Any excavations in the Saugus Formation, as exposed in the southwestern portion of the project area have a good chance of encountering significant terrestrial or marine vertebrate fossils of Plio-Pleistocene age. Likewise, any excavations in the Mint Canyon Formation exposed throughout most of the project area have an excellent chance of discovering significant fossil vertebrate remains. Given the substantial grading and excavation associated with project development and within these formations, which have high fossil sensitivity, impacts on paleontological resources are considered potentially significant.

4. MITIGATION MEASURES

a. Archaeological Resources

4.D-1(a) *Archaeological Monitoring. At the commencement of project grading or construction, all workers associated with earth disturbing activities (particularly remedial grading and excavation) shall be given an orientation regarding the possibility of exposing unexpected archaeological material and/or cultural remains by a qualified archaeologist who satisfies the Secretary of the Interior's Professional Qualification Standards for Archaeology (prehistoric/historic archaeology) pursuant to 36 CFR 61. The archaeologist shall also instruct the workers as to what steps are to be taken if such a find is encountered. Due to the moderate sensitivity and possibility of buried cultural materials within the project area, it is recommended that initial grading and ground disturbing activities in areas determined to be sensitive (primarily those areas proximal to recorded sites) be monitored by an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology (prehistoric/historic archaeology) pursuant to 36 CFR 61. The archaeologist shall have the authority to stop*

work if sensitive or potentially significant cultural remains are discovered during excavation or ground disturbing activities. Test excavations may be necessary to reveal whether such cultural materials are significant. In the event the archaeologist indicates that a significant or unique archaeological/cultural find has been unearthed, grading operations shall cease in the affected area until the geographic extent and scientific value of the resources can be reasonably verified. Upon such discoveries, the archaeologist shall notify the applicant and Los Angeles County. Any excavation and recovery of resources shall be performed by a qualified archaeologist using standard archaeological techniques. If necessary, a mitigation plan shall be formulated. Work in the area shall only resume with the approval of the project archaeologist. Artifacts, notes, photographs, and other project materials recovered during the monitoring program shall be curated at a facility meeting federal and state standards.

- 4.D-1(b)** *Human Remains. If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person(s) thought to be the Most Likely Descendent (MLD) of the deceased Native American, who will have 24 hours to make a formal recommendation as to disposition of the remains. All work associated with the remains will be done respectfully, and with recognition that the remains are considered sacred. All work in the area of the remains will be monitored by an authorized representative of the MLD.*

b. Paleontological Resources

- 4.D-2(a)** *Paleontological Survey and Treatment Program. Prior to the implementation of grading or construction related activities, a qualified paleontologist shall be retained by the applicant to survey the project area to relocate known fossil localities, and determine the most sensitive areas. Following the survey, a paleontological resources monitoring and mitigation program will be developed that will include salvage of known fossil resources, areas that will be monitored during project-related earth-moving activities. The paleontological resources monitoring and mitigation program shall be submitted to the County for review and approval prior to construction grading activities. The program shall define specific procedures for construction monitoring; emergency discovery; sampling and data recovery, if needed; museum storage of any specimen and data recovered; preconstruction coordination; and reporting.*

- 4.D-2(b)** *Paleontological Monitoring. The paleontologist shall monitor earth-moving construction activities at depths determined to be sensitive as specified in the County approved monitoring plan. Monitoring will not be conducted in areas where the ground has been previously disturbed or in areas where exposed sediment will be buried, but not otherwise disturbed.*
- 4.D-2(c)** *Paleontological Data Recovery. Prior to the start of grading or construction related activities, construction personnel involved with earth-moving activities shall be informed of procedures to follow if fossil remains are encountered. In the event that paleontological resources are encountered during construction-related earth-moving activities, all work shall cease within the immediate area and be redirected elsewhere until the paleontological monitor has evaluated the situation and provided recommendations for the protection of, or mitigation of adverse effects to, significant paleontological resources assessed. Upon such discoveries, the contractor shall notify the applicant and Los Angeles County. Procedures for mitigating potential impacts to significant paleontological resources shall follow the monitoring and mitigation program previously developed under this mitigation measure. Construction work within this area shall resume upon approval from the principal project paleontologist.*

5. CUMULATIVE PROJECT IMPACTS

a. Archaeological and Native American Resources

The number of archaeological sites previously recorded in the area suggests that there is a relatively low to moderate likelihood of discovering archaeological resources during construction related activities. This level of sensitivity, however, may not be true for other projects in the vicinity. Because much of the archaeological work in the area was conducted several years ago, there may be a number of historic period sites similar to that discovered within the project area that were not recorded during earlier surveys. Related projects would contribute to the progressive cumulative loss of archaeological resources due to the disturbance or destruction of resources; however, projects would be required to avoid or mitigate impacts on significant archaeological resources where feasible. Most projects would also have mitigation in place for construction monitoring and recovery of resources. Implementation of regulatory compliance and mitigation required on a project-by-project basis is expected to reduce most impacts on significant archaeological and Native American resources to a less than significant level. The proposed project's impacts on archaeological resources focus on the potential for encountering currently undiscovered resources as recorded resources on site are not considered significant. The potential impacts on undiscovered resources are considered reduced to a less than significant level through implementation of the mitigation measures provided above. With regulatory compliance and implementation of mitigation measures on a project-by-project basis, and with

the measures provided to address the potential impacts of the proposed project, cumulative impacts on archaeological resources are considered less than significant.

b. Paleontological Resources

Future development in the project vicinity could contribute to the progressive loss of fossil remains, as-yet unrecorded fossil sites, associated geologic and geographic site data, and fossil-bearing strata. However, the majority of such impacts, where significant, are expected to be addressed and reduced to a less than significant level through mitigation measures. The proposed project has the potential for significant impacts on paleontological resources, however, mitigation measures require a well-designed and implemented paleontological resource survey; and a salvage, monitoring, and mitigation plan that includes the recovery of and laboratory study of fossil resources recovered. With this mitigation, project impacts would be less than significant. With implementation of mitigation measures for the project and related projects, and considering that the associated recovery of fossil remains could help answer important questions regarding the geographic distribution, stratigraphic position, and age of fossiliferous sediments in the immediate project area, cumulative impacts on paleontological resources after mitigation are considered less than significant.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the mitigation measures listed above which generally provide for on-site evaluation of resources, recovery and archiving of important resources, possible avoidance and preservation-in-place, and monitoring during remedial grading and excavation activities, would reduce potential impacts to archaeological and paleontological resources to a less than significant level. Similarly, cumulative impacts on these resources after mitigation would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

E. VISUAL QUALITIES

1. INTRODUCTION

This section describes existing conditions on the project site and in the area relating to scenic resources, aesthetics, views, and light and glare. Policies and plans associated with view preservation and visual quality are also described, as well as the design features of the proposed project. The analysis of project impacts focuses on the potential for the project to obstruct scenic views, damage scenic resources, degrade the visual quality of the site, or create adverse light and glare.

The analysis presented in this section of the Draft EIR assesses both aesthetic impacts (degradation of visual quality) and view impacts (loss or diminishment of important views). Impacts on aesthetics were considered adverse where the proposed project would eliminate scenic natural features or areas, or introduce contrasting features into valued natural areas. To assess contrasts between proposed and existing conditions, basic features (such as landform, vegetation, and structures) and basic elements (form, line, color, and texture) were identified, with the significance of change based on how dissimilar introduced features and elements would be with those continuing to exist in the built and natural landscape. The focus of the evaluation is on potential effects from viewpoints considered most important, such as public views along Sierra Highway and from adjacent residential areas.

The analysis of lighting focuses on potential adverse light spillover effects on sensitive receptors due to the use of artificial light during the evening and nighttime hours. Artificial light may be generated from point sources as well as from indirect sources of reflected light. Uses such as residences are considered light sensitive since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light impacts can also reduce views of the night sky, and if not controlled, can disturb wildlife in natural habitat areas.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Daytime glare generation is common in urban areas, but is less of an issue for locations such as the project site. Glare is typically associated with buildings with exterior façades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of

artificial light sources such as automobile headlights. Glare-sensitive uses include residences and open space/wildlife corridors.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Los Angeles County Code

Ridgelines and hillsides are present throughout the Santa Clarita Valley. In order to protect resources, development in hillside management areas within the County is regulated by Section 22.56.215 of the Los Angeles County Code. The project site is located within a hillside management area. Hillside management areas are defined by the General Plan as land having natural slopes in excess of 25 percent. The intent of this ordinance is to protect these areas from incompatible development that may result in environmental degradation or destruction of life or property. It is not the intent of the ordinance to preclude development in hillside management areas but to ensure that such development maintains, where possible, the natural topography, resources, and amenities of these areas.

(2) Los Angeles County Hillside Design Guidelines

In addition to the code section described above, the County also has Hillside Design Guidelines (1989) that are intended to provide guidance to those preparing plans for hillside development. These guidelines apply to residential, commercial, and industrial projects within Hillside Management Areas. The goal of these guidelines is to promote quality design and land development that is compatible with existing natural surroundings. The Hillside Design Guidelines specify requirements associated with project design, grading, circulation, site design, fire protection, and landscaping of hillside areas. Some of the key guidelines that are applicable to the proposed project include the following:

- preservation of distinct natural features and the general existing topographical forms; preservation of prominent skyline ridge silhouettes;
- location of roads below skyline ridges;
- variation in lot size, building placements, setbacks, and orientation; creation of views from hillside sites;
- illumination of streets with low intensity, unobtrusive lighting, as specified by the Department of Public Works; and

- landscaping of graded slopes to mitigate adverse visual impacts created by hillside grading.

(3) Los Angeles County General Plan and Santa Clarita Valley Area Plan

The County regulates scenic open space primarily through its General Plan and Area Plans. Policies and programs directed toward the management and protection of the scenic qualities of these areas constitutes the Conservation and Open Space Element of Los Angeles County General Plan.¹ Open space lands may be subject to additional controls through special management areas, such as National Recreation and Forest areas, significant ecological areas (SEAs), mineral resource areas, hazard areas, and areas subject to cultural heritage protection. The applicable policies of the Conservation and Open Space Element of the General Plan are presented as follows:

18. Encourage open-space easements and dedications as a means of meeting scenic, recreational and conservation needs.
19. Protect the visual quality of scenic areas including ridge-lines and scenic views from public roads, trails and key vantage points.

Goals and policies for the protection of scenic resources within the Santa Clarita Valley, which incorporates the project site, are set forth in the Santa Clarita Valley Area Plan.² The Plan contains goals and policies relative to various issues identified in individual topical elements of the Plan, which are presented as follows:

¹ *The County is currently updating the General Plan and has prepared a Draft General Plan (September 2008) that is available for public review at: <http://planning.lacounty.gov/generalplan>. An EIR that addresses the environmental impacts of the amended plan is expected to become available in the winter of 2009. Adoption of the updated Countywide General Plan is estimated for 2010. Until this Draft Plan is approved, the existing General Plan is the current governing document.*

² *The Santa Clarita Valley Area Plan, which encompasses the County of Los Angeles and the City of Santa Clarita, is currently being updated as the "One Valley One Vision," program (OVOV). Drafts of the Plan Elements are currently being reviewed and public hearings on the plan are expected to occur in the later part of 2009, with adoption occurring in 2010. Until such time as this Plan is adopted, the County's existing Santa Clarita Valley Area Plan prevails.*

(a) Community Design Element**(i) Physical Appearances—Community Image**

- 3.2 Require that all new power distribution networks, communication lines, and other service network facilities be located underground wherever practical. Transmission lines should be located underground where feasible.
- 3.4 Identify and use landmarks, topographic features and other dominant physical characteristics of each community as a focus for developing a community image.
- 3.5 Encourage planting of street trees in urban portions of the Santa Clarita Valley.

b. Environmental Setting

Scenic resources can include natural open spaces, topographic formations, and landscapes, such as lakes, rivers, and streams that contribute to a high level of visual quality. Scenic resources can also include man-made open spaces and the built environment, such as parks, trails and pathways, nature centers, archaeological, and architectural features.

(1) Site Characteristics and Visual Quality

The project site is located in the Santa Clarita Valley north of Highway 14 and the City of Santa Clarita in unincorporated northern Los Angeles County, west of Mint Canyon between the Santa Clara River and Vasquez Canyon. The project site is roughly defined by Sierra Highway (Mint Canyon) on the east and southeast, residential communities on the south and southwest, Plum Canyon Road on the west, Bouquet Canyon Road to the northwest, and Vasquez Canyon Road to the northeast.

The project site is primarily comprised of modest- to steep-sloped ridgelines and canyons. The ridgelines and slopes are generally uniformly covered with low scrub and grasslands, with scattered trees and tall scrub in the larger canyons. Existing views of the project site are shown in Figure 4.E-1, Site Photographs (Photos 1 and 2), Figure 4.E-2, Site Photographs (Photos 3 and 4), and Photo 5 of Figure 4.E-3, Site Photographs (Photos 5 and 6) on pages 4.E-5, 4.E-6, and 4.E-7 respectively. The plant species and habitats that exist on the project site are further described in Section 4.C, Biological Resources, of this Draft EIR.

The elevation of the property ranges from approximately 1,445 feet above mean sea level (amsl) at the mouth of an unnamed canyon adjacent to the residential community near the southwestern portion of the site to over 2,400 feet amsl on Beacon Hill, west of Fitch Avenue and south of the extension of Arline Street that traverses Plum Canyon (i.e., an unpaved road



Photo 1: View of one of the vernal pools on the northern portion of the project site.



Photo 2: View of Cruzan Mesa on the northern portion of the project site.

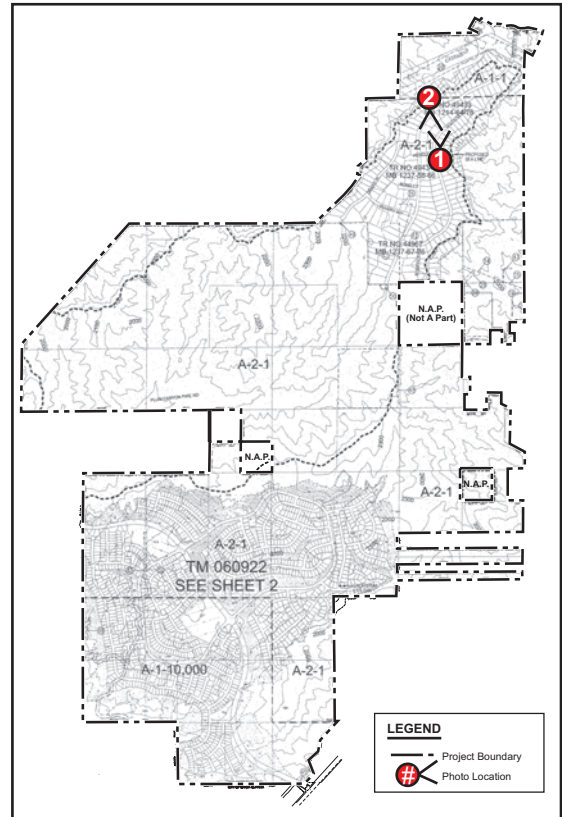


Photo Location Map



Photo 3: View of the proposed development area from Cruzan Mesa.



Photo 4: View of Plum Canyon near the northern boundary of the proposed development area.

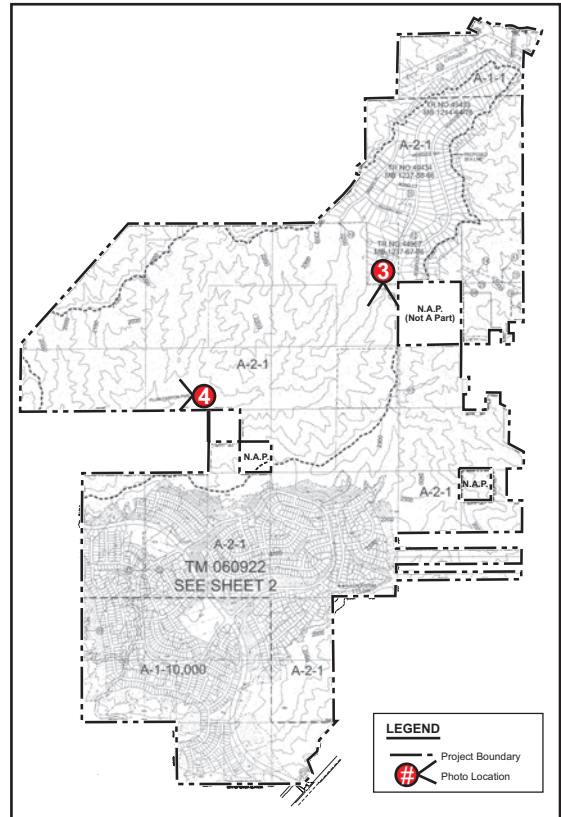


Photo Location Map



Figure 4.E-2
Site Photographs
(Photos 3 and 4)



Photo 5: View of unnamed Canyon near southwestern portion of project site.



Photo 6: View looking northeast along Sierra Highway near the southern entrance to the project site.

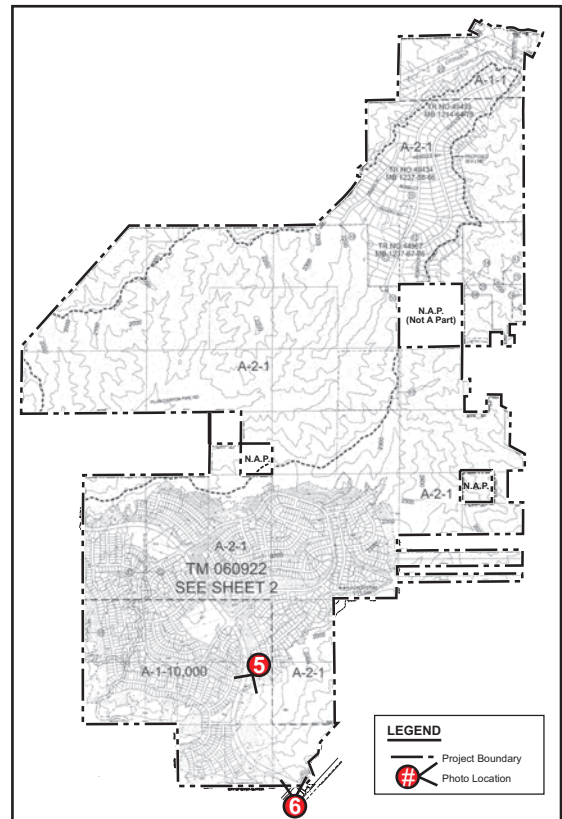


Photo Location Map



Figure 4.E-3
Site Photographs
(Photos 5 and 6)

following the alignment of Plum Canyon, which traverses the central portion of the project site (see Photo 4 in Figure 4.E-2)). This road generally divides the northern portion of the site, which is proposed to remain undeveloped from the southern portion of the site that is proposed for development. The terrain is generally rugged with few exposed rock outcroppings. South of Plum Canyon, primarily within the proposed development area, the terrain rises gently from southwest to northeast, where it joins the pass at the headwaters of Plum Canyon. North of Plum Canyon, primarily within the area that is proposed to remain undeveloped, are a series of side canyons and associated slopes and ridges, which slope northward onto Cruzan Mesa and then abruptly into Vasquez and Bouquet Canyons farther to the north. A significant ridgeline is located along the eastern boundary of the proposed development area, with elevations ranging from 2,000 to 2,200 feet amsl.

Areas north and northwest of the project site in Bouquet and Vasquez Canyons remain mostly undeveloped and rural with scattered single-family homes and ranches. Although Mint Canyon remains largely undeveloped northeast of the project site, Sierra Highway traverses the length of the canyon. Presently, commercial and retail uses and some semi-rural residential communities occupy the section of Sierra Highway located immediately east of the project site. Single-family residential neighborhoods are located immediately to the west and southwest of the proposed development area. Commercial uses are located along Soledad Canyon Road between Whites Canyon Road and Sierra Highway, including the Joanne Darcy Canyon Country Library. Construction of residential tracts is occurring west of the project site along Plum Canyon Road.

(2) Views

Short-range and long-range views of the project site are available from a number of locations. Among the locations with views of the project site are Sierra Highway (short-range views, as shown in Photo 6 of Figure 4.E-3 and Photo 7 of Figure 4.E-4, Site Photographs (Photos 7 and 8), on pages 4.E-7, and 4.E-9, respectively); Via Princessa; and Highway 14 (long-range views). In addition, adjacent residential neighborhoods to the west, southwest, and south have short-range views of the proposed development area, as shown in Photo 8 of Figure 4.E-4.

Views to the interior of the project site from scattered single-family and multi-family residences and commercial/retail uses along Sierra Highway are generally limited due to the significant ridge situated along the eastern boundary of the proposed development area. This significant ridge currently acts as a barrier and obstructs views of the proposed development area from the north and east, including Sierra Highway. Presently, scattered commercial/retail uses and power lines are located along both sides of Sierra Highway (see Photo 6 in Figure 4.E-3) while rolling hills and ridgelines comprise the backdrop of the views along Sierra Highway.



Photo 7: View looking southwest along Sierra Highway near the southern entrance to the project site.

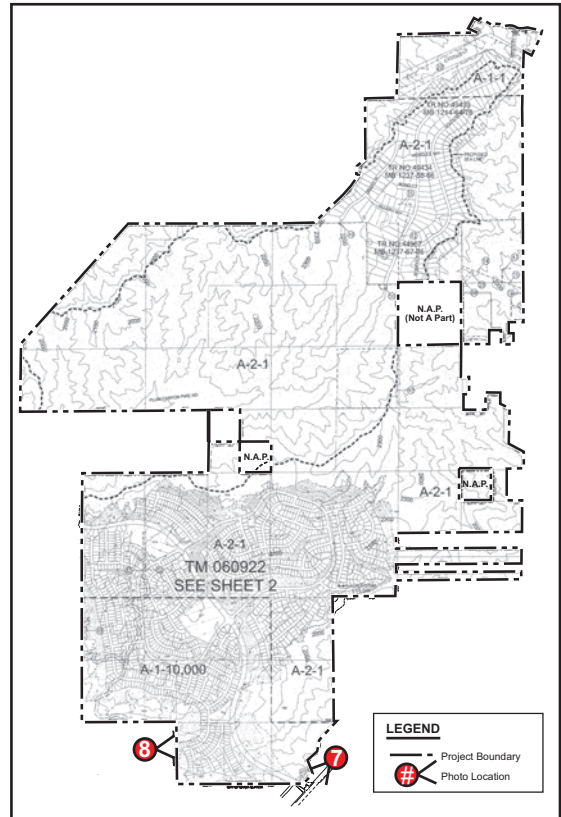


Photo Location Map



Photo 8: View of the proposed development area looking northeast from the residential neighborhood to the southwest of the project site.

Views of the site from the west generally consist of moderate-sloped hills of varying forms and elevations. These hills are covered with mature coastal sage scrub and non-native grasslands. There are no prominent ridgelines that dominate views from this vantage point, which includes views from the residential neighborhoods to the north and south of Canyon Crest Drive.

Views of the site from the southwest are dominated by steep-sloped hills that drop into the deep canyons below. Due to the higher elevation of this area relative to the proposed development area, views of the site, particularly of the canyons, are prominent from this location, which includes the single-family residences situated on the termini of the roads extending east from Whites Canyon Road (e.g., Oakmoor Street, Ironshire Street, Fairweather Street, Eaglecrest Avenue).

In general, due to the configuration of on-site landforms (e.g., ridges and canyons), public views of the project site, particularly of the proposed development area, are limited. Public views from Sierra Highway, Whites Canyon Road, Vasquez Canyon Road, Soledad Canyon Road, and other public locations around the site are limited by on- and off-site topography and by off-site development adjacent to the project site. Consequently, the project site, particularly the proposed development area, is not visible from points north of the site, west of Whites Canyon Road, or east of Sierra Highway (due to the significant ridge that generally borders the proposed development area on the east). However, Cruzan Mesa, which is not proposed for development, lies atop of an eroded mesa and is visible from the east, north, and west. As further described in Section 4.P, Parks, the Santa Clarita Valley Area Plan Trails Map shows three trails (Mint Canyon, Bouquet Canyon, and an unnamed trail) located to the north, northeast, and northwest of the site and one unnamed trail located in the northeastern portion of the project site, that generally follows the main roadway alignment shown within Recorded Tract Map No. 44967. These trails are all generally located to the north and remote from the proposed project development area. Views from the trails would encompass views of the northern area of the site and areas on Cruzan Mesa which are proposed to remain as open space. Views from the trails to the proposed development area would be obscured by intervening topography.

(3) Light and Glare

The project site, in its undeveloped state, does not produce light and glare from indoor sources, and the only notable outdoor lighting is temporary lighting that has occasionally been used for filming in the northern portion of Cruzan Mesa. Residential and commercial uses in the project vicinity, particularly the single-family residences immediately to the west of the proposed development area, and scattered single-family and multi-family residences and commercial uses to the southeast of the proposed development area, generate light from interior sources, safety and landscape lighting, and street lighting. In addition, streets in these areas, including Sierra Highway, produce light and glare from passing cars and their headlights.

3. PROJECT IMPACTS

a. Thresholds of Significance

A significant impact related to aesthetics, visual quality, or light and glare would occur if the proposed project would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character or aesthetic quality of the project area and its surroundings;
- Be substantially visible, or obstruct views, from a regional hiking trail; or
- Create substantial light or glare which would adversely affect day or nighttime views in the area.

b. Methodology

The assessment of aesthetic impacts is based upon the potential for the project to degrade the existing visual character or aesthetic quality of the project site or its surrounding area by being substantially visible, or obstructing views, from public vantage points. The potential for project implementation to improve the aesthetic qualities associated with the site is also addressed. As part of this analysis, distinct aesthetic features and the overall aesthetic character of the area were recorded based on field surveys, photographic interpretation, and topographic analysis. In addition, the project was evaluated against the policies of the General Plan and the Santa Clarita Valley Area Plan as they apply to aesthetics, visual quality, and views.

The analysis of view impacts is based on the potential for the project to result in changes to existing views within and near the project site as perceived by the public (e.g., motorists and pedestrians on the surrounding roadways) and private citizens (e.g., residents and property owners within the vicinity). The analysis addresses both the degree to which proposed development may obstruct or detract from existing views and on- or off-site aesthetic features from representative viewing locations, as well as the extent to which project development or design features may create new view opportunities or improve existing views. The identification of views within the project site and surrounding area was accomplished through field surveys, photographic interpretation, and topographic analysis.

Photo simulations were prepared to assist with the visual analysis. Four view points were selected during an initial field survey. These view points were selected based on the prominence and importance of the views and the potential for views to be affected by the project.

Representative future conditions were then approximated based on project site and grading plans using computer-rendered drawings that account for road and pad locations, housing height and location, open space areas, and the changes in topography that would occur with implementation of the conceptual grading plan.

The analysis of light conditions associated with the project site consisted of visual observations during the evening and nighttime hours. The evaluation of nighttime illumination included an assessment of the lighting conditions within the surrounding vicinity, as well as the degree of exposure to light intensities experienced by surrounding land uses. Potential light sources from the proposed project will include low to moderate levels of interior and exterior lighting for security, parking, signage, architectural highlighting, and landscaping, as well as street lighting and residential lighting. A qualitative analysis of the potential for an increase in ambient light levels and light spillover onto off-site light-sensitive uses was conducted. Nearby sensitive receptors were identified through review of the aerial photograph and during a survey of the area.

The evaluation of existing glare conditions associated with the project site included visual observations of the site. The potential for substantial changes to existing glare generation from future development of the site was then evaluated. Nearby receptors sensitive to glare exposure were identified through a windshield survey of the area and review of the aerial photograph.

c. Impact Analysis

(1) Construction Impacts

Development of the proposed project would cause changes in visual conditions on the project site during construction. Construction would occur over an approximate seven year period. Activities would include grading of the site, a materials processing facility in the northeast corner of the development area, provision of onsite infrastructure/streets and offsite cul-de-sacs and utilities, the sequential addition of buildings, and finally the provision of landscaping and other aesthetic treatments.

Construction activities related to project development would temporarily introduce heavy equipment and construction workers to the project site and some offsite areas to engage in typical construction activities (e.g., earth movement, materials delivery, building construction, etc.).

The overall grading operation, which would remove native vegetation and alter the natural landform over approximately 622 acres of the proposed development area, would include clearing/grubbing, sub-drain construction, erosion control, and finish grading, all of which is

anticipated to take approximately 24 months with three phases. Other site preparation activities include roads, sewers, water, streets, dry utilities, entry monumentation, and landscaping/irrigation. Off-site construction and grading would primarily occur to the west and south, due to the extension of Whites Canyon Road through the project site to Sierra Highway. Consequently, views during construction would substantially degrade the visual quality of the site and immediately adjacent areas. Views most affected would be from the neighborhood to the southwest of the proposed development area due to the higher elevation of this area relative to the site. The single-family residences from this location would observe major earth-moving operations and landform alterations, which may result in barren residential pads until build out of the project in this area. Construction activities associated with the connection of Skyline Ranch Road to Sierra Highway and drainage improvements within this area would also be visible from single-family residences at this location. Impacts on these views during construction, while temporary, would be significant and unavoidable.

The single-family residential neighborhoods immediately west of the project site would observe some alteration of landform upslope along the western edge of the proposed development area to accommodate the homes abutting the existing development and the extension of Whites Canyon Road to connect with proposed Skyline Ranch Road. In addition, excavation and construction activities for a linear 78-inch storm drain and channel would be visible from some portions of Goodvale Road, Darter Court, Darter Drive, Claycrest, Nearview Drive, Cabral Street, and Bakerton Avenue. Impacts on these views during construction, while temporary, would be significant and unavoidable.

As the residential lots begin to be developed on-site, the appearance of the proposed development area would change in an incremental fashion from undeveloped open space to a developed suburban area. Impacts on receptors and travelers along Sierra Highway, the only existing major public thoroughfare adjacent to the project site, would be somewhat limited as construction would primarily occur on the other side of the significant ridge along the eastern boundary of the project site. However, receptors and motorists along Sierra Highway would have a view of graded slopes on both sides of Skyline Ranch Road near the southern entrance to the project site, and of the gap in the ridgeline created for the road. Impacts on these views during construction would be significant and unavoidable until landscaping and planting have been established.

(2) Visual Impacts

Photosimulations were prepared from five vantage points to illustrate the conceptual design, massing, and views of the proposed project, depicting both short-range and long-range views, along Sierra Highway, from an adjacent residential neighborhood to the west of the proposed development area, and from Via Princessa and Whites Canyon Road (approximately

1.5 miles southwest of the project site), as shown in Figures 4.E-5 through 4.E-9 on pages 4.E-15 through 4.E-19, respectively.

The visual simulations depicted in Figures 4.E-5 through 4.E-7 provide a general representation of the southeastern portion of the proposed development area that would be visible to motorists traveling along Sierra Highway and residential and commercial uses located in the immediate vicinity of the southern entrance to the project site. More specifically, as shown in Figure 4.E-5, Photographic Simulation Looking North/Northwest from Sierra Highway and Adon Avenue, a smaller relatively flat ridgeline, behind the dominant ridgelines along the eastern boundary of the proposed development area, would be graded and no longer visible due to the lowering the topography in this portion of the proposed development area to accommodate the extension/realignment of Whites Canyon Road (i.e., Skyline Ranch Road) through the project site. Although this secondary ridgeline would no longer be visible along Sierra Highway, the dominant ridgelines would remain, and their visibility or silhouettes would be enhanced from this vantage point, as shown in Figure 4.E-5. Additionally, the altered secondary ridgeline is relatively flat and has limited landform contours. As a result, the loss of the secondary ridgeline within this viewshed is considered a less than significant impact.

In addition, from this same vantage point, as illustrated in Figure 4.E-5, paved terrace drains would be installed along both sides of Skyline Ranch Road near the southern entrance to the project site. Without specific landscape treatment, these drains along the graded entry road hillside would be visible for motorists traveling north on Sierra Highway and for residential and commercial uses located immediately south of project site entrance. Impacts on views for motorists traveling south would be less affected due to existing vegetation and orientation of the terraced slope relative to Sierra Highway. The potential visual effect of the terrace drains along this graded hillside is considered a potentially significant impact. Therefore, a mitigation measure is recommended regarding on-site landscaping (see Subsection 4, below).

As shown in Figure 4.E-6, Photographic Simulation Looking Northwest from Sierra Highway near Hillfield Lane, the proposed entry road at the southeastern edge of the site and the homes (potentially Lots 1 through 20) along Skyline Ranch Road would be visible from Sierra Highway. Existing views from this vantage point are of a hillside and a small canyon with disturbed undeveloped areas in the foreground. The impact on foreground views from this vantage point would be less than significant due to the disturbed nature of the Sierra Highway frontage in this area and the enhancement of the entry to the site with monumentation, trees, and other landscaping.

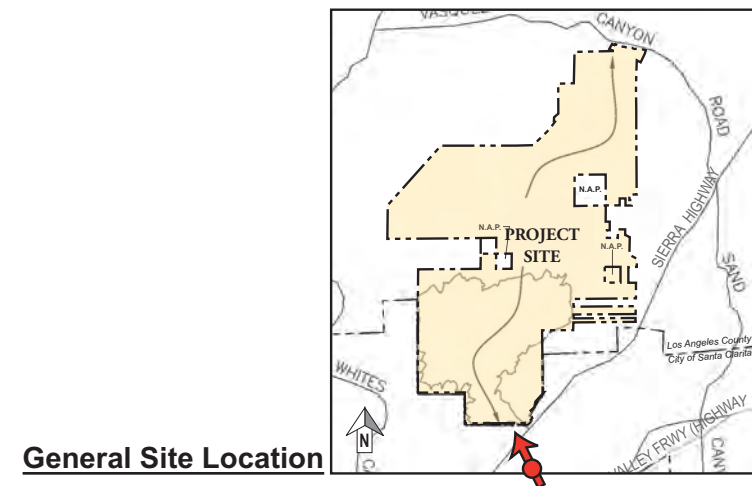
Grading of the entry road from Sierra Highway into the site would however require substantial alteration of the hillside along the west side of the road. Due to property



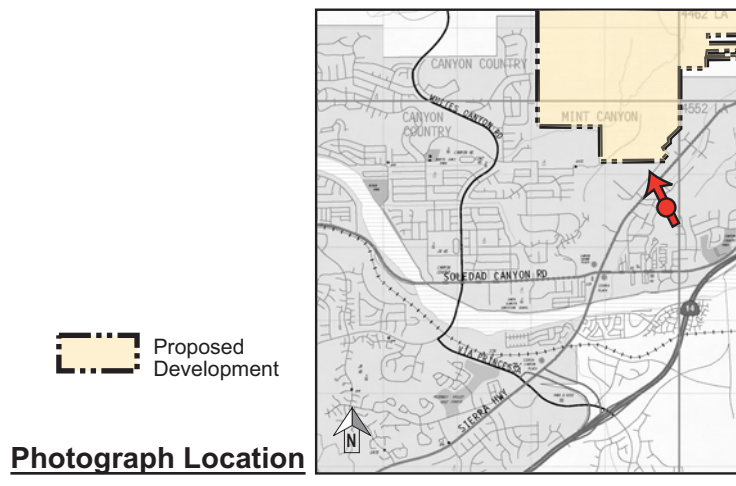
Existing view of project site looking north/northwest along Sierra Highway and Adon Avenue.



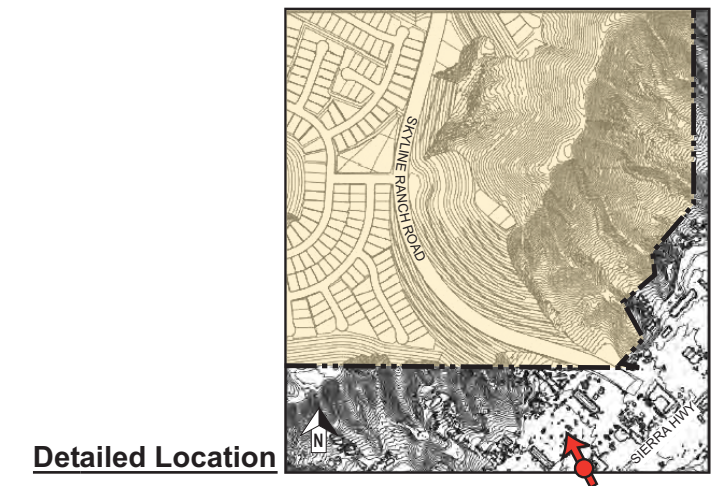
Proposed view of project site along Sierra Highway and Adon Avenue. This photosimulation shows the proposed view with the removal of the secondary ridgeline to accommodate the proposed extension and alignment of Whites Canyon Road (also known as Skyline Ranch Road).



General Site Location



Photograph Location



Detailed Location

Proposed Development



Figure 4.E-5
Photographic Simulation Looking North/Northwest
from Sierra Highway and Adon Avenue

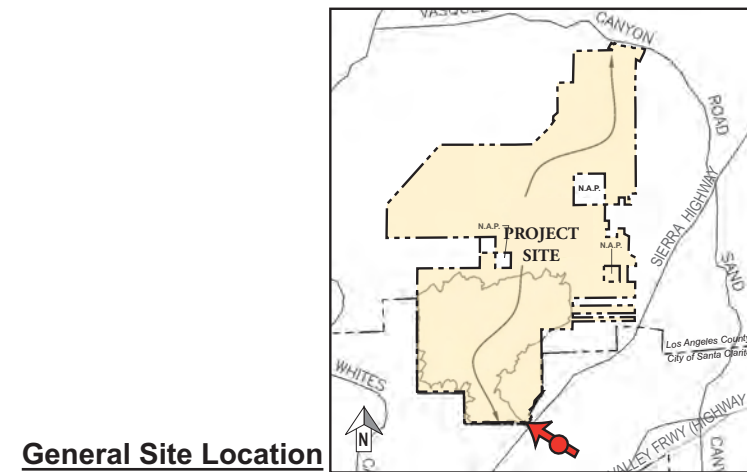
Source: Earthworks, 2005



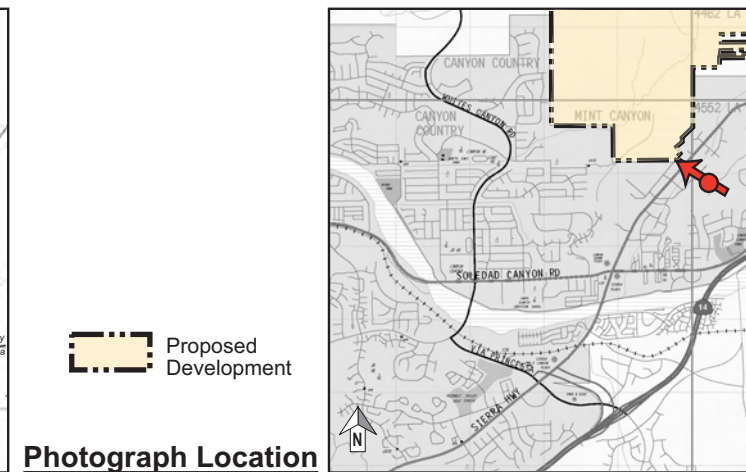
Existing view of project site looking west along Sierra Highway near Hillfield Lane.



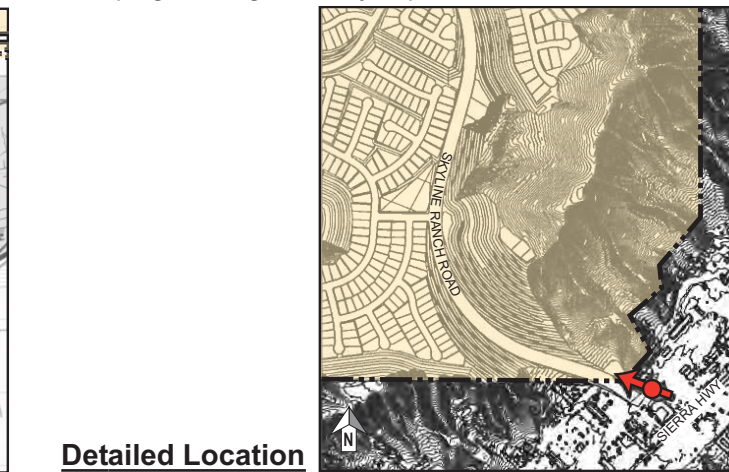
Proposed view of project site looking west along Sierra Highway. This photosimulation shows the southern entrance to the project site with the removal of the secondary ridgeline to accommodate the proposed extension and realignment of Whites Canyon Road (also known as Skyline Ranch Road) through the project site. Also shown are manufactured slopes, entry monumentation, landscaping, and right-of-way improvements.



General Site Location



Photograph Location



Detailed Location



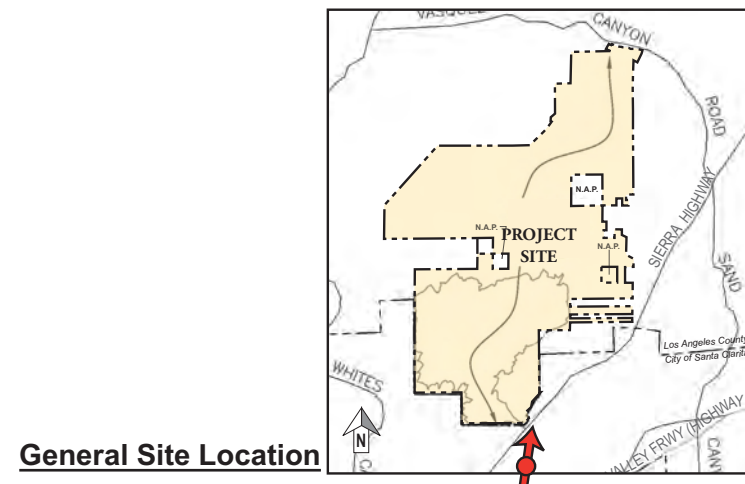
Figure 4.E-6
Photographic Simulation Looking Northwest
from Sierra Highway near Hillfield Lane



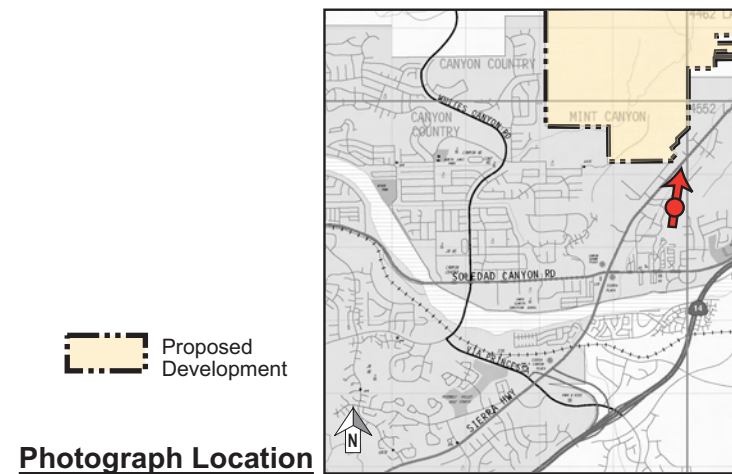
Existing view of project site looking north near Hillfield Lane.



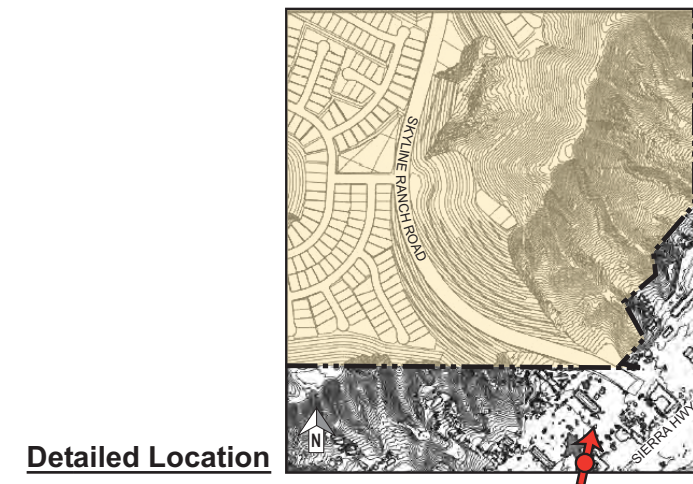
This photosimulation shows the southern entrance to the project site with grading effects associated with the proposed extension of Whites Canyon Road (proposed as Skyline Ranch Road) through the site being shown along with manufactured slopes, entry monumentation, landscaping and right-of-way improvements.



General Site Location



Photograph Location



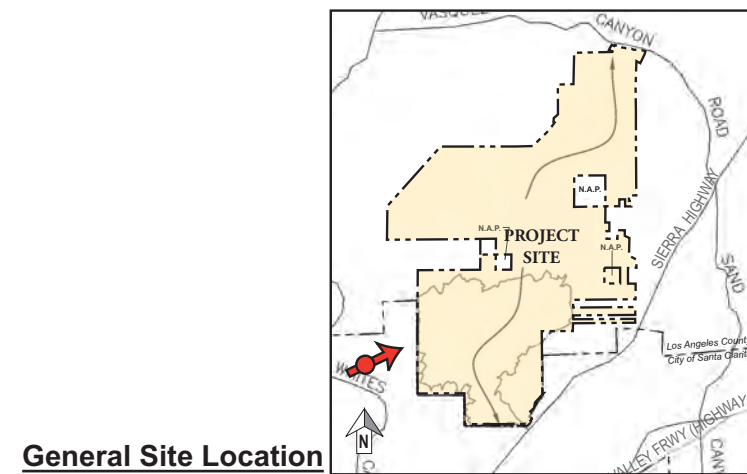
Detailed Location



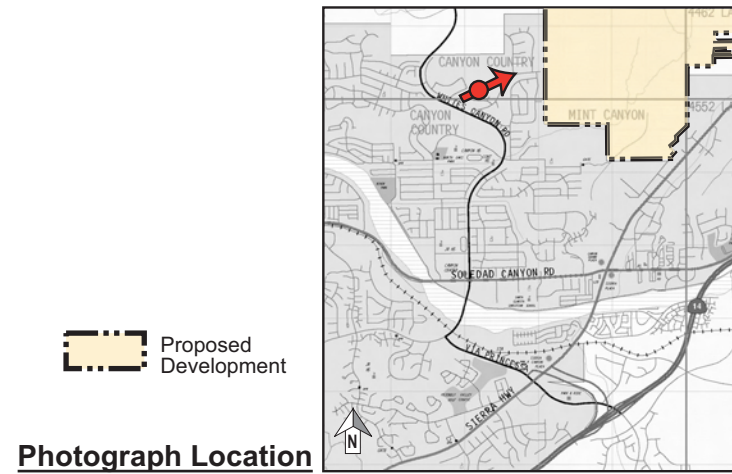
Existing view of project site looking northeast from Canyon Crest Drive.



Proposed view of project site looking northeast from Canyon Crest Drive, which consists of an adjacent residential neighborhood. This photosimulation shows the proposed alteration of the existing ridgeline to accommodate placement of the residential homes, which are shown along the western edge of the proposed development.



General Site Location



Photograph Location



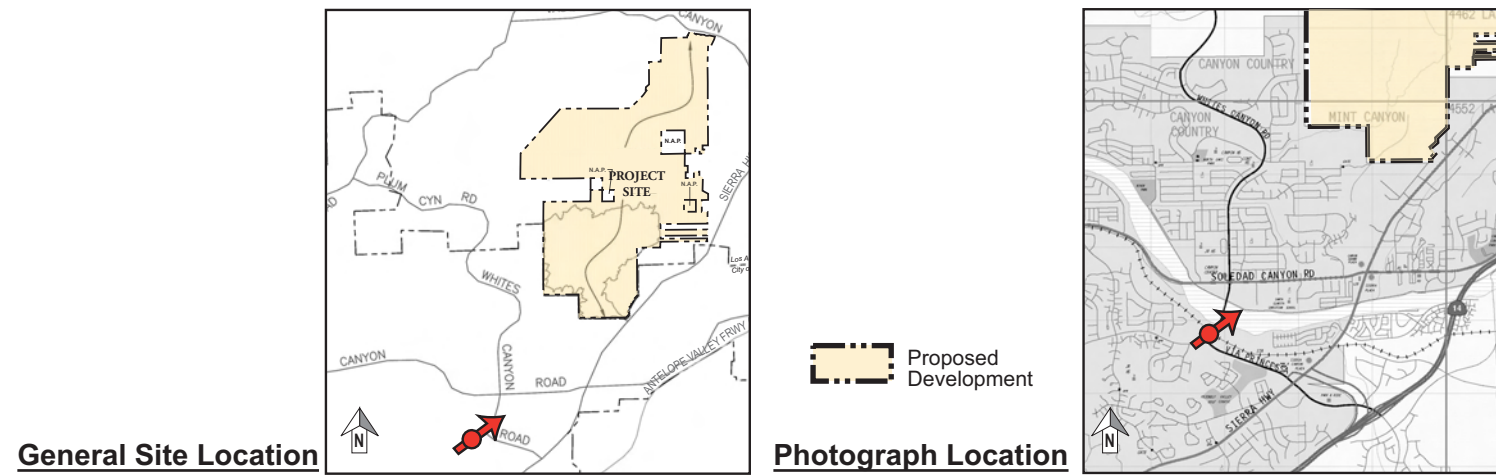
Detailed Location



Existing view of the project site area looking northeast from Via Princesa and Whites Canyon Road.



Proposed long-range view of the project site looking northeast from Via Princesa and Whites Canyon Road. This photosimulation shows long-range views of the existing ridgelines would be maintained from this vantage point.



boundaries and other grading constraints, grading along the west side of the entry road would create a peak at the interface between manufactured slopes and the remaining hilltop that would contrast with the natural landform of the hills that are adjacent to the site and within the viewshed of Sierra Highway. Due to this grading effect on natural topography and the contrast that is created, this impact on mid-range views is considered significant prior to implementation of mitigation measures. Regarding the hilltop homes visible from this vantage point, their distance and location relative to Sierra Highway and landscaping proposed at the entry and along Skyline Ranch Road is such that they are not expected to figure prominently in views from properties or motorists along Sierra Highway. As a result, impacts associated with the hillside homes from this vantage point would be less than significant.

Figure 4.E-7, Photographic Simulation Looking North from Sierra Highway near Hillfield Lane, shows the graded slope along the east side of the entry road. Similar to the effect on the hillside to the west of the entry road, as discussed above and shown in Figure 4.E-6, grading of the entry road from this vantage point would affect the hillside to the east of the entry road. Grading would result in more angular and less mounded landforms than previously existed, which would contrast with the natural landform of hills that are adjacent to the site. Due to this effect on landform the impact on mid-range views from this vantage point is considered significant prior to implementation of mitigation measures. Similar to the effect on views looking northwest toward the entry road, impacts on foreground views from this vantage point would be less than significant due to the disturbed nature of the area and the enhancement of the entry to the site with monumentation, trees, and other landscaping.

Figure 4.E-8, Photographic Simulation Looking Northeast from Canyon Crest Drive, demonstrates the view from the residential neighborhood located immediately west of the proposed development area in the vicinity of Canyon Crest Drive. Most of the residences in this adjacent neighborhood are oriented to the north, south, and west and, as such, their views are not dominated by the rolling hills characterizing the visible horizon from this vantage point. However, residences that are oriented to the east, and views along certain sidewalks and roadways would experience a substantial change in long-range views. As shown in Figure 4.E-8, project grading and development would level topography to accommodate proposed residential homes. Consequently, some of the ridgelines would be eliminated by grading or obstructed from view by proposed homes. This change in views would contrast with an existing vista where long-range views encompass undeveloped rolling hills and ridgelines. As such, the proposed project would substantially degrade a long-range scenic vista from areas along Canyon Crest Road. This change in views is considered a significant impact. The proposed homes would also be located upslope from residential development located along Bakerton Avenue and Falcon Crest. However, these shorter range views toward proposed homes would be screened by trees and landscaping within a perimeter slope area shown in Chapter 2, Figure 2-6, Skyline Ranch – Conceptual Site Plan, and as such impacts on these views would not be significant.

Views of the project from the neighborhood to the southwest of the proposed development area would be prominent due to the higher elevation of this area relative to the proposed development area. However, because the single-family residences from this location are generally oriented away from the project, the completed project, which would include a landscape design (e.g., combination of streetscape elements, enhanced landscaped pedestrian circulation routes, parks, and common area landscaping) to create an aesthetically pleasing and highly livable residential environment, is not expected to figure prominently in views from these receptors. Based on the above, impacts on views from the residences to the southwest are considered less than significant.

Figure 4.E-9, Photographic Simulation Looking Northeast from Via Princessa and Whites Canyon Road, provides a long-range view of the proposed project from a distance of approximately 1.5 miles southwest of the project site. As depicted in the figure, the existing ridgelines from this vantage point would be maintained and would not be altered by the proposed development. Because of the existing residential developments to the west and south of the project site, the proposed development would generally blend in with the pattern and scale relative to these developments in the project area. As such, this change in views would not be considered significant.

As indicated above in the discussion of Environmental Setting, although areas to the north of the site do have views of the Cruzan Mesa and areas in the north of the site that are not proposed for development, the areas that are proposed for development are generally not visible from the north due a major intervening ridgeline. Consequently, there would be no impacts on views from areas to the north, northwest, and northeast of the site, including the Mint Canyon Trail, Bouquet Canyon Trail, an unnamed trail to the northwest, and an unnamed trail that generally follows the main roadway alignment shown within Recorded Tract Map No. 44967. These trails are part of the adopted County trail system as shown on the Santa Clarita Valley Area Plan. A trail easement, that includes the unnamed trail located in the northern portion of the site and extends southwest towards a lookout point, is proposed as part of the project.

With regard to general aesthetic characteristics of the development, building materials would consist of typical materials used in residential construction, including wood, stucco, and non-reflective glass, consistent with the adjacent residential developments. The overall design concept would be a modern design of high quality materials that would provide visual distinction between the proposed project and surrounding neighborhoods.

(3) Light and Glare

On-site lighting would introduce new sources of light and glare to the project site and surrounding areas. Proposed uses, particularly along the western and southern edges of the site would be similar in nature to the residential and urban uses they would face in surrounding areas.

Project lighting would be typical of lighting in other residential neighborhoods. The project is expected to include standard lighting practices that would preclude lighting from spilling-over or being directed onto off-site areas. Lighting at the project site would be shielded in accordance with nationally recognized practices and recommendations of lighting professionals. Regarding the potential for lighting to affect adjacent open space areas, streetlights, the most dominant source of lighting, would be concentrated along streets to the interior of the development area, rather than along the edges of the site. And, as further described in Section 4.C, Biological Resources, lighting would not present a significant nuisance to sensitive habitat areas or wildlife due to the characteristics (focused and directed downward) and placement of the lighting, the topographic separation of proposed development from such areas, and the project's provision of interceding landscaped buffer areas in the form of privately maintained slopes. Therefore, the proposed project would not substantially alter the lighting character in surrounding communities and open space areas and would not interfere with the performance of off-site activities. As such, impacts related to lighting would be less than significant.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces, such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. The proposed project is anticipated to use building materials that are non-reflective in nature and typical of residential development throughout the area. As such, the proposed project is not anticipated to have a significant impact associated with glare.

(4) Consistency with Applicable Policies

Table 4.E-1, Consistency of the Proposed Project with the Applicable Policies of the County General Plan and the Santa Clarita Valley Area Plan, starting on page 4.E-23, provides an analysis of the project with regard to each of the policies that are set forth in the County General Plan and the Santa Clarita Valley Area Plan, which focus on preservation of view resources in the project vicinity. Although the project would have an impact on a ridgeline, it would be in substantial conformance with County General Plan Policy 19, and based on the analyses presented in Table 4.E-1, it is concluded that the project would be consistent with the applicable policies of the County General Plan and the Santa Clarita Valley Area Plan.

Table 4.E-1

Consistency of the Proposed Project with the Applicable Policies of the County General Plan and the Santa Clarita Valley Area Plan

Applicable Policy	Analysis of Project Consistency
<i>County General Plan</i>	
18. Encourage open-space easements and dedications as a means of meeting scenic, recreational and conservation needs.	Consistent. As further described in Chapter 2, Project Description the northern 1,551 acres of the project site is proposed to remain undeveloped with resources preserved and enhanced through the proposed establishment of a 1,355-acre Skyline Ranch Conservation Area (SRCA). This proposed conservation area would directly support the policy for encouraging open space easements/dedications that meet scenic, conservation and recreational needs.
19. Protect the visual quality of scenic areas including ridge-lines and scenic views from public roads, trails and key vantage points.	Inconsistent. The project would involve a density transfer from the northern portion of the project site to the southern portion. This would allow the northern portion of the project site with the highest environmental sensitivity to remain undeveloped; thus, preserving a potential Significant Ecological Area and minimizing environmental impacts on the hillsides/ridge-lines. The proposed residential development would not be visible from Mint Canyon Trail, Bouquet Canyon Trail, and other unnamed trails on and to the north, northwest and northeast of the site due to distance and intervening topography; therefore visual impacts from these locations would be less than significant. Impacts on views from Sierra Highway associated with grading and construction of Skyline Ranch Road would be significant, however, mitigation measures would reduce this impact to a less than significant level. Project grading and development would also alter a ridgeline and degrade a long-range scenic vista from areas along Canyon Crest Road. Although this impact is considered significant and unavoidable, overall, particularly given the substantial preservation of open space in the northern portion of the site, the project appears to be in substantial conformance with this policy.
<i>Santa Clarita Valley Area Plan</i>	
Community Design Element	
3.2 Require that all new power distribution networks, communication lines, and other service network facilities be located underground wherever practical. Transmission lines should be located underground where feasible.	Consistent. The proposed project would locate new utility lines underground.

Table 4.E-1 (Continued)

Consistency of the Proposed Project with the Applicable Policies of the County General Plan and The Santa Clarita Valley Area Plan

Applicable Policy	Analysis of Project Consistency
3.4 Identify and use landmarks, topographic features and other dominant physical characteristics of each community as a focus for developing a community image.	The proposed residential development would be clustered in the southern portion of the project site, preserving the dominant ridgelines along the eastern boundary of the development area. In addition, approximately 71 percent of the site would remain undeveloped, preserving ridgelines and other significant biological areas to the north. Open space areas adjacent to the proposed SRCA would be landscaped in a manner that would compliment and provide a smooth transition to the natural open space areas within the SRCA.
3.5 Encourage planting of street trees in urban portions of the Santa Clarita Valley.	The proposed project would include planting of street trees within the developed area, particularly along Skyline Ranch Road.

Sources: PCR Services Corporation, 2007.

4. MITIGATION MEASURES

a. Construction Impacts

4.E-1 *During construction, the applicant or his contractors shall locate equipment, stockpiles, and staging areas out of direct public or private view to the extent feasible.*

b. Visual Impacts

4.E-2(a) *To reduce the significant aesthetic impact associated with graded slopes and paved terrace drains along the southern entrance to the project site, the slopes on both sides of proposed Skyline Ranch Road shall be revegetated and landscaped as soon as feasible following grading and roadway development. Landscaping in this area shall be selected and planted to screen proposed terrace drains from public views and to merge ornamental and native materials such that sharp contrasts in form and color with undeveloped areas are avoided.*

4.E-2(b) *A landscape plan for the planned residential development shall be prepared by a Landscape Architect with a plant palette that will merge*

ornamental and native materials such that shape contrasts in form and color are avoided with adjacent undeveloped areas. Trees and shrubs on streets, slopes and ridgelines should emphasize mounded rather than columnar forms (such as palm trees and cypress). Plantings on the hillsides to the south and east of the entry road shall be specifically selected, sized, and placed to soften angular forms created by grading at the interface of manufactured slopes and natural hillsides. Furthermore, every effort shall be made as grading plans are finalized and during grading to create rounded landforms that are generally reflective of the natural topography of the area. Planting of common landscape areas shall be undertaken as soon as possible following grading to avoid prolonged view degradation. Landscaping on the site shall be routinely maintained by a homeowners association and/or through Covenants, Conditions and Restrictions (CC&Rs) throughout the life of the project. The landscape plan shall be subject to review and approval by the County prior to issuance of any grading permits.

5. CUMULATIVE PROJECT IMPACTS

All related projects would be analyzed on a case-by-case basis to determine impacts on aesthetics, views and light and glare. Such analyses would include the degree to which the introduction of new features or the loss of existing aesthetic elements would alter, degrade, or contrast with the existing valued visual character of the area. The analyses would also include the change in ambient illumination levels and lighting spillover as a result of project sources. However, the project in combination with related projects would have a significant unavoidable impact associated with visual quality due to the alteration of landform and development of rural hillside area to a developed condition. Similarly, as related projects in the project vicinity are completed, built out hillsides would dominate views, particularly long-range views, over time. Therefore, this impact on visual quality is considered cumulatively significant and unavoidable.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

The mitigation measures listed above would reduce visual impacts. However, impacts associated with project construction activities and the change in views from the existing residential neighborhood to the west, particularly from those residences located west of the project site that are oriented to the east, would remain significant and unavoidable due to the alteration of a scenic vista and the modification of hillsides and ridgelines.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

F. TRAFFIC/ACCESS

1. INTRODUCTION

The following transportation and circulation analysis is based upon the Traffic Impact Analysis prepared by Austin-Foust Associates, Inc. in October 2008. A copy of the revised report is provided in Appendix F of this Draft EIR. This section addresses the proposed project's potential impacts on the transportation system in the vicinity of the project site, including intersections within the jurisdiction of the County of Los Angeles (County) and those within the City of Santa Clarita (City), interchanges on Highway 14 (Antelope Valley Freeway), and Los Angeles County Congestion Management Program (CMP) facilities.

2. EXISTING CONDITIONS

a. Regulatory Framework

A number of regional and local improvement plans affect transportation and circulation in the project area. These include the Los Angeles County Highway Plan prepared by the County of Los Angeles; the City of Santa Clarita Circulation Element and the Transportation Development Plan, prepared by the City of Santa Clarita; the Los Angeles County Congestion Management Program (CMP) and the Long Range Plan prepared by the Los Angeles County Metropolitan Transportation Authority (Metro); the Regional Transportation Plan (RTP) prepared by the Southern California Association of Governments (SCAG); and the Statewide Transportation Improvement Program (STIP) prepared by the California Department of Transportation (Caltrans).

(1) State Level

The Statewide Transportation Improvement Program (STIP) is a programming document prepared by Caltrans, in which program funds are allocated to individual projects and adopted/approved by the California Transportation Commission (CTC). The STIP is a seven-year capital improvement program of projects, on and off the State Highway system, funded with revenues from the State Highway Account, Passenger Rail Bond Fund and other sources. The purpose is to increase/enhance the capacity, operations, and safety of the transportation system. Projects in the STIP may include projects on State highways, local roads, intercity rail, or local rail systems. The current STIP was adopted by the CTC in May 2008.

(2) Regional Level

(a) Regional Plans

Prepared by the Southern California Association of Governments (SCAG), the Regional Transportation Plan (RTP) is a planning document which serves as the Transportation Plan required under State and Federal law. The RTP forecasts long-term transportation demands, and identifies policies, actions and funding sources to accommodate these demands. The RTP contemplates the construction of new transportation facilities, transportation system management (TSM) strategies, transportation demand management (TDM) strategies, and land-use strategies. Relevant goals and policies applicable to the proposed project are identified and addressed in Section 4.Q, Land Use of this EIR. These goals and policies aim to (1) maximize mobility and accessibility in the region, (2) ensure travel safety and reliability in the region, (3) preserve and ensure a sustainable regional transportation system, (4) maximize the productivity of the region's transportation system, (5) protect the environment, improve air quality and promote energy efficiency, and (6) encourage land use and growth patterns that complement the region's transportation investments. The 2008 Regional Transportation Improvement Plan (RTIP), also prepared by SCAG based on the RTP, lists all regional funded/programmed improvements within the next six years. The 2008 RTIP provides updates to the list of regional funded/programmed improvements in the next improvement cycle.

(b) Bridge and Thoroughfare District Fee

Presently, public funding is not available to adequately provide highway improvements for the future anticipated development in the Santa Clarita Valley. Consequently, to accommodate the needs of future development anticipated by both the Los Angeles County and the City of Santa Clarita General Plans and to ensure new development pays its fair-share of the costs for the many significant transportation infrastructure improvements needed to accommodate the cumulative growth in traffic within the Santa Clarita Valley, the County and the City have established multiple Bridge and Thoroughfare (B&T) Districts. The project site is located within two of the B&T Districts: the Bouquet Canyon District, which covers the western portion of the site, and the Eastside District, which covers the eastern portion of the site.

Both the Bouquet Canyon and the Eastside B&T Districts have recently been updated and are considered full improvement districts.¹ By being full improvement districts, the B&T fees

¹ *For the Bouquet Canyon and the Eastside B&T Districts, the update reanalyzed build out development of the District and expanded on the scope of District improvements, which consist of full improvement of all roadways identified on the City and County Circulation Elements, including intersections and interchanges. In addition, in order to equitably assess future development, as well as collect sufficient funds to complete the improvements, the net cost of the improvements, the remaining land to be developed, and the type of development being constructed within the District are periodically reevaluated with the fee adjusted accordingly.*

collected in the districts are intended to cover all the anticipated improvements necessary to build out the arterial roadway network. The B&T fees are assessed based on the number of peak hour trips generated by the proposed project collected at the time of recordation of a final tract map.

Generally, the timing and phasing of construction of the improvements proposed by the Districts are determined by the location and the size of the proposed developments. In addition, the amount of funds received may also determine the timing of improvements.

(3) Local Level

(a) Los Angeles County

The Los Angeles County CMP is a state-mandated program, which serves as the monitoring and analytical basis for transportation funding decisions made through the RTP and STIP. Metro's Long Range Plan is a strategic document which serves as a framework for meeting the current and projected mobility needs of Los Angeles County. The Long Range Plan recommends within Los Angeles County, highway, high occupancy vehicle (HOV), bus, rail, and travel demand management improvements, and identifies funding sources and implementation schedules over a 20-year period.

The Los Angeles County General Plan Circulation Element sets policy direction for the continuing development of a comprehensive and coordinated transportation system for Los Angeles County. Metro and SCAG are the regional transportation planning agencies. The County's Circulation Element concurs with Metro and SCAG on the need for the continued development and construction of a comprehensive public transportation system. The Circulation Element reflects the locations of major existing and future transit travel corridors and provides the framework for the County's ongoing coordination of transportation and highway planning with local cities and regional and state agencies. Key features of the Circulation Element include a Transportation Plan, a Highway Plan, a Scenic Highway Plan, and a Bikeway Plan.

The purpose of the Highway Plan is to: (1) depict the general location of planned highway routes throughout the County; (2) provide a means for protecting highway right-of-way and requiring roadway improvements within the unincorporated area; (3) establish a plan and process for coordinating highway policies with neighborhood cities and counties; and (4) provide for a system of highways that is consistent with other policies of the General Plan. The Los Angeles County Highway Plan currently shows an extension of Whites Canyon Road being routed through the property's proposed northern open space area with a connection to Vasquez Canyon Road. The Plan also shows a future roadway segment for Cruzan Mesa Road between Whites Canyon Road and Sierra Highway. The Draft Highway Plan recommends the deletion of Cruzan Mesa Road between Whites Canyon Road and Sierra Highway through the project site and the realignment of Whites Canyon Road from Vasquez Canyon Road to Plum Canyon Road

through the southern portion of the project site. These existing and proposed alignments are further described under Subsection c.(8), Site Access.

(b) City of Santa Clarita

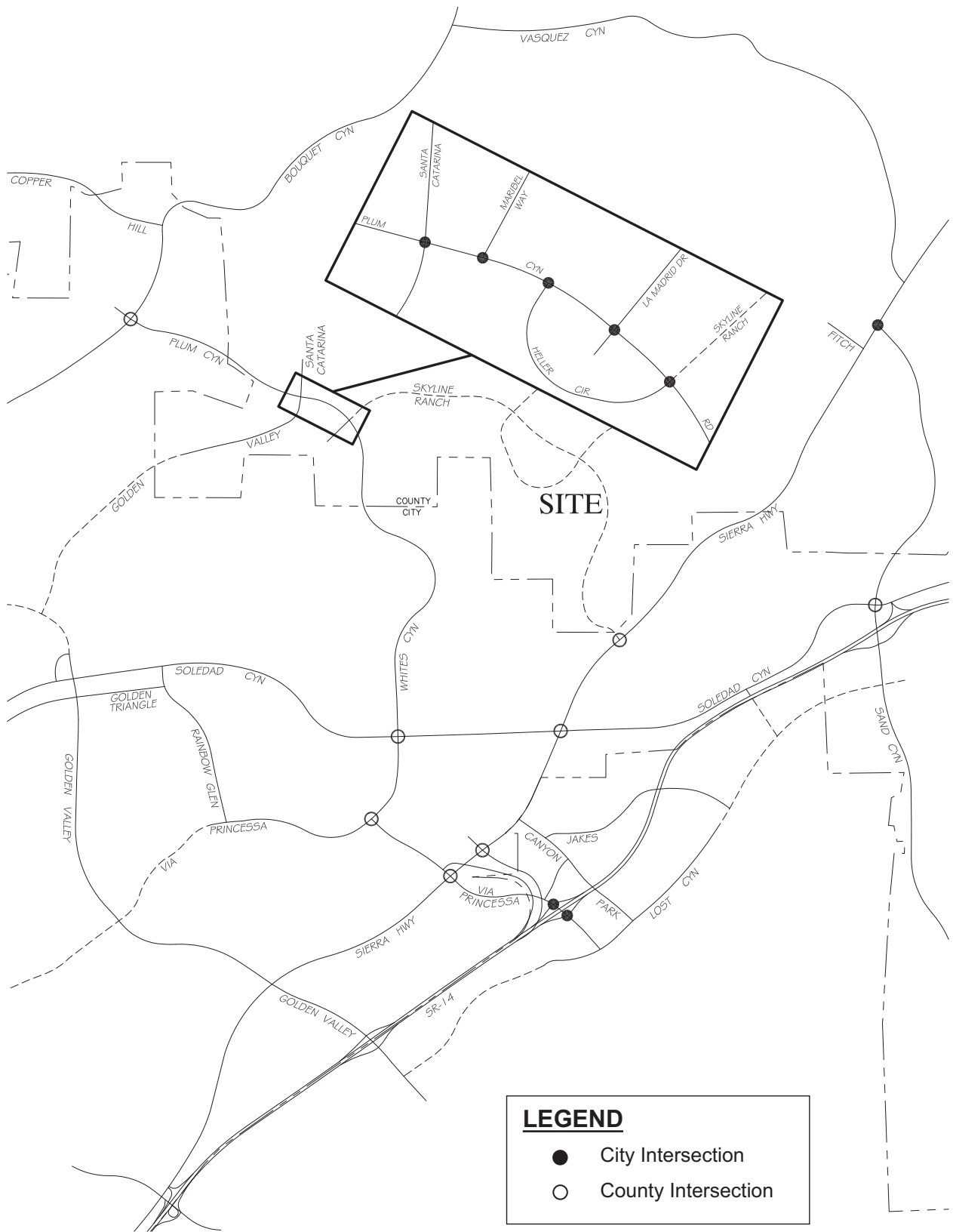
Within the project's study area, the City of Santa Clarita General Plan Circulation Element offers guidelines for provision and improvement of infrastructure within its jurisdiction. More specifically, the City's Circulation Element identifies and regulates a hierarchy of transportation corridors with specific development standards prescribed for each classification of roadway. Sierra Highway is designated as a major, six-lane highway. The Circulation Element also identifies and regulates other transportation facilities and issues, including, but not limited to, intersections, bikeways, equestrian trails, truck routes, railways, parking, transit operations, and pedestrian activities. The Circulation Element is often reviewed and utilized to determine how planning and development activities both outside and within the City's boundaries may affect circulation and transportation conditions.

The City of Santa Clarita prepared a Transportation Development Plan (November 2006) for the Santa Clarita Transit that outlines specific route and schedule changes as well as capital improvement projects needed to accommodate growth through 2015. The Plan identifies a population increase within the Santa Clarita Valley service area of over 30 percent. The Plan describes specific short-term changes to improve the operations of the transit system, including changes for the routes that serve the project site area and completion of the "Cross-Valley Connection," (i.e., extending Newhall Ranch Road east of Bouquet Canyon Road and connection with Soledad Canyon Road). The Plan identifies additional residential growth projected to occur in the vicinity of Plum Canyon/Whites Canyon.

b. Environmental Setting

(1) Existing Roadway System

The study area, as illustrated in Figure 4.F-1, Study Intersection Locations, on page 4.F-5, includes the roadways and intersections near the project site, where County of Los Angeles and City of Santa Clarita staff identified the potential for project traffic to cause significant impacts. The study area generally extends to Golden Valley Road/Highway 14 to the south, Bouquet Canyon Road to the west, Vasquez Canyon Road to the north, and Sand Canyon Road to the east and includes major roadways providing access to the project site, such as Sierra Highway, Soledad Canyon Road, Plum Canyon Road, Whites Canyon Road, Via Princessa, and the Antelope Valley Freeway (Highway 14).



LEGEND

- City Intersection
- County Intersection



Figure 4.F-1
Study Intersection Locations

Sierra Highway to the east and southeast of the project site is designated as a major (six-lane) highway, but it is currently configured with two lanes in each direction north of Soledad Canyon Road. Plum Canyon Road and Whites Canyon Roads are also designated as major (six-lane) highways but are currently configured with segments ranging from two to three lanes in each direction. Highway 14 provides regional access to the site and is located approximately two miles to the southeast. The Interstate 5 (I-5) Freeway is located approximately eight miles to the southwest and west.

(2) Existing Traffic Volumes

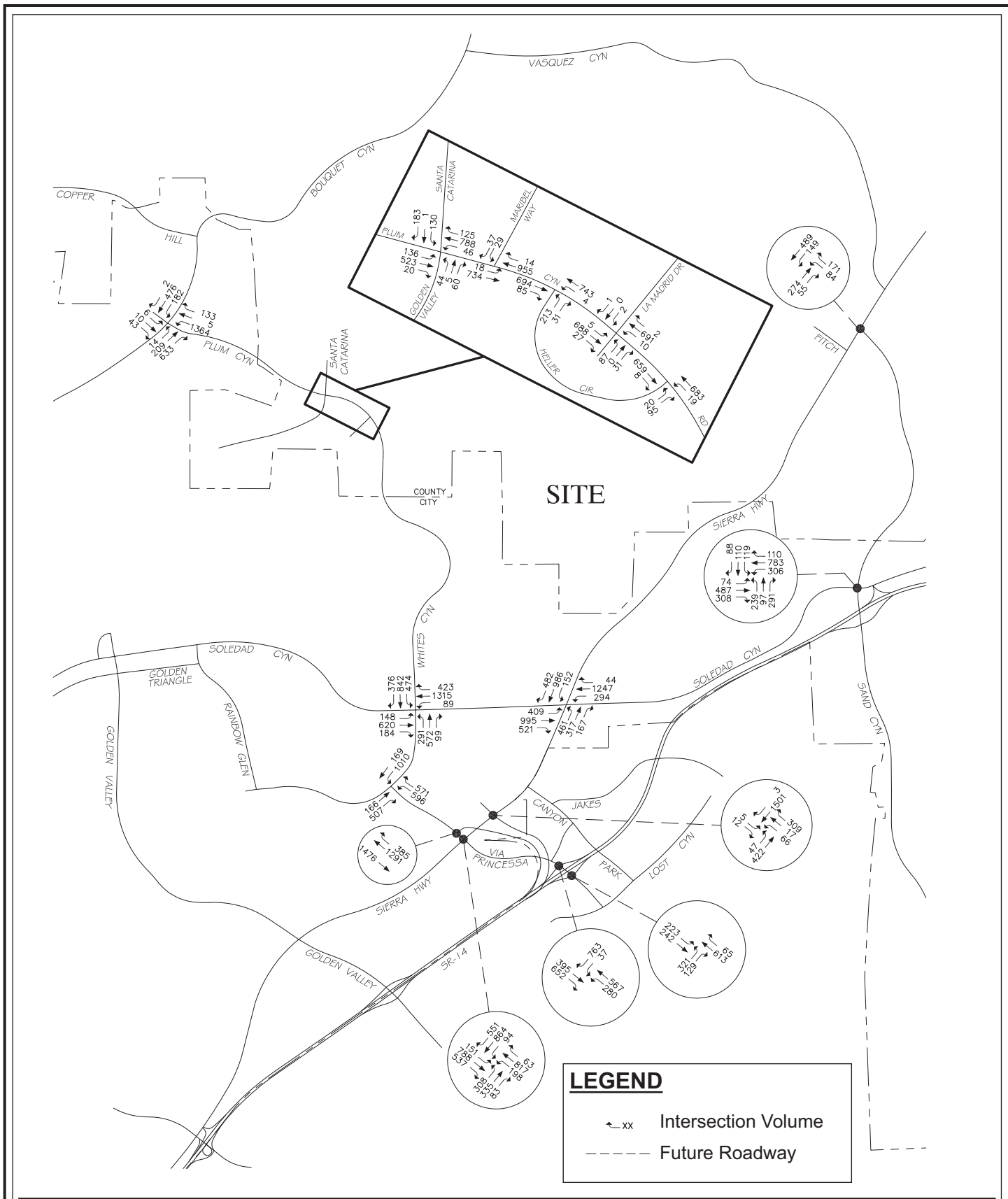
Peak-hour turning movement volumes for each study area intersection are represented in Figure 4.F-2, A.M. Peak Hour Turning Movement Volumes—Existing (2007) Conditions, on page 4.F-7 and Figure 4.F-3, P.M. Peak Hour Turning Movement Volumes—Existing (2007) Conditions, on page 4.F-8, for the A.M. and P.M. peak hours, respectively. The peak-hour counts were collected in December 2007. The study intersections include the following 16 off-site intersections:

County of Los Angeles

- Highway 14 Northbound (NB) Ramps at Via Princessa;
- Highway 14 Southbound (SB) Ramps at Via Princessa;
- Golden Valley Road at Plum Canyon Road;
- Plum Canyon Road at Heller Circle (South);
- Sierra Highway at Sand Canyon Road;
- Maribel Way at Plum Canyon Road;
- Heller Circle (North) at Plum Canyon Road;
- La Madrid Drive at Plum Canyon Road.

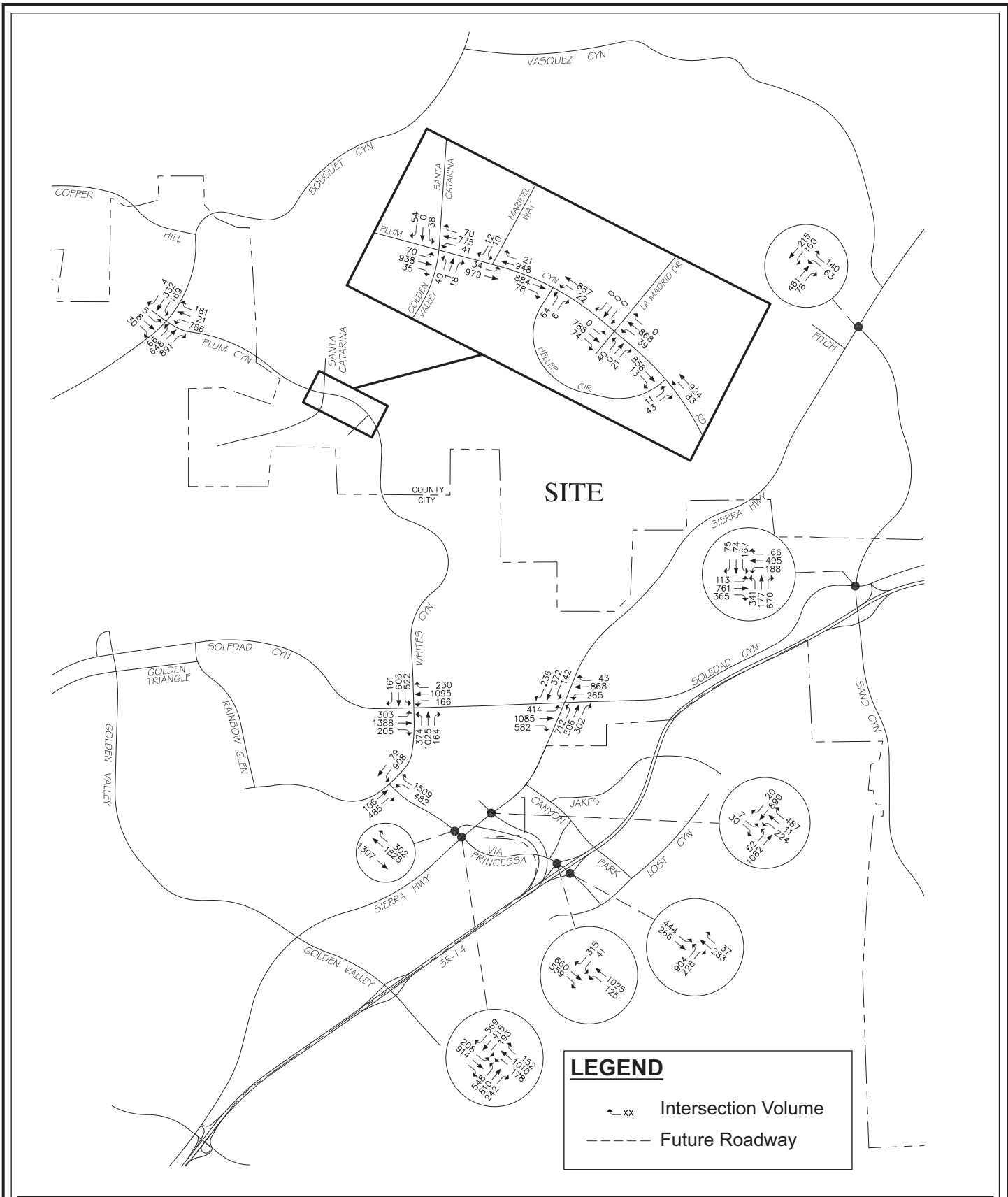
City of Santa Clarita

- Sand Canyon Road at Soledad Canyon Road;
- Sierra Highway at Via Princessa;
- Whites Canyon Road at Via Princessa;
- Whites Canyon Road at Soledad Canyon Road;
- Bouquet Canyon Road at Plum Canyon Road;
- Sierra Highway at Soledad Canyon Road;
- Sierra Highway at Highway 14 NB Off-Ramp; and
- Sierra Highway at Skyline Ranch Road.



Source: Austin-Foust Associates, Inc., 2008

Figure 4.F-2
A.M. Peak Hour Intersection Volumes
Existing (2007) Conditions



Source: Austin-Foust Associates, Inc., 2008

Figure 4.F-3
P.M. Peak Hour Intersection Volumes
Existing (2007) Conditions

(3) Level of Service Definitions

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 and based on that V/C ratio, a corresponding level of service (LOS) is defined. 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 4.F-1, Level of Service Definitions, on page 4.F-10. A more detailed description is provided in Appendix F, Table 1-1.

The study intersections are controlled by traffic signals. The Intersection Capacity Utilization (ICU) method of intersection analysis was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding level of service for the given turning movements and intersection characteristics of each study intersection. Table 4.F-1 defines the ranges of V/C ratios and corresponding levels of service for signalized intersections.

(4) Existing Traffic Operations

The results of the ICU level of service analyses for the study intersections are presented in Table 4.F-2, ICU and LOS Summary—Existing (2007) Conditions, on page 4.F-11. ICU values are shown using the methodology adopted by the City of Santa Clarita for those intersections that are located within the City. As shown in the table, most of the intersections are currently operating at LOS A through LOS C, with the exception of the intersections of Whites Canyon Road at Soledad Canyon Road and Sierra Highway at Soledad Canyon Road. The intersection of Whites Canyon Road at Soledad Canyon Road is currently operating at LOS C and D in the A.M. and P.M. peak hours, respectively. The intersection of Sierra Highway at Soledad Canyon Road is currently operating at LOS D and C in the A.M. and P.M. peak hours, respectively.

(5) State Highways

The project site is located approximately two miles north of Highway 14. In the vicinity of the project site, Highway 14 has four lanes (three general purpose lanes and one HOV lane) in each direction and is a State highway under the jurisdiction of Caltrans. Highway 14 would provide regional transportation opportunities for residents of the project site, and the Soledad Canyon Road and Sand Canyon Road interchanges would be the primary access points to Highway 14. Table 4.F-3, V/C and LOS Summary—Existing (2007) Conditions, on page 4.F-12 presents the freeway volumes and the corresponding V/C ratio on segments of Highway 14 that would be most affected by project traffic, specifically the segments north of Sand Canyon Road,

Table 4.F-1**Level of Service Definitions**

Level of Service	Volume/Capacity Ratio (V/C)	Definition
A	≤ 0.60	EXCELLENT. No vehicle waits longer than one red light, and no approach phase is fully used.
B	$> 0.60 \leq 0.70$	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	$> 0.70 \leq 0.80$	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	$> 0.80 \leq 0.90$	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	$> 0.90 \leq 1.00$	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.00	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, Transportation Research Circular No. 212, Interim Materials on Highway Capacity, 1980.

south of Sierra Highway, and north of I-5. As shown in the table, these locations are currently operating at acceptable levels of service (i.e., LOS E or better). Note that the V/C calculations and the corresponding LOS do not account for downstream congestion that may result in an observed LOS worse than the calculated value.

(6) Congestion Management Program

The Congestion Management Program (CMP) was enacted by the California State Legislature with the passage of Assembly Bill (AB) 471 in July 1989 (California Government Code Section 65088, et seq.). The requirements of the CMP became effective upon voter approval of Proposition 111 in June 1990. The Los Angeles County Transportation Commission, which soon merged into the Los Angeles County Metropolitan Transportation Authority (Metro), first adopted a County-wide CMP in December 1992 and periodically updates the CMP on a scheduled basis. The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. A specific system of arterial roadways and all freeways comprise the CMP system. Based on the list of surface-street monitoring stations listed in the CMP, the nearest CMP arterial monitoring intersections to the project site are the following:

- Sierra Highway at Sand Canyon Road; and

Table 4.F-2

ICU and LOS Summary—Existing (2007) Conditions

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	ICU	LOS	ICU	LOS
<i>County Locations</i>				
Highway 14 NB Ramps at Via Princessa*	0.47	A	0.72	C
Highway 14 SB Ramps at Via Princessa*	0.59	A	0.53	A
Golden Valley Road at Plum Canyon Road	0.53	A	0.39	A
Plum Canyon Road at Heller Circle (South)	0.30	A	0.34	A
Sierra Highway at Sand Canyon Road	0.46	A	0.53	A
Maribel Way at Plum Canyon Road	0.47	A	0.72	C
Heller Circle (North) at Plum Canyon Road	0.59	A	0.53	A
La Madrid Drive at Plum Canyon Road	0.53	A	0.39	A
<i>City Locations</i>				
Sand Canyon Road at Soledad Canyon Road	0.61	B	0.66	B
Sierra Highway at Via Princessa	0.63	B	0.61	B
Whites Canyon Road at Via Princessa	0.61	B	0.53	A
Whites Canyon Road at Soledad Canyon Road	0.79	C	0.89	D
Bouquet Canyon Road at Plum Canyon Road	0.68	B	0.73	C
Sierra Highway at Soledad Canyon Road	0.88	D	0.80	C
Sierra Highway at Highway 14 NB Off Ramp*	0.44	A	0.45	A

* *Joint jurisdiction with Caltrans.*

Level of service range: 0.00–0.60 A
0.61–0.70 B
0.71–0.80 C
0.81–0.90 D
0.91–1.00 E
Above 1.00 F.

Source: Austin-Foust Associates, Inc., October 2008.

- Sierra Highway at Soledad Canyon Road.

The nearest mainline freeway CMP monitoring locations to the project site are the following:

- Highway 14 south of Angeles Forest Highway;
- Highway 14 north of I-5; and
- I-5 north of Highway 14.

Table 4.F-3

V/C and LOS Summary—Existing (2007) Conditions

Freeway Segment	A.M. Peak Hour			P.M. Peak Hour		
	Volume	V/C	LOS	Volume	V/C	LOS
Northbound						
Highway 14 north of Sand Canyon Road ^a	1,114	0.19	A	5,349	0.89	D
Highway 14 south of Sierra Highway ^b	3,135	0.39	B	7,415	0.93	E
Highway 14 north of I-5 ^c	3,564	0.30	A	8,431	0.70	C
Southbound						
Highway 14 north of Sand Canyon Road ^a	5,776	0.96	E	2,643	0.44	B
Highway 14 south of Sierra Highway ^b	7,363	0.92	E	3,623	0.45	B
Highway 14 north of I-5 ^c	8,371	0.70	C	4,119	0.34	B

^a Existing lanes consist of two mixed-flow lanes and one HOV lane.

^b Existing lanes consist of three mixed-flow lanes and one HOV lane.

^c Existing lanes consist of five mixed-flow lanes and one HOV lane.

LOS – Basic Freeway Segments:	0.30	A
(Maximum V/C)	0.50	B
	0.71	C
	0.89	D
	1.00	E.

Source: Austin-Foust Associates, Inc., October 2008.

The CMP also requires an analysis of project impacts on the local and regional transit systems. Existing transit systems and services are described below.

(7) Existing Transit Service

The study area is served by two major transit carriers—the Santa Clarita Transit (SCT) system operated by the City of Santa Clarita and the Metrolink operated by the Southern California Regional Rail Authority (SCRRA). The SCT largely serves the Santa Clarita Valley, while the Metrolink currently serves Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties.

Existing fixed-route bus service within a quarter mile radius of the proposed project consists of SCT Routes 1 and 2 and Route 5. Routes 1 and 2 provide service from Whites Canyon Road to the Princess and Newhall Metrolink Stations, the Valencia Industrial and Commerce Centers, and the Valencia Town Center area. Buses run every 30 minutes. Routes 1 and 2 connect with other bus routes at the McBean Transfer Station and connect with commuter trains at the Jan Heidt Metrolink Station in Newhall. Major destinations along Routes 1 and 2 are Soledad Entertainment Center, Downtown Newhall, the Newhall Metrolink Station, Valencia

Town Center, Valencia Industrial Center, Valencia Commerce Center, and Castaic (Route 1) and Val Verde (Route 2).

Route 5 extends bus service on Sierra Highway north of Soledad Canyon Road to Vasquez Canyon Road. Route 5 connects with other bus routes at the McBean Transit Station and with commuter trains at the Jan Heidt Metrolink Station in Newhall and the Santa Clarita Metrolink Station on Soledad Canyon Road. Major destinations include Soledad Entertainment Center, Mountasia, Valencia Town Center, Henry Mayo Hospital, Downtown Newhall, Valencia Market Place, and Stevenson Ranch. Furthermore, Route 501 to Magic Mountain, Route 502 to the Valencia Commerce Center Area, Route 503 to Tamarack, and Route 504 to Bouquet Canyon are operated by SCT and provide service from the Santa Clarita Metrolink Rail Station to various areas of the City.

SCT commuter buses provide regional service to downtown Los Angeles, the San Fernando Valley and the Antelope Valley. Specifically, commuter bus service is provided to the following locations: Olive View Medical Center in Sylmar (Route 790), Chatsworth Metrolink/Amtrak Station–Warner Center (Route 791), UCLA/Westwood–Century City (Routes 792 and 797), Van Nuys–Sherman Oaks (Routes 793 and 798), Los Angeles Union Station/Gateway Transit Center (Route 794), Vincent Grade/Acton Metrolink Station and Lancaster Metrolink Station (Route 795), Warner Center (Route 796), and downtown Los Angeles–7th and Spring Streets (Route 799).

In addition to bus service, the Princess Metrolink Rail Station (located on Via Princessa) and Santa Clarita Metrolink Rail Station (located on Soledad Canyon Road) are respectively located approximately 3 miles and 5 miles southwest of the project site. These Metrolink stations provide commuter rail service between the Antelope Valley and downtown Los Angeles, thereby supplying additional regional transit to the site. These Metrolink stations also link Ventura, Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties with convenient transfer service between the bus and rail systems.

The Transportation Development Plan recommends that Route 1 is extended further north to Heller Court and provide new service further north on Whites Canyon. The extension of Route 1 along Whites Canyon/Skyline Ranch Road is shown as a proposed short-term route in the Plan. The Plans also recommends the elimination of Route 5 and segment of Sierra Highway near the project site would instead be served by a branch of Route 1, or would function as a local feeder to Route 1 within the Canyon Country area.

3. PROJECT IMPACTS

a. Thresholds of Significance

(1) Intersection Traffic Impact (County of Los Angeles)

According to the County's criteria, a project impact would be considered significant if the following conditions are met:

Intersection Condition Before Project Traffic		Project-Related Increase in ICU
LOS	ICU	
C	0.71 to 0.80	Equal to or greater than 0.04
D	0.81 to 0.90	Equal to or greater than 0.02
E, F	0.91 or more	Equal to or greater than 0.01

(2) Intersection Traffic Impact (City of Santa Clarita)

The City of Santa Clarita has established threshold criteria to determine if a project has a significant traffic impact at a specific intersection. According to the City's criteria, a project impact would be considered significant if the following conditions are met:

Intersection Condition With Project Traffic		Project-Related Increase in ICU
LOS	ICU	
D	0.81 to 0.90	Equal to or greater than 0.02
E, F	0.91 or more	Equal to or greater than 0.01

(3) State Highway Impact

As a general guideline, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D; however, Caltrans also acknowledges that this is not always feasible. Specifically, for urban areas Caltrans' goal is to maintain no worse than LOS E for freeway mainline segments. Furthermore, if an existing State highway facility is operating worse than the appropriate target LOS, Caltrans specifies that, at a minimum, the existing LOS should be maintained. Consequently, a project impact would be considered significant if each of the following conditions are met:

- The freeway mainline segment is forecast to operate deficiently (i.e., worse than the performance standard of LOS E or existing LOS, whichever is greater); and

- Compared to the V/C in the no project scenario, the V/C in the with-project condition increases the mainline V/C by 0.02 or more (the freeway impact threshold specified in the CMP).

(4) Regional Transportation System Impact

The CMP traffic impact analysis guidelines indicate a project impact on the regional transportation system is considered to be significant when the following threshold is exceeded:

- The proposed project increases traffic demand on a CMP facility by 2 percent of capacity or more ($V/C \geq 0.02$), causing LOS F ($V/C > 1.00$); or
- If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity or more ($V/C \geq 0.02$).

(5) Transit Services

Although the County and SCT do not have established thresholds that relate to impacts on transit service, for the purpose of this analysis impacts would be considered significant if the following occurs:

- The proposed project would result in an increase in ridership that would require additional facilities beyond those identified in the Transportation Development Plan that cannot be met by existing or planned transit services; or
- Traffic generated by the proposed project would cause a significant delay along existing and proposed transit routes.

b. Methodology

(1) Project Development Assumptions

The proposed project is evaluated for the year in which occupancy would occur and is analyzed both singularly and together with the cumulative traffic from other known developments planned to occur in the area that are referred to throughout this impact analysis as “related projects.” The planned year of occupancy for the first phase of the project is 2011. Baseline conditions are derived using actual peak hour traffic volumes (measured in 2007). Although project occupancies are expected to begin in 2011, recognizing that the amount of time to fully build out the project can vary and be dependent on market conditions at that time, it is

assumed for purposes of this analysis that a conservative estimate of approximately 200 units would be occupied per year with full build out of the project is expected to occur by 2017.

(2) Cumulative Development Assumptions

As further described in Appendix F, the evaluation of related project conditions is based on traffic volume forecasts obtained from the Interim Year Santa Clarita Valley Consolidated Traffic Model (SCVCTM). The Interim Year version of the SCVCTM is a sophisticated traffic demand model maintained jointly by the County of Los Angeles and City of Santa Clarita and includes approved, pending, and proposed development within the entire Santa Clarita Valley. Included within this model's growth assumptions are 42 projects within the vicinity of the study area, which were obtained from the County's Development Monitoring System and from the City of Santa Clarita in December 2007. These projects are listed in Table 3-1 and shown on Figure 3-1 of this EIR.

The Interim Year SCVCTM forecasts include future development and roadway infrastructure improvements, such as the Cross Valley Connector between Bouquet Canyon Road and Soledad Canyon Road, and the extension of Golden Valley Road between Plum Canyon Road and the Cross Valley Connector.

(3) Procedures for Determining Impacts to Intersections

For intersections under County jurisdiction, the project is evaluated for two scenarios. First, the project traffic is added to existing traffic volumes that have been increased for ambient growth ("Existing + Ambient + Project" conditions). Ambient growth is based on a 3.8 percent annual ambient growth between 2007 and 2008 or 38 percent over 10 years (between 2007 and 2017). This scenario is compared to "Existing + Ambient" conditions to determine the project's stand-alone impacts. Traffic from related projects is then added and this scenario ("Existing + Ambient + Project + Cumulative") and compared to "Existing + Ambient" conditions to determine cumulative impacts.

The City's procedure for determining impacts includes traffic from related projects as part of the background conditions to which the "with project" traffic is compared (i.e., "Existing + Project + Cumulative" is compared to "Existing + Cumulative").

As noted above, related projects are included within the Interim Year SCVCTM and include a listing of 42 approved, pending, and proposed projects that was obtained from the County and City, as previously described. This is referred to as the cumulative conditions.

(4) Procedures for Determining Impacts to State Highways

The impact analysis for freeway mainline segments uses peak hour volumes by direction as the basis for the analysis. LOS is derived from V/C ratios; this is the methodology utilized by the Los Angeles County CMP and is a standard industry practice. Capacities for calculating peak hour V/C ratios for freeway mainline segments are based on information contained in the CMP or provided by Caltrans. A capacity of 2,000 vehicles per hour per lane (vphpl) is used for mixed-flow (general purpose) mainline freeway lanes and high occupancy vehicle (HOV) facilities, a capacity that corresponds to LOS E conditions. For truck lanes, a capacity of 1,200 vphpl is applied for each designated truck lane, derived from actual field observations of truck lanes on the I-5 freeway.

(5) CMP Traffic Impact Analysis Criteria

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 A.M. or P.M. weekday peak hours (of adjacent street traffic).
2. Mainline freeway locations where the project will add 150 or more trips, in either direction, during either the A.M. or P.M. weekday peak hours.

(6) Transit Services

Although no quantitative guidelines have been established by either the County or SCT to determine impacts on transit services, the proposed project will be qualitatively evaluated to determine if existing and planned facilities identified in the Transportation Development Plan can reasonably be expected to accommodate increased ridership and if project-generated traffic would significantly impact intersections along existing and proposed transit routes.

c. Impact Analysis

(1) Trip Generation

As shown in Table 4.F-4, Project Land Use and Trip Generation Summary, on page 4.F-18, the project is forecast to generate a total of approximately 13,121 vehicle trips per day, with

Table 4.F-4

Project Land Use and Trip Generation Summary

Land Use	Units	A.M. Peak Hour			P.M. Peak Hour			ADT
		In	Out	Total	In	Out	Total	
TRIP GENERATION (Total)								
Single-Family Residential	1,270 DU	241	711	953	813	470	1,283	12,154
Elementary School	750 STU	173	143	315	—	—	—	968
Total		414	854	1,268	813	470	1,283	13,121
TRIP GENERATION (Off-Site)^a								
Single-Family Residential		217	640	857	813	470	1,283	10,939
Elementary School		17	14	31	—	—	—	97
Total		234	654	888	813	470	1,283	11,036
TRIP RATES^b								
Single-Family Residential	DU	0.19	0.56	0.75	0.64	0.37	1.01	9.57
Elementary School	STU	0.23	0.19	0.42	—	—	—	1.29

Note: Since preparation of the Traffic Impact Analysis the number of single-family residential dwelling units proposed for the project has been reduced to 1,260.

DU = Dwelling Units.

STU = Students.

^a Off-site trip generation was calculated as less than the total trip generation because of the interaction between the project's housing and school components. The following factors were used:

Residential: A.M. Peak Hour (90 percent travels off-site, 10 percent interacts with school);

P.M. Peak Hour (Same as Total Trip Generation, no reduction);

School (10 percent travels off-site, 90 percent interacts with residential).

^b Trip Rate Sources:

Institute of Transportation Engineers (ITE) Category 210 (Single-Family Detached Housing);

Institute of Transportation Engineers (ITE) Category 520 (Elementary School).

Source: Austin-Foust Associates, October 2008.

1,268 occurring in the A.M. peak hour (414 inbound trips and 854 outbound trips), and 1,283 occurring in the P.M. peak hour (813 inbound trips and 470 outbound trips).²

A separate "off-site" trip generation (i.e., trips that travel beyond the project's internal boundary) was also calculated because of the interaction between the project's housing and school components. The elementary school site proposed as part of the project would be developed by the Sulphur Springs School District to serve students from the project site.

² Trip generation considered in this Section is based on 1,270 dwelling units. Additional refinements to the proposed project since preparation of the traffic impact analysis has reduced the number of single family dwelling units that would be constructed from 1,270 to 1,260. Therefore, the traffic analysis presents a conservative analysis of what could result from project implementation.

During the A.M. peak hour, the net volume of traffic traveling off-site and onto the existing arterial roadway system is less than the total volumes noted above (residential trip ends plus school trip ends) due to the fact that a number of project-generated trips are between the project's residential units and the on-site elementary school. For example, a vehicle traveling from a home to the school and then back from the school to the home represents four of the project's calculated trip ends but does not add to the off-site trips. At the direction of County staff, this analysis conservatively assigns 90 percent of the total A.M. residential trip ends as off-site trips and assigns 10 percent of the elementary school's trip ends as off-site trips. The combined effect of these two factors is a net volume of trips leaving the project site during the A.M. peak hour (654 vehicles) that is 8 percent less than the total amount of A.M. outbound trip ends generated by the project's residential units (711 vehicles). Independent of the proposed project, the County will also require a traffic study to address the school site when a detailed site plan for the school is developed by the District.

(2) Trip Distribution

The distribution of project trips is based on two scenarios; one using the existing roadway system and the other based on the future roadway system to be in place under the Interim SCVCTM. The proposed project would be accessed from a new roadway through the project site (i.e., the proposed realignment of Whites Canyon Road). The realignment of Whites Canyon Road, between Plum Canyon Road and Sierra Highway, was conditionally approved as Skyline Ranch Road for the proposed project by the Los Angeles County Department of Public Works on July 19, 2006. Further discussion of the realignment of Whites Canyon Road is provided in Subsection (8)(a), Whites Canyon Road Extension.

Figure 4.F-4, Project Trip Distribution – Existing Roadways, on page 4.F-20 illustrates the distribution of trips to be generated by the proposed project with existing roadways in place. A total of 75 percent of the project trips would travel to and from a new intersection with Sierra Highway. Of these, approximately 5 percent would travel to and from the northeast along Sierra Highway, with the remaining 70 percent traveling to and from the southwest along Sierra Highway and dispersing beyond that point, as shown in Figure 4.F-4. About 25 percent of the project trips would travel to the more northerly intersection with the existing Plum Canyon Road, with about 15 percent traveling to and from the north from that point (10 percent in the A.M. peak hour due to school trips), and 10 percent traveling to and from the south (15 percent in the A.M. peak hour due to school trips). Approximately 30 percent of project trips are anticipated to use Highway 14 based on existing roads and commute patterns. About 25 percent of these trips would use the Sierra Highway interchange to travel to and from the south, and approximately 5 percent would travel to and from the north utilizing the Sand Canyon Road interchange.

Figure 4.F-5, Project Trip Distribution – Future Roadways, on page 4.F-21 shows the distribution of trips generated by the proposed project with construction of future roadways

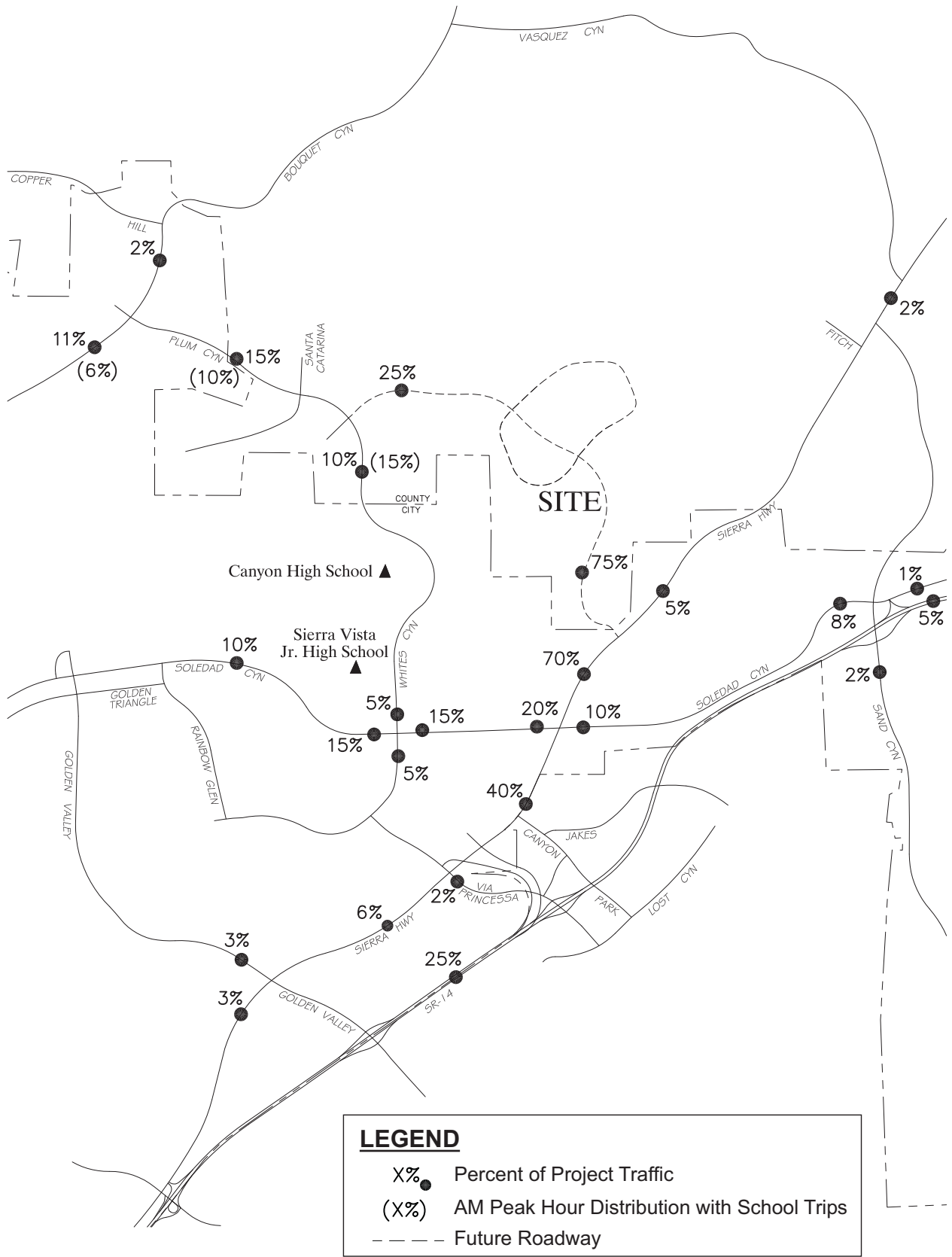


Figure 4.F-4
Project Trip Distribution
Existing Roadways

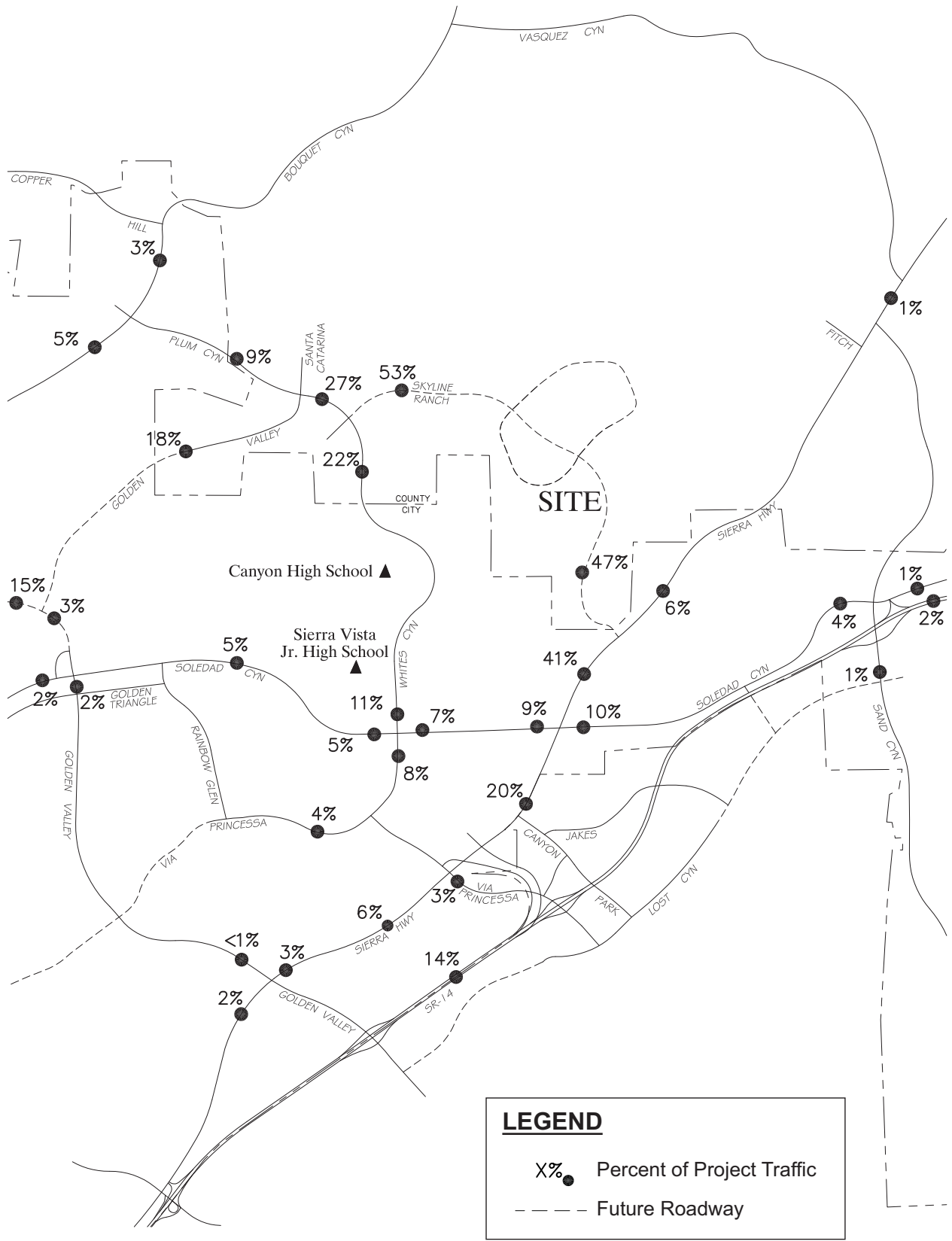


Figure 4.F-5
Project Trip Distribution
Future Roadways

Source: Austin-Foust Associates, Inc., 2008

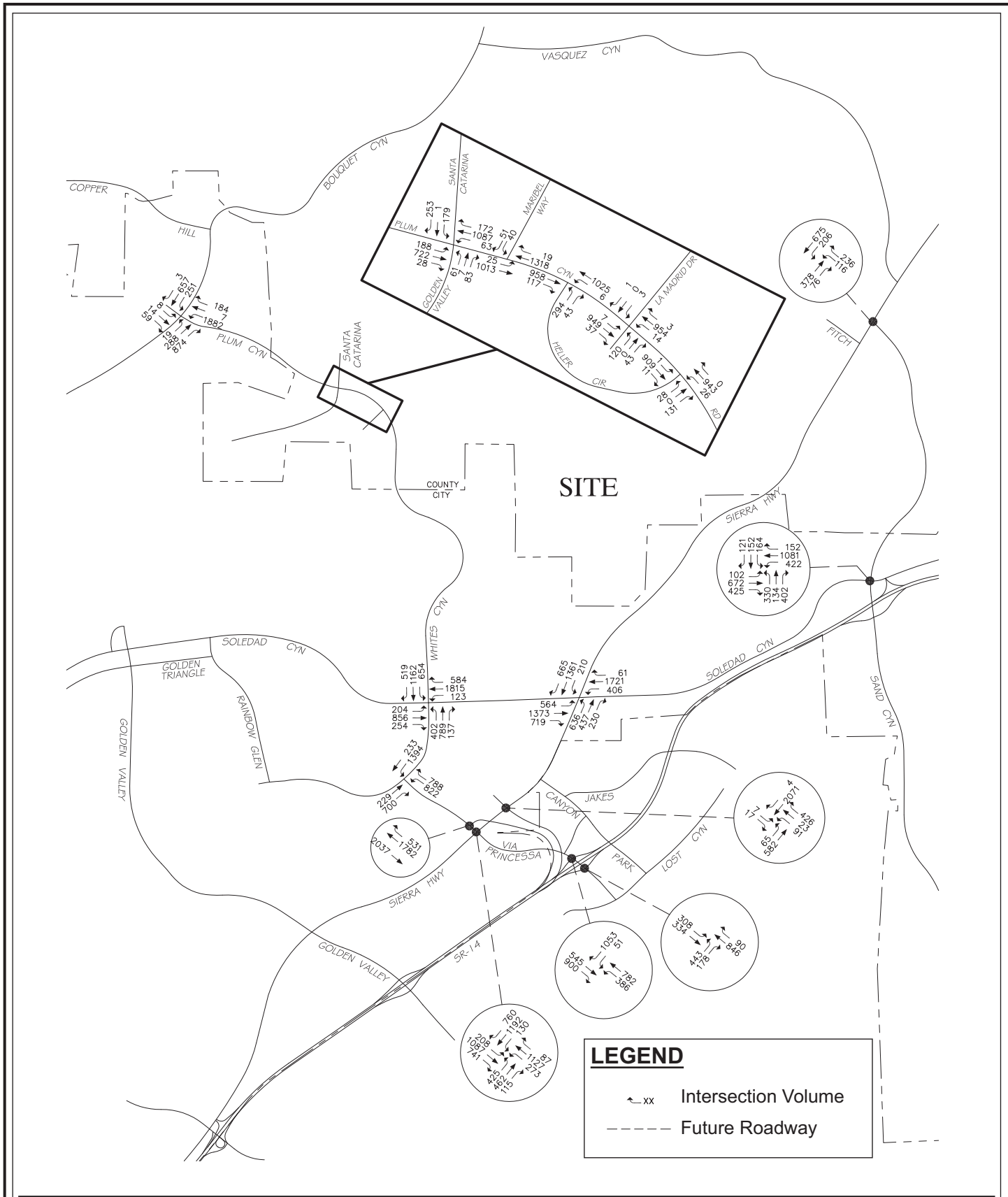
associated with cumulative development. A total of 47 percent of the project trips are oriented to and from a new intersection with Sierra Highway, as shown on Figure 4.F-5. Of these, approximately 6 percent will travel to and from the northeast along Sierra Highway, with the remaining 41 percent traveling to and from the southwest along Sierra Highway. About 53 percent of the project trips are oriented to the more northerly intersection with existing Plum Canyon Road, with about 27 percent traveling to and from the north from that point, 22 percent traveling to and from the south, and 4 percent interacting with the developing area along Plum Canyon Road. The shift in project traffic from Sierra Highway to Plum Canyon Road is largely due to new roadways such as the Golden Valley Road connection between Plum Canyon Road and Newhall Ranch Road and the new Golden Valley Road Bridge connecting Newhall Ranch Road to Soledad Canyon Road. Approximately 16 percent of project trips are anticipated to use Highway 14. About 14 percent of these would use the Sierra Highway interchange to travel to/from the south. As with the shift in project traffic noted above, cumulative conditions results in less project traffic utilizing Highway 14 largely due to development within the Santa Clarita Valley that will create new employment opportunities within the large commercial business centers west of the project site.

(3) Intersection Analysis

As discussed above, a 38 percent growth factor was used to represent ambient growth through 2017 for the purpose of the project stand-alone analysis, and the Interim Year SCVCTM provides forecasts for 2017 cumulative conditions. Figure 4.F-6, A.M. Peak Hour Intersection Volumes (Existing Plus 2017 Ambient Growth), through Figure 4.F-13, P.M. Peak Hour Intersection Volumes (Project Plus Cumulative), on pages 4.F-23 through 4.F-30, respectively, present illustrations of A.M. and P.M. peak-hour turning movement volumes at the study intersections for “existing plus 2017 ambient” conditions, “existing plus 2017 ambient plus project” conditions, “existing plus 2017 ambient plus cumulative” conditions, and “existing plus 2017 ambient plus project plus cumulative” conditions.

Table 4.F-5, ICU and LOS Summary for County Intersections Existing Plus 2017 Ambient Conditions (Without and With the Project), on page 4.F-31, summarizes the ICUs and LOS for “existing plus ambient” conditions for County intersections based on the existing roadway system, both with and without the project. As shown, using County methodology project impacts would be less than significant at these intersections.

City guidelines specify that project impacts are evaluated for conditions that include related project traffic (included in the SCVCTM) as part of the background conditions. Table 4.F-6, ICU and LOS Summary for City Intersections (Without and With the Project), on page 4.F-32 compares "cumulative conditions" to "cumulative conditions with project" for City intersections and shows that when trips associated with the project and cumulative (i.e., the



Source: Austin-Foust Associates, Inc., 2008

Figure 4.F-6
A.M. Peak Hour Intersection Volumes
(Existing Plus 2017 Ambient Growth)

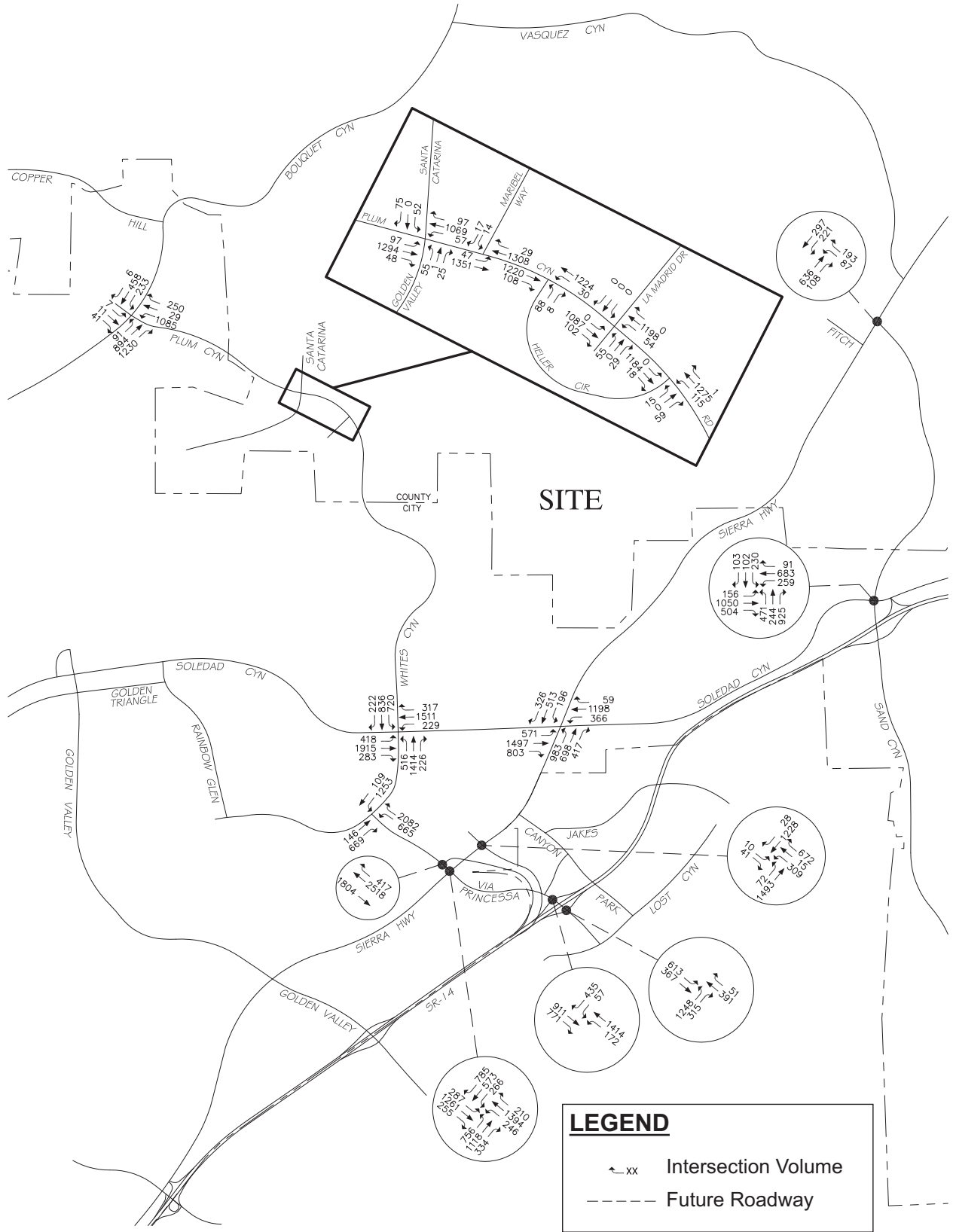


Figure 4.F-7
 P.M. Peak Hour Intersection Volumes
 (Existing Plus 2017 Ambient Growth)

Source: Austin-Foust Associates, Inc., 2008

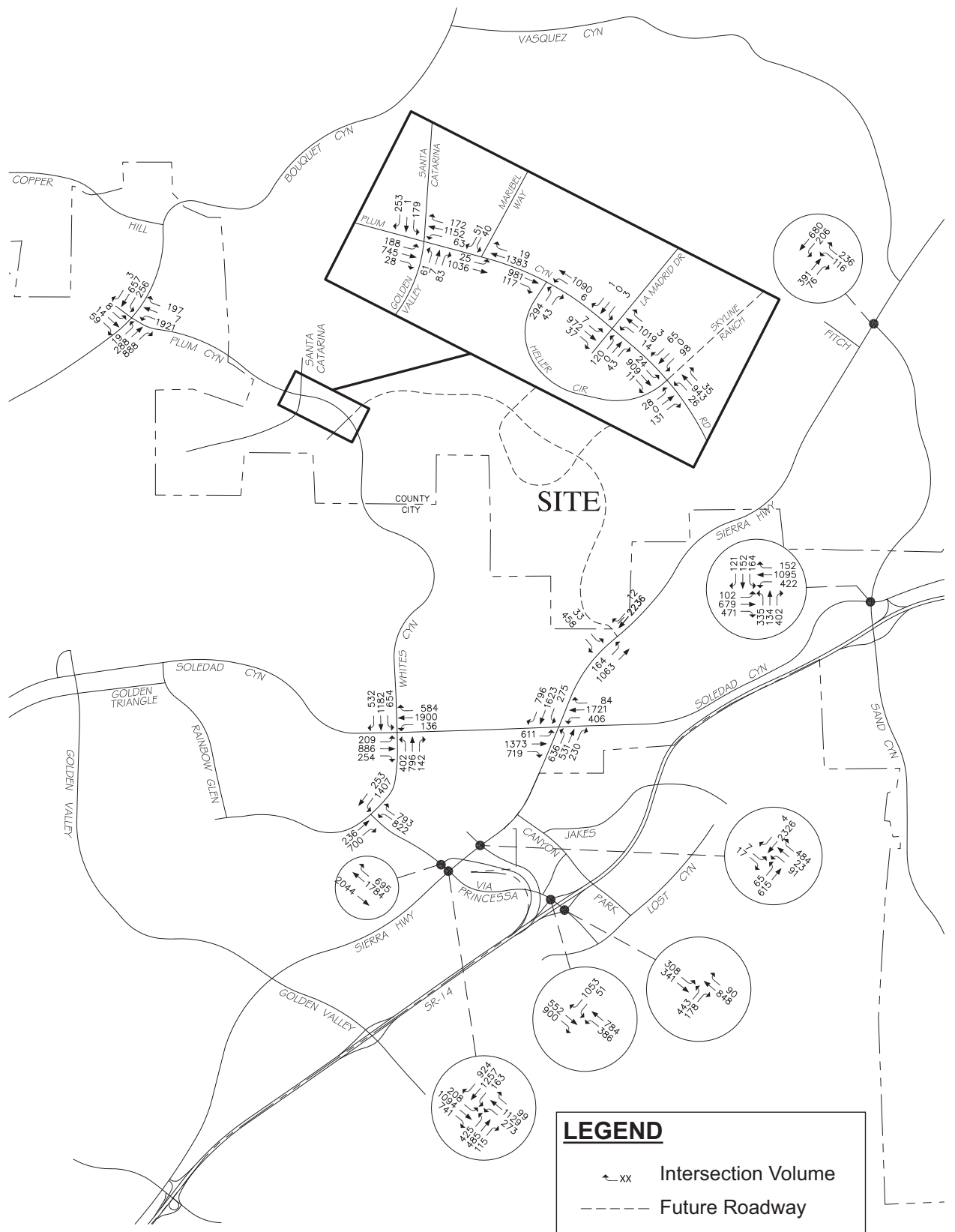
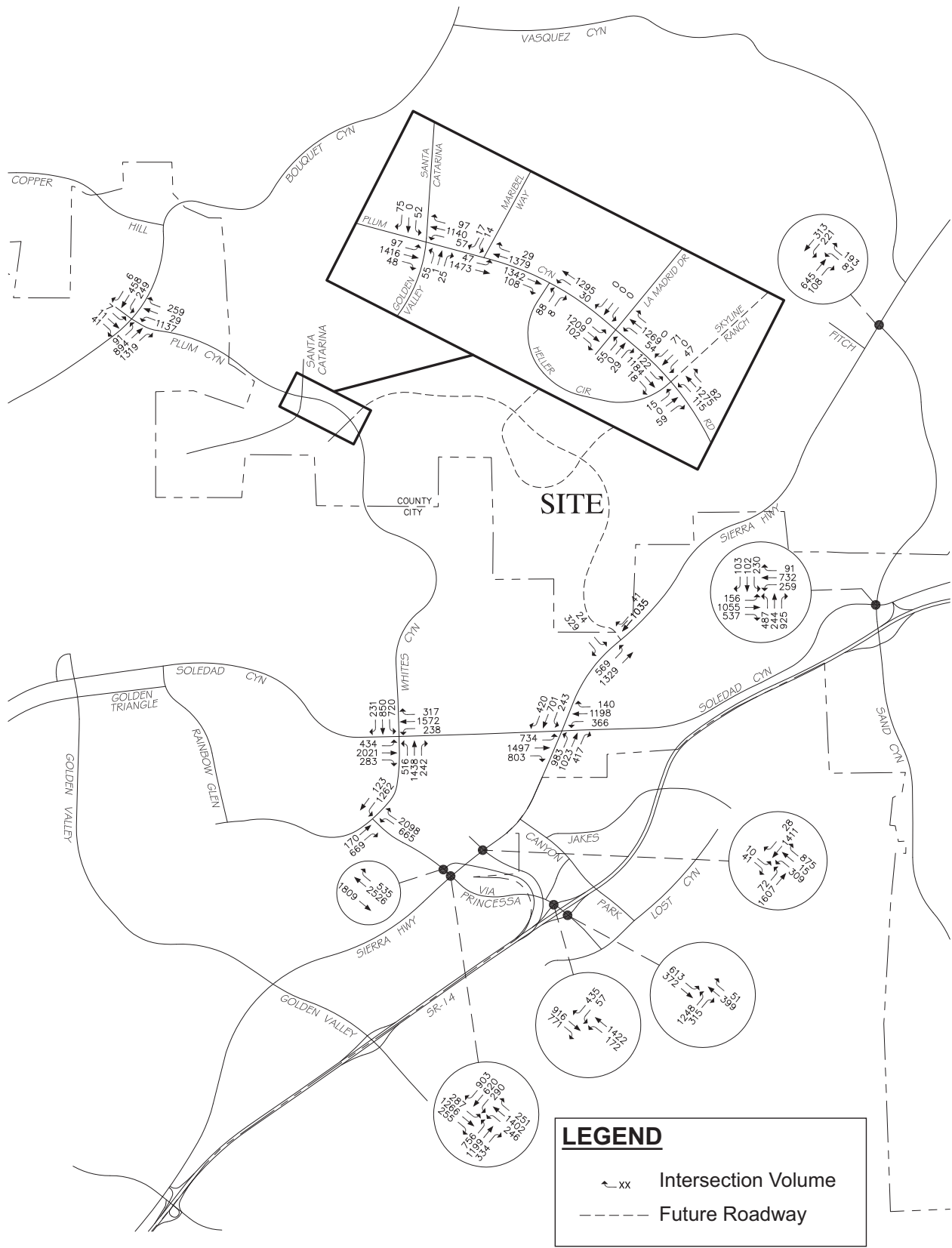


Figure 4.F-8
 A.M. Peak Hour Intersection Volumes
 (Existing Plus 2017 Ambient Growth
 Plus Project)



↑ N
 Not to scale

Source: Austin-Foust Associates, Inc., 2008



Source: Austin-Foust Associates, Inc., 2008

Figure 4.F-9
 P.M. Peak Hour Intersection Volumes
 (Existing Plus 2017 Ambient Growth
 Plus Project)

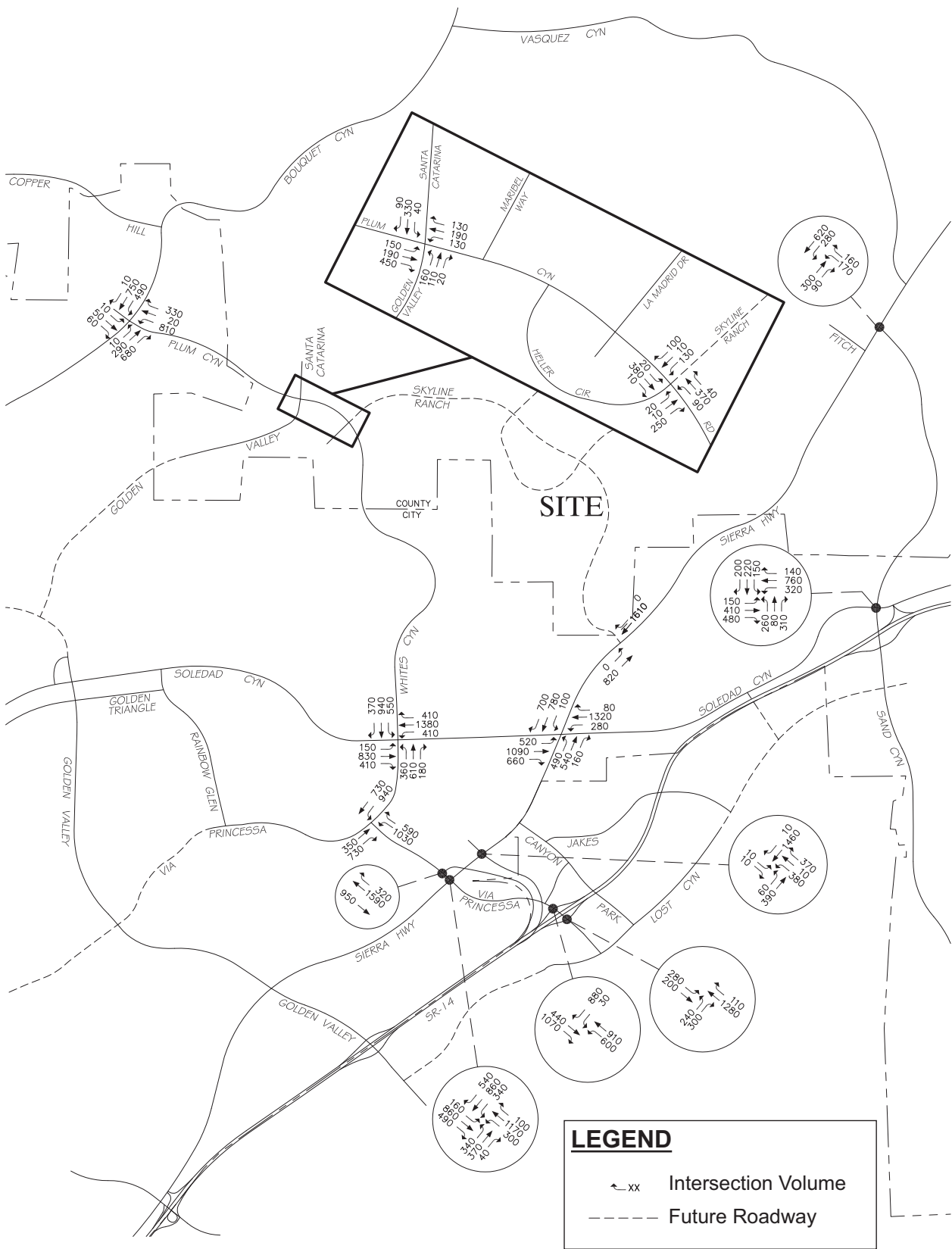
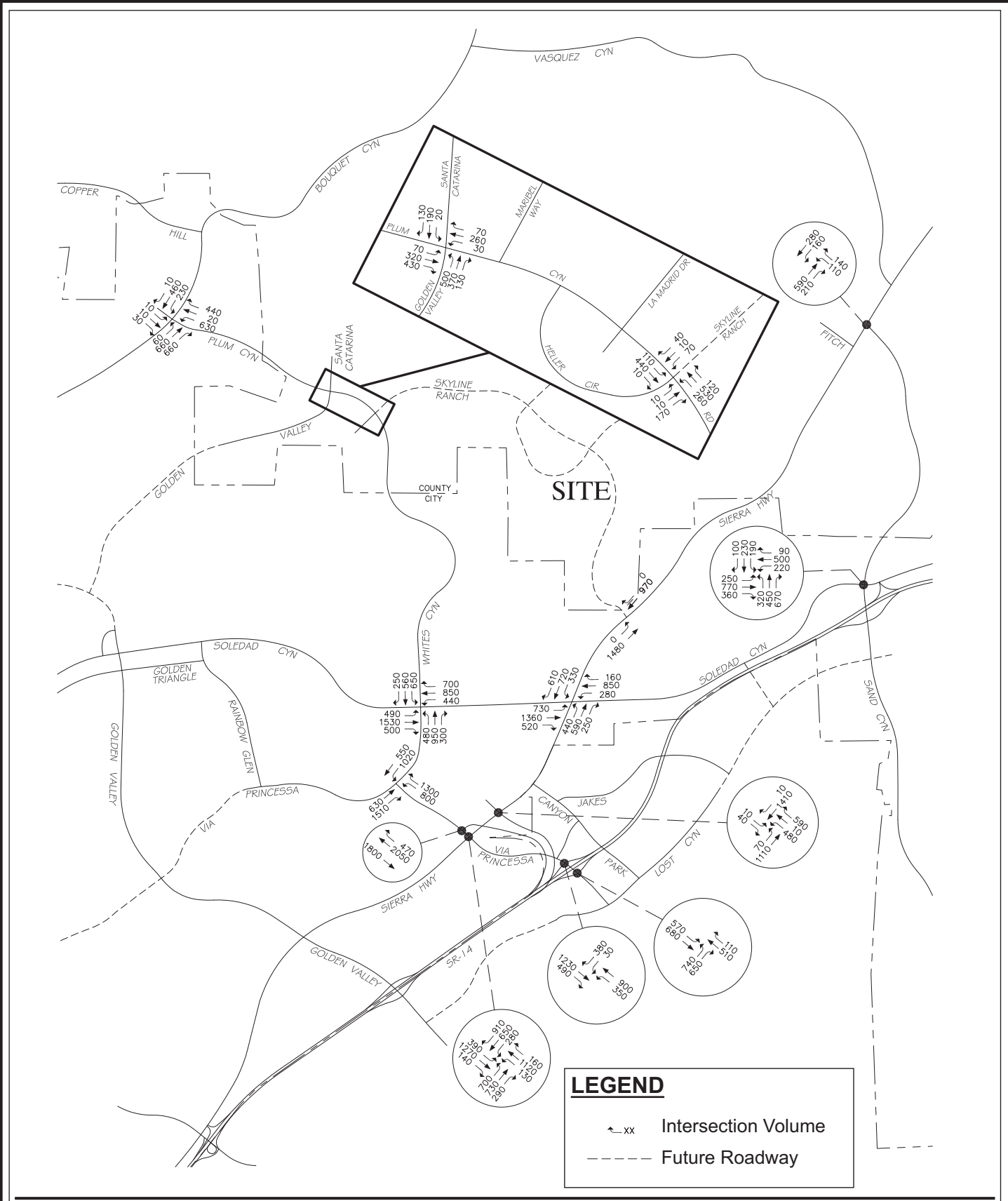


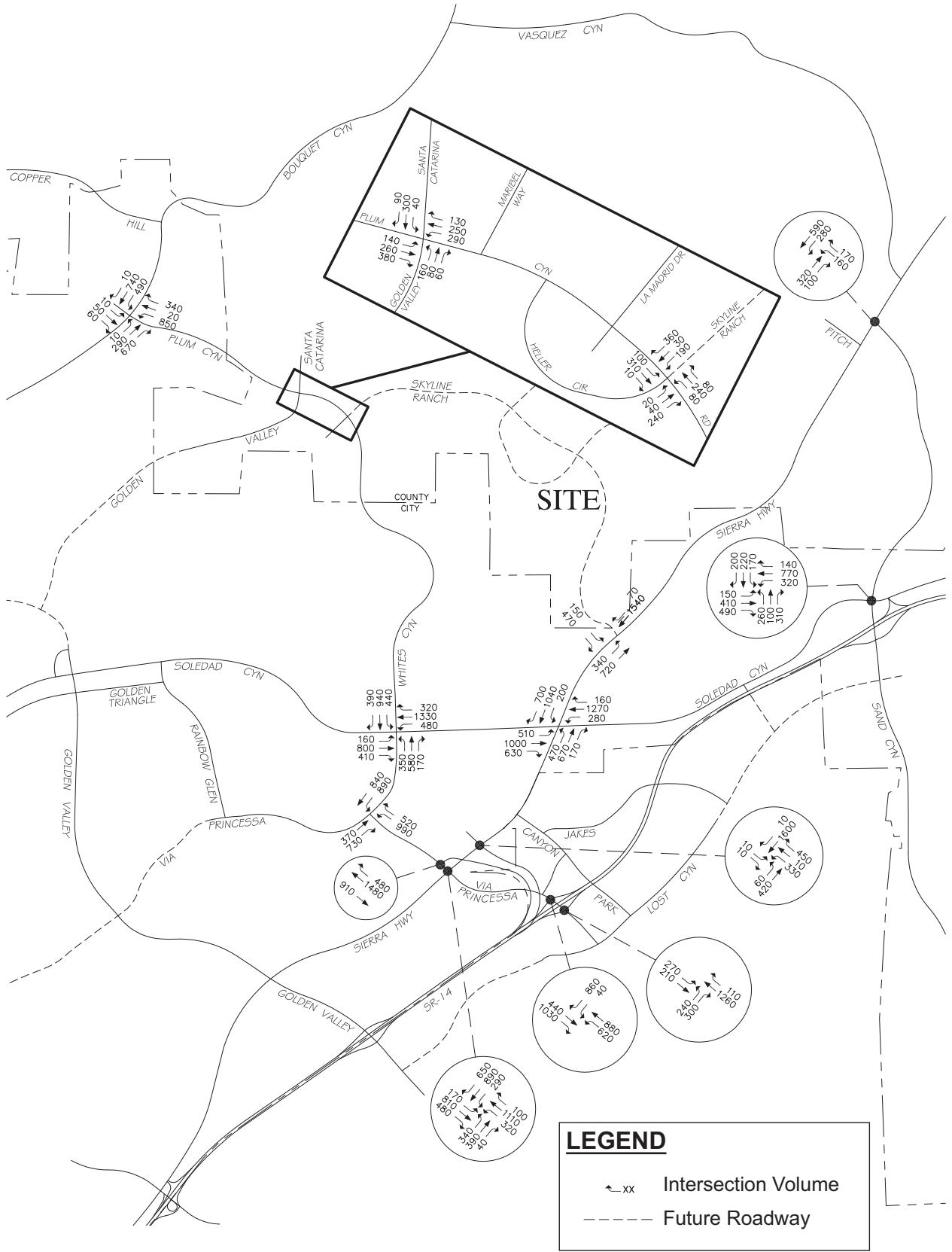
Figure 4.F-10
A.M. Peak Hour Intersection Volumes
(Cumulative Without Project)




 Not to scale

Figure 4.F-11
 P.M. Peak Hour Intersection Volumes
 (Cumulative Without Project)

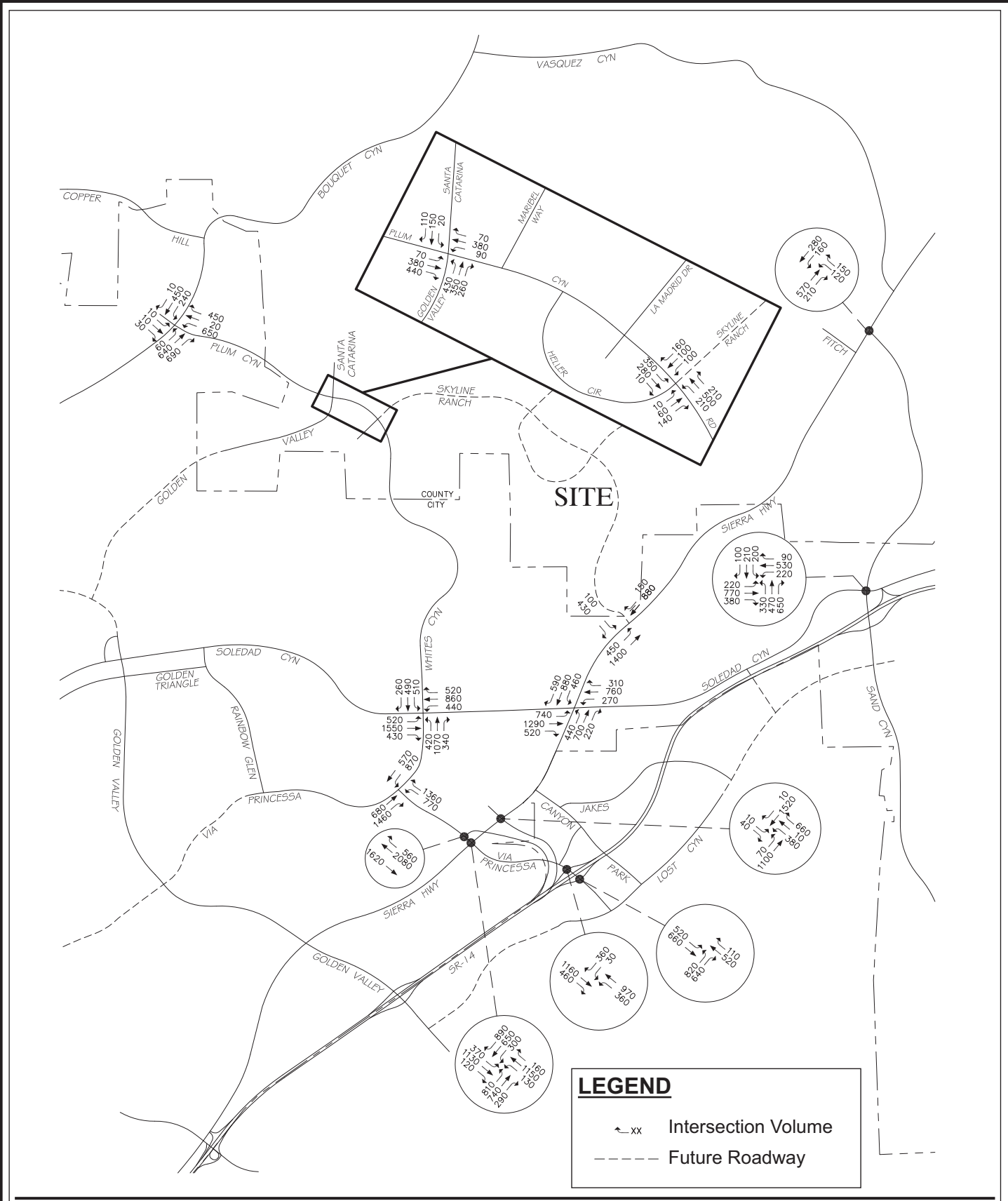
Source: Austin-Foust Associates, Inc., 2008



Not to scale

Source: Austin-Foust Associates, Inc., 2008

Figure 4.F-12
A.M. Peak Hour Intersection Volumes
(Project Plus Cumulative)



Not to scale

Source: Austin-Foust Associates, Inc., 2008

Figure 4.F-13
P.M. Peak Hour Intersection Volumes
(Project Plus Cumulative)

Table 4.F-5

**ICU and LOS Summary for County Intersections
Existing Plus 2017 Ambient Conditions (Without and With the Project)**

Intersection ^a	Existing + Ambient				Existing + Ambient + Project				Increase	
	A.M.		P.M.		A.M.		P.M.		A.M.	P.M.
Highway 14 NB Ramps at Via Princessa ^b	0.61	B	0.95	E	0.61	B	0.95	E	0.00	0.00
Highway 14 SB Ramps at Via Princessa ^b	0.76	C	0.69	B	0.77	C	0.69	B	0.01	0.00
Golden Valley Road at Plum Canyon Road	0.68	B	0.50	A	0.70	B	0.53	A	0.02	0.03
Plum Canyon Road at Skyline Ranch Road/Heller Circle (South)	0.37	A	0.43	A	0.44	A	0.54	A	0.07	0.11
Sierra Highway at Sand Canyon Road	0.59	A	0.69	B	0.60	A	0.69	B	0.01	0.00

^a Only intersections located within the County are shown here since the City does not consider this scenario when determining the significance of project impacts.

^b Joint jurisdiction with Caltrans.

Level of service ranges:

- 0.00–0.60 A
- 0.61–0.70 B
- 0.71–0.80 C
- 0.81–0.90 D
- 0.91–1.00 E
- Above 1.00 F.

Source: Austin-Foust Associates, October 2008.

SCVCTM/related projects) are included, significant impacts occur at the intersection of Sierra Highway at Soledad Canyon Road during the P.M. peak hour.

Therefore, a mitigation measure is recommended to reduce the project traffic impact at this intersection to a less-than-significant level (see Subsection 4, below).

(4) Analysis of Intersections along Plum Canyon Road

Due to the close proximity of one of the related projects (i.e., Tentative Tract [TT] 46018) to the project site, the County of Los Angeles requested that a separate traffic analysis be conducted for the intersections along Plum Canyon Road that would provide access to TT 46018 and shown on Figure 4.F-1. In addition, TT 46018 was approved by the County, which specified the design of these intersections along Plum Canyon Road.

Table 4.F-7, ICU and LOS Summary—Existing Plus 2017 Ambient Conditions Plus TT 46018 Conditions (Without and With the Project), on page 4.F-33 compares “existing plus ambient growth plus TT 46018” conditions without and with the proposed project. The intersection lane geometry utilized for the ICU calculations was obtained from the conditions of

Table 4.F-6

**ICU and LOS Summary for City Intersections
Cumulative Conditions
(Without and With the Project)**

Intersections ^a	Cumulative Conditions Without Project				Cumulative Conditions With Project				Increase	
	A.M.		P.M.		A.M.		P.M.		A.M.	P.M.
Sand Canyon Road at Soledad Canyon Road	0.72	C	0.82	D	0.73	C	0.83	D	0.01	0.01
Sierra Highway at Via Princessa	0.63	B	0.77	C	0.63	B	0.80	C	0.00	0.03
Whites Canyon Road at Via Princessa	0.76	C	0.80	C	0.74	C	0.76	C	-0.02	-0.04
Whites Canyon Road at Soledad Canyon Rd.	0.85	D	1.08	F	0.84	D	1.07	F	-0.01	-0.01
Bouquet Canyon Road at Plum Canyon Road	0.84	D	0.64	B	0.83	D	0.66	B	-0.01	0.02
Sierra Highway at Soledad Canyon Road	0.95	E	0.93	E	0.95	E	1.01	F	0.00	0.08*
Sierra Highway at Highway 14 NB Off Ramp ^b	0.53	A	0.56	A	0.55	A	0.55	A	0.02	-0.01
Sierra Highway at Skyline Ranch Road	—	—	—	—	0.84	D	0.71	C	—	—

^a Only intersections located within the City are shown here since the County does not consider this scenario when determining the significance of project impacts.

^b Joint jurisdiction with Caltrans.

* Significant Project Impact.

Level of Service Ranges:

- 0.00–0.60 A
- 0.61–0.70 B
- 0.71–0.80 C
- 0.81–0.90 D
- 0.91–1.00 E
- Above 1.00 F.

Source: Austin-Foust Associates, October 2008.

approval for TT 46018. The table shows that the addition of project traffic would result in a significant impact at the intersection of Plum Canyon Road with Skyline Ranch Road/Heller Circle(South), which would also function as an access point for the proposed project. Therefore, a mitigation measure is recommended to reduce the project traffic impact at this intersection to a less-than-significant level (see Subsection 4, below).

(5) Impacts on State Highways

As mentioned above, Highway 14 would provide regional transportation opportunities for residents of the project site, and the Soledad Canyon Road and Sand Canyon Road interchanges would be the primary access points to Highway 14. Under current conditions, the segments of Highway 14 in the project area are operating at acceptable levels of service.

Table 4.F-7

ICU and LOS Summary
Existing Plus 2017 Ambient Conditions Plus TT 46018 Conditions
(Without and With the Project)

Intersections	Existing + Ambient + TT 46018		Existing + Ambient + TT 46018 + Project		Increase					
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.				
Golden Valley Road at Plum Canyon Road	0.74	C	0.64	B	0.75	C	0.66	B	0.01	0.02
Plum Canyon Road at Skyline Ranch/Heller Circle (South)	0.54	A	0.76	C	0.57	A	0.88	D	0.03	0.12*
Maribel Way at Plum Canyon Road	0.49	A	0.53	A	0.50	A	0.55	A	0.01	0.02
Heller Circle (North) at Plum Canyon Road	0.55	A	0.59	A	0.57	A	0.62	B	0.02	0.03
La Madrid Drive at Plum Canyon Road	0.56	A	0.77	C	0.58	A	0.78	C	0.02	0.01

* *Significant Project Impact.*

Level of Service Ranges: 0.00–0.60 A
 0.61–0.70 B
 0.71–0.80 C
 0.81–0.90 D
 0.91–1.00 E
 Above 1.00 F.

Source: Austin-Foust Associates, October 2008.

Table 4.F-8, Project Volumes on State Highways, on page 4.F-34 summarizes the volume of project traffic forecast to use Highway 14.

Table 4.F-9, SR-14 Mainline Freeway Analysis, on page 4.F-35, evaluates existing and forecast traffic volumes, with and without the proposed project, based on the existing freeway lanes and on two sets of planned improvements (i.e., Short Range Plan and Long Range Plan) outlined in the North County Combined Highway Corridors Study, a report recently published by the Metro.³ As shown in Table 4.F-9, the proposed project would not result in a significant

³ *Subsequent to the publication of the final North County Combined Highway Corridors Study, Metro decided that reversible HOV lanes identified as part of the Short Range Plan and Long Range Plan were not preferable and instead chose to implement a second HOV lane in each direction. The North County Combined Highway Corridors Study states that to fund the Short Range Plan, North County Cities and Caltrans are seeking Metro Call for Projects funding. The report also states that the North County Cities are simultaneously asking the U.S. Congress for specific inclusion of Highway 14 as a recipient of transportation demonstration funding under the reauthorization of Transportation Equity Act for the 21st Century (TEA-21), and that the North County Cities have agreed to work together collaboratively through the North County Transportation Coalition, the Golden Gateway Coalition, or a Joint Powers Agency to pursue funding for project development, design and construction.*

A Project Study Report/Project Development Support (PSR/PDS) has been prepared by Metro to address the initial implementation target of the corridor, which is the elimination of lane drops in the northerly segments of (Footnote continued on next page)

Table 4.F-8
Project Volumes on State Highways

Location	A.M. Peak Hour	P.M. Peak Hour
SR-14 Interchange at Sand Canyon Road		
Northbound On-Ramp	15	11
Southbound Off-Ramp	7	22
SR-14 Interchange at Sierra Highway		
Northbound Off-Ramp	30	97
Southbound On-Ramp	82	50
SR-14 Mainline Volumes		
North of Sand Canyon Road		
Northbound	15	11
Southbound	7	22
South of Sierra Highway		
Northbound	30	96
Southbound	82	50
North of I-5		
Northbound	20	84
Southbound	90	35

Source: Austin-Foust Associates, October 2008.

impact on Highway 14, since the V/C increase with the project compared to without the project is less than 0.02 with existing lanes and with lanes identified in the Short Range or Long Range Plan. However, as also indicated on Table 4.F-9, deficiencies are projected to occur on Highway 14 due to cumulative conditions both with and without the project traffic even with implementation of the lanes identified in the Short Range Plan. Significant cumulative impacts would occur on Highway 14 between the Sand Canyon Road to south of the Sierra Highway interchange during the A.M. peak hour (southbound) and P.M. peak hour (northbound). No deficiencies were identified with implementation of lanes identified under the Long Range Plan. However, due to the speculative nature of the timing of implementation and availability of funding to implement the Short Range or the Long Range Plan, the reduction of cumulative impacts to less than significant levels cannot be guaranteed, and as such, cumulative impacts to Highway 14 between Sand Canyon Road and Sierra Highway are considered significant and unavoidable.

Highway 14. Funding is currently being requested to prepare the Project Approval and Environmental Documentation (PAED).

Table 4.F-9

SR-14 Mainline Freeway Analysis

Period/ Direction Location	Project Scenario	Existing Conditions			2015 Conditions						
		Existing Volume	Existing Lanes	V/C	2015 Volume	Existing Lanes	V/C	Short-Range Plan ¹ Lanes	V/C	Long-Range Plan ² Lanes	V/C
A.M. Peak Hour—Northbound											
SR-14 north of Sand Canyon	Without Project	1,114	2MF + 1HOV	0.19	2,773	2MF + 1HOV	0.46	3MF + 1HOV	0.35	3MF + 2HOV	0.28
	With Project	1,129		0.19	2,788		0.46		0.35		0.28
SR-14 south of Sierra Highway	Without Project	3,135	3MF + 1HOV	0.39	3,387	3MF + 1HOV	0.42	3MF+ 1HOV	0.42	4MF+ 2HOV	0.28
	With Project	3,217		0.40	3,469		0.43		0.43		0.29
SR-14 north of I-5	Without Project	3,564	5MF + 1HOV	0.30	4,179	5MF + 1HOV	0.35	5MF+ 1HOV	0.35	5MF ++ 2HOV 1T	0.27
	With Project	3,584		0.30	4,199		0.35		0.35		0.28
A.M. Peak Hour—Southbound											
SR-14 north of Sand Canyon	Without Project	5,776	2MF + 1HOV	0.96	8,280	2MF + 1HOV	1.38	3MF + 1HOV	1.04	3MF + 2HOV	0.83
	With Project	5,783		0.96	8,270		1.38		1.04		0.83
SR-14 south of Sierra Highway	Without Project	7,363	3MF + 1HOV	0.92	10,538	3MF + 1HOV	1.32	3MF + 1HOV	1.32	4MF + 2HOV	0.88
	With Project	7,393		0.92	10,568		1.32		1.32		0.88
SR-14 north of I-5	Without Project	8,371	5MF + 1HOV	0.70	10,187	5MF + 1HOV	0.85	5MF + 1HOV	0.85	5MF + 2HOV + 1T	0.67
	With Project	8,461		0.71	10,277		0.86		0.86		0.68
P.M. Peak Hour—Northbound											
SR-14 north of Sand Canyon	Without Project	5,349	2MF + 1HOV	0.89	8,123	2MF + 1HOV	1.35	3MF + 1HOV	1.02	3MF + 2HOV	0.81
	With Project	5,360		0.89	8,134		1.36		1.02		0.81

Table 4.F-9 (Continued)

SR-14 Mainline Freeway Analysis

Period/ Direction Location	Project Scenario	Existing Conditions			2015 Conditions						
		Existing Volume	Existing Lanes	V/C	2015 Volume	Existing Lanes	V/C	Short-Range Plan ¹ Lanes	V/C	Long-Range Plan ² Lanes	V/C
SR-14 south of Sierra Highway	Without Project	7,415	3MF + 1HOV	0.93	10,581	3MF + 1HOV	1.32	3MF + 1HOV	1.32	4MF + 2HOV	0.88
	With Project	7,511		0.94	10,677		1.33		1.33		0.89
SR-14 north of I-5	Without Project	8,431	5MF + 1HOV	0.70	10,093	5MF + 1HOV	0.84	5MF + 1HOV	0.84	5MF + 2HOV + 1T	0.66
	With Project	8,515		0.71	10,177		0.85		0.85		0.67
P.M. Peak Hour—Southbound											
SR-14 north of Sand Canyon	Without Project	2,643	2MF + 1HOV	0.44	3,995	2MF + 1HOV	0.67	3MF+ 1HOV	0.50	3MF+ 2HOV	0.40
	With Project	2,665		0.44	4,017		0.67		0.50		0.40
SR-14 south of Sierra Highway	Without Project	3,623	3MF + 1HOV	0.45	5,086	3MF + 1HOV	0.64	3MF+ 1HOV	0.64	4MF+ 2HOV	0.42
	With Project	3,673		0.46	5,136		0.64		0.64		0.43
SR-14 north of I-5	Without Project	4,119	5MF + 1HOV	0.34	5,509	5MF + 1HOV	0.46	5MF+ 1HOV	0.46	5MF+ 2HOV + 1T	0.36
	With Project	4,154		0.35	5,544		0.46		0.46		0.36

Deficient locations are shown in **bold**.

¹ Metro North County Corridors Plan, Short-Range Plan.

² Metro North County Corridors Plan, Long-Range Plan (LPS) with reversible HOV lanes replaced by a second HOV lane in each direction (per current Metro plan).

MF = Mixed-Flow Lane

HOV = High-Occupancy-Vehicle (Carpool) Lane

T = Truck Lane

Per-Lane Capacities:

Mix-flow HOV lanes: 2,000 vehicles/hour.

Truck lanes: 1,200 trucks/hour.

Existing Count Source: Caltrans; 2017 Volume Source: SCVCTM 4.1 Interim Year.

(6) CMP Analysis

The proposed project meets the CMP analysis criteria identified earlier in this section at the intersection of Sierra Highway and Soledad Canyon Road.

As previously identified, the CMP intersections nearest to the project site are the intersection of Sierra Highway at Sand Canyon Road and the intersection of Sierra Highway at Soledad Canyon Road. The proposed project is not anticipated to add 50 or more peak-hour trips to the intersection of Sierra Highway at Sand Canyon Road (15 P.M. trips) but is expected to add more than 50 trips to the intersection of Sierra Highway at Soledad Canyon Road (455 P.M. trips). An impact analysis of this intersection has been prepared according to CMP guidelines. Table 4.F-10, ICU and LOS Summary for the CMP Intersection of Sierra Highway at Soledad Canyon Road, on page 4.F-38 summarizes the ICU and LOS for this intersection and shows that the intersection is forecasted to exceed LOS F prior to the addition of project traffic and that the project would cause a significant impact based on the CMP guidelines if mitigation measures were not implemented.

The nearest mainline freeway CMP monitoring locations are the following:

- SR-14 south of the Angeles Forest Highway;
- SR-14 north of I-5;
- I-5 north of SR-14.

The proposed project is not forecast to add 150 or more trips in either direction to these three locations, as demonstrated by the volumes presented in Table 4.F-8.

Another component of the CMP transportation impact analysis is a review of transit impacts, described below.

(7) Transit Analysis

The project site is served by Santa Clarita Transit Routes 1, 2 and 5, which provide service between Sierra Highway and the Transit Center located in the Valencia Town Center. Build out of the proposed project is forecasted to generate approximately 11,000 average daily trips (ADTs). The conversion to person trips is accomplished by using Metro's guidelines (multiplying the ADT by an occupancy factor of 1.4), which results in a total of 15,400 average daily person trips. Applying Metro's factor for converting total person trips to transit trips (0.035) results in approximately 540 total daily transit trips and approximately 60 peak-hour

Table 4.F-10

**ICU and LOS Summary for
the CMP Intersection of Sierra Highway at Soledad Canyon Road**

Scenario	A.M. Peak Hour		P.M. Peak Hour	
	ICU	LOS	ICU	LOS
Future 2017 No Project	1.045	F	1.012	F
Future 2017 With Project (without mitigation)	1.063	F	1.104	F
Future 2017 With Project (with mitigation)	1.063	F	1.025	F
Net Change Compared to No Project (with mitigation)	0.018		0.013	

^a The improvements identified as mitigation measures (see Subsection 4, below) are consistent with the General Plan designation for Sierra Highway and Soledad Canyon Road, both of which are designated as six lane roadways.

Level of Service Ranges:

- 0.00–0.60 A
- 0.61–0.70 B
- 0.71–0.80 C
- 0.81–0.90 D
- 0.91–1.00 E
- Above 1.00 F.

Source: Austin-Foust Associates, October 2008.

transit trips. Although Route 5 is recommended for deletion, Routes 1 and 2 would provide service along Whites Canyon Road/Plum Canyon Road, as indicated in the Transportation Development Plan. In addition, with development of the proposed project, SCT would be able to utilize Skyline Ranch Road between Plum Canyon Road and Sierra Highway as part of future bus route changes. Additional ridership anticipated by the proposed project is consistent with future residential growth patterns anticipated by SCT. Therefore, this volume of public transit ridership is not expected to have a significant impact on the public transit system.

Regarding delay in transit service as a result of additional traffic generated by the proposed project, with implementation of mitigation measures, impacts on the study area intersections from project traffic and cumulative traffic would be reduced to a less-than-significant level. Therefore, no traffic related impacts on transit would occur.

(8) Site Access

(a) Whites Canyon Road Extension (Skyline Ranch Road)

The project would construct a network of collector roads to provide local access to land uses associated with the proposed project. Development of the project as proposed would also construct an important regional roadway improvement long planned by the County to extend Whites Canyon Road. The Los Angeles County Highway Plan currently shows an extension of Whites Canyon Road being routed through the property's proposed northern open space area

with a connection to Vasquez Canyon Road. The Plan also shows a future roadway segment for Cruzan Mesa Road between Whites Canyon Road and Sierra Highway. These future roadway segments, as currently shown on the Highway Plan, have been recommended for elimination by the County due to the amount of grading that would be required and the impact the proposed alignments would have on sensitive biological resource areas. Consequently, the County of Los Angeles Draft Highway Plan shows the realignment of Whites Canyon Road connecting with Sierra Highway instead of Vasquez Canyon Road with Cruzan Mesa Road eliminated as part of this change. Under the proposed project, and consistent with the County Department of Public Works alignment shown on the County's Draft Highway Plan, Whites Canyon Road would be extended from Plum Canyon Road on the west (through Tract Map No. 46018) to the southeast and through the project site as Skyline Ranch Road, ultimately connecting to Sierra Highway north of its existing intersection with Adon Avenue.⁴

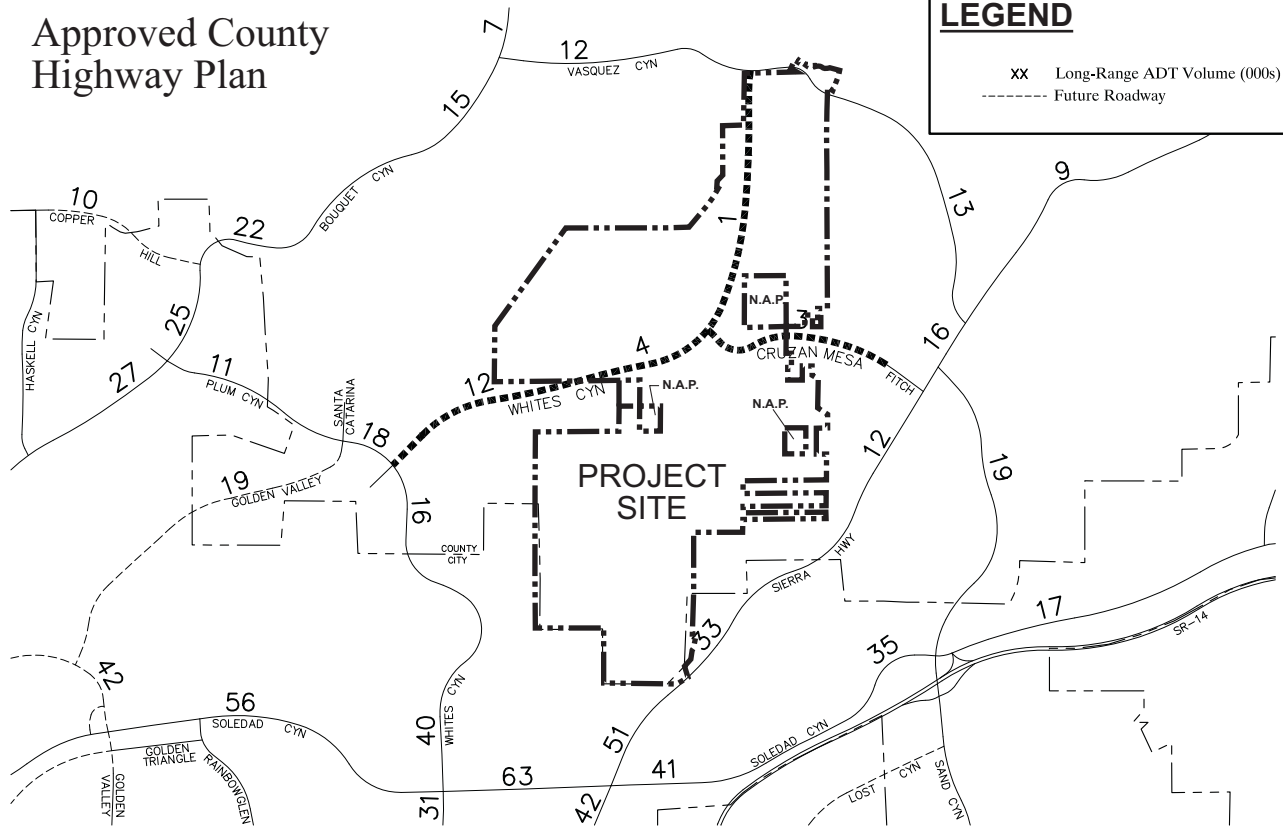
This alignment was conditionally approved by the Los Angeles County Department of Public Works on July 19, 2006 and is recommended as Secondary Highway (with an 80-foot standard right-of-way width and two lanes in each direction). Therefore, it is anticipated that the County would amend its Highway Plan in favor of the project alignment as part of the General Plan Update Process. Figure 4.F-14, Long-Range Average Daily Traffic Volumes (In Thousands) — Current County Plan and Proposed Project Alignment, on page 4.F-40 illustrates the location of these roadways according to the current Highway Plan and shows the proposed realignment and deletion, as shown on the Draft County Highway Plan for comparison.

Also included in Figure 4.F-14 are long-range ADT volumes for the current plan and the proposed project alignment. The ADT volumes represent build out conditions for the Santa Clarita Valley as calculated by the SCVCTM.

The current Highway Plan results in relatively low traffic volumes on the future segments of Whites Canyon Road and Cruzan Mesa Road. With the exception of Whites Canyon Road nearest to Plum Canyon Road, these roadways have been estimated to carry between 1,000 and 4,000 ADTs. The effect of changing the configuration of these roadways is illustrated in the proposed project alignment, which shows little to no change on the surrounding roadway network since most segments were predicted to change by approximately 1,000 ADTs or less. The roadways that would exhibit the largest change in traffic volumes are Whites Canyon Road and Soledad Canyon Road. The segment of Whites Canyon Road north of Soledad Canyon Road would decrease by approximately 4,000 ADTs (from 40,000 ADTs to 36,000 ADTs) and the corresponding segment of Sierra Highway north of Soledad Canyon Road shows no net increase in volume due to the revised Plan. The segment of Vasquez Canyon east of Bouquet

⁴ *The Draft Highway Plan is a part of the County of Los Angeles Draft General Plan (September 2008) and is available for public review at: <http://planning.lacounty.gov/generalplan>.*

Approved County Highway Plan



Draft County Highway Plan Update

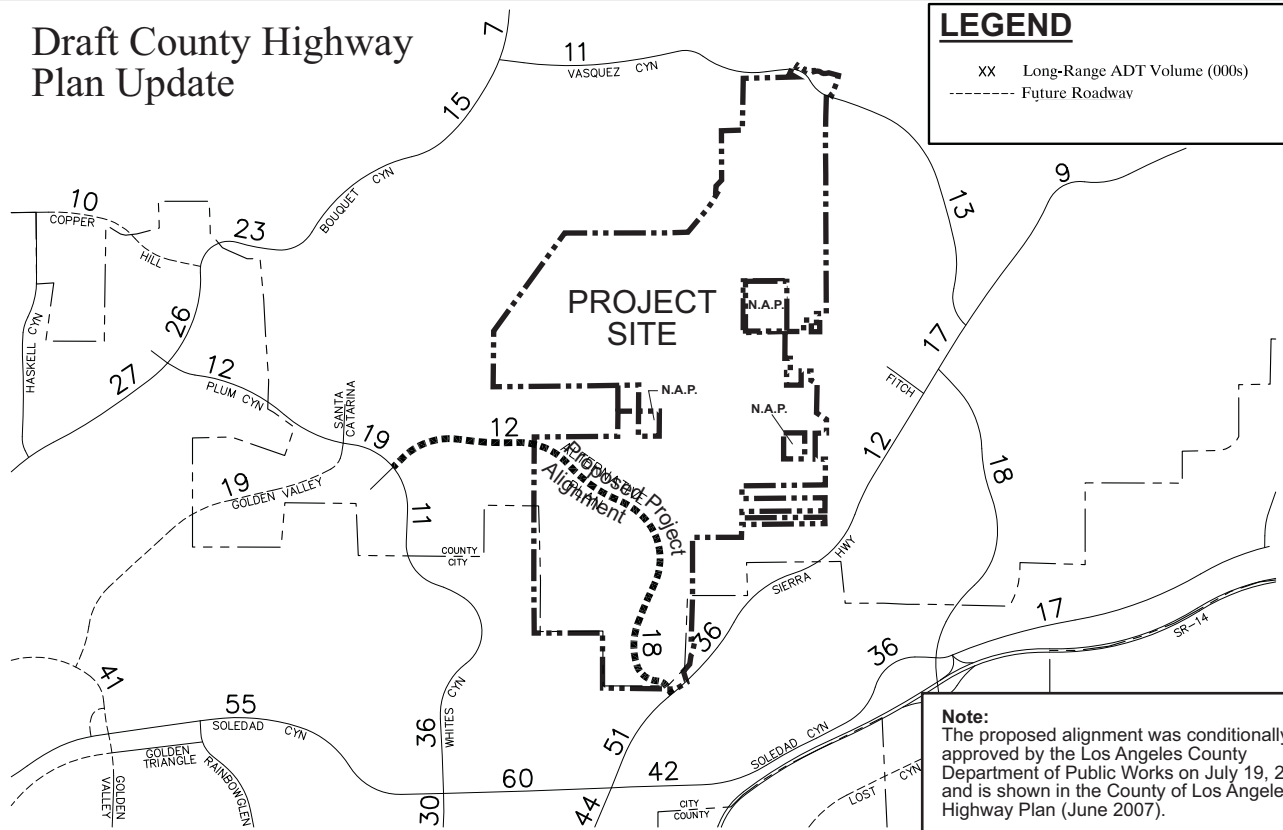


Figure 4.F-14
 Long-Range Average Daily Traffic Volumes (In Thousands)
 Current County Plan and
 Proposed Project Alignment

Source: Austin-Foust Associates, Inc., 2007; PCR Services Corporation, 2008.

Canyon Road would decrease by approximately 1,000 ADTs (from 12,000 ADTs to 11,000 ADTs), and the segment west of Sierra Highway would remain the same at 13,000 ADTs. Table 4.F-11, Comparison of the Current Highway Plan and Draft Highway Plan ADTs, on page 4.F-42 presents a summary of these changes in ADTs as a result of the Draft Highway Plan.

Under the proposed project alignment, Whites Canyon Road is forecasted to carry between 12,000 and 18,000 ADTs. Of this volume, approximately 5,000 to 6,000 ADTs are “through” trips that would use the roadway as a connection between Sierra Highway and Plum Canyon Road. This volume is higher than the volumes seen on the current highway plan that would use Whites Canyon Road and Cruzan Mesa Road. The remainder of traffic with the proposed project alignment would be generated locally and use that roadway as access to the existing roadway system.

In comparing the current highway plan to the proposed project alignment, the project alignment would result in reduced volumes on the surrounding roadway system, in some locations and increases in others, with changes ranging from -5,000 to 3,000 ADTs, as shown in Table 4.F-11. However, the project alignment would carry a higher volume of “through” traffic than the current plan. Overall, the change in alignment would result in little or no change in the surrounding roadway network, as some road segments would experience reduced traffic volumes and other segments would experience increased traffic volumes.

(b) Internal Circulation

Access to the site is proposed via an extension of Whites Canyon Road (as Skyline Ranch Road) between Plum Canyon Road and Sierra Highway (see discussion above on the Draft Highway Plan depiction of Whites Canyon Road extension). The main internal circulation would be provided via a circular roadway that intersects Skyline Ranch Road at two locations (referred to here as Main Street North and Main Street South), as shown in Figure 4.F-15, Peak Hour Intersection Volumes—Internal Project Intersections, on page 4.F-43. The Main Street North intersection is located approximately one mile south of Plum Canyon Road, and the Main Street South intersection is located approximately 1,800 feet (0.34 miles) south of Main Street North and approximately 0.9 mile north of Sierra Highway. The Main Street North intersection is located adjacent to the proposed 12-acre park site, and the Main Street South intersection is located adjacent to the proposed elementary school site. A third access point along Skyline Ranch Road is proposed midway between Main Street South and Sierra Highway (i.e., S-A Street).

Figure 4.F-15 also illustrates the peak-hour turning movement volumes for the two Main Street intersections and the S-A Street intersection. In addition, through traffic (both diverted existing traffic and future cumulative traffic) was included as part of the Skyline Ranch Road volumes.

Table 4.F-11

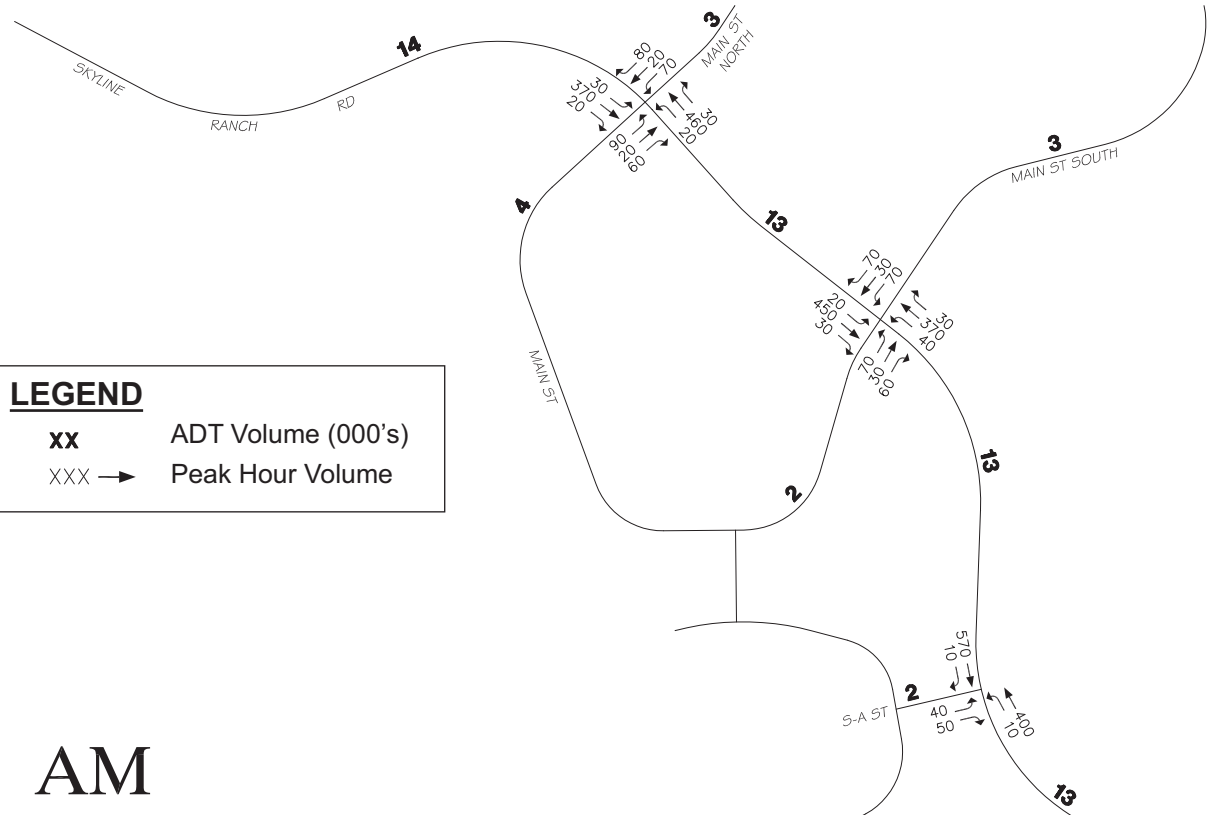
Comparison of the Current Highway Plan and Draft Highway Plan ADTs

Roadway Segment	From	To	Current Highway Plan ADTs	Alternate Highway Plan ADTs	Change in ADTs
Whites Canyon Road	South of Soledad Canyon Road		31,000	30,000	-1,000
Whites Canyon Road	Soledad Canyon Road	City/County Line	40,000	36,000	-4,000
Whites Canyon Road	City/County Line	Extension Alignment	16,000	11,000	-5,000
Plum Canyon Road	Extension Alignment	Santa Catarina Road	18,000	19,000	1,000
Plum Canyon Road	Santa Catarina Road	Bouquet Canyon Road	11,000	12,000	1,000
Sierra Highway	South of Soledad Canyon Road		42,000	44,000	2,000
Sierra Highway	North of Soledad Canyon Road		51,000	51,000	0
Sierra Highway	South of the City/County Line		33,000	36,000	3,000
Sierra Highway	City/County Line	Fitch Avenue	12,000	12,000	0
Sierra Highway	Fitch Avenue	Vasquez Canyon Road	16,000	17,000	1,000
Sierra Highway	North of Vasquez Canyon Road		9,000	9,000	0
Sand Canyon Road	Soledad Canyon Road	Sierra Highway	19,000	18,000	-1,000
Soledad Canyon Road	Rainbow Glen Drive	Whites Canyon Road	56,000	55,000	-1,000
Soledad Canyon Road	Whites Canyon Road	Sierra Highway	63,000	60,000	-3,000
Soledad Canyon Road	East of Sierra Highway		41,000	42,000	1,000
Soledad Canyon Road	West of Sand Canyon Road		35,000	36,000	1,000
Soledad Canyon Road	East of Sand Canyon Road		17,000	17,000	0
Vasquez Canyon Road	East of Bouquet Canyon Road		12,000	11,000	-1,000
Vasquez Canyon Road	West of Sierra Highway		13,000	13,000	0
Bouquet Canyon Road	South of Plum Canyon Road		27,000	27,000	0
Bouquet Canyon Road	Plum Canyon Road	Copper Hill Drive	25,000	26,000	1,000
Bouquet Canyon Road	North of Copper Hill Drive		22,000	23,000	1,000
Bouquet Canyon Road	South of Vasquez Canyon Road		15,000	15,000	0
Bouquet Canyon Road	North of Vasquez Canyon Road		7,000	7,000	0

Source: Austin-Foust Associates, October 2008.

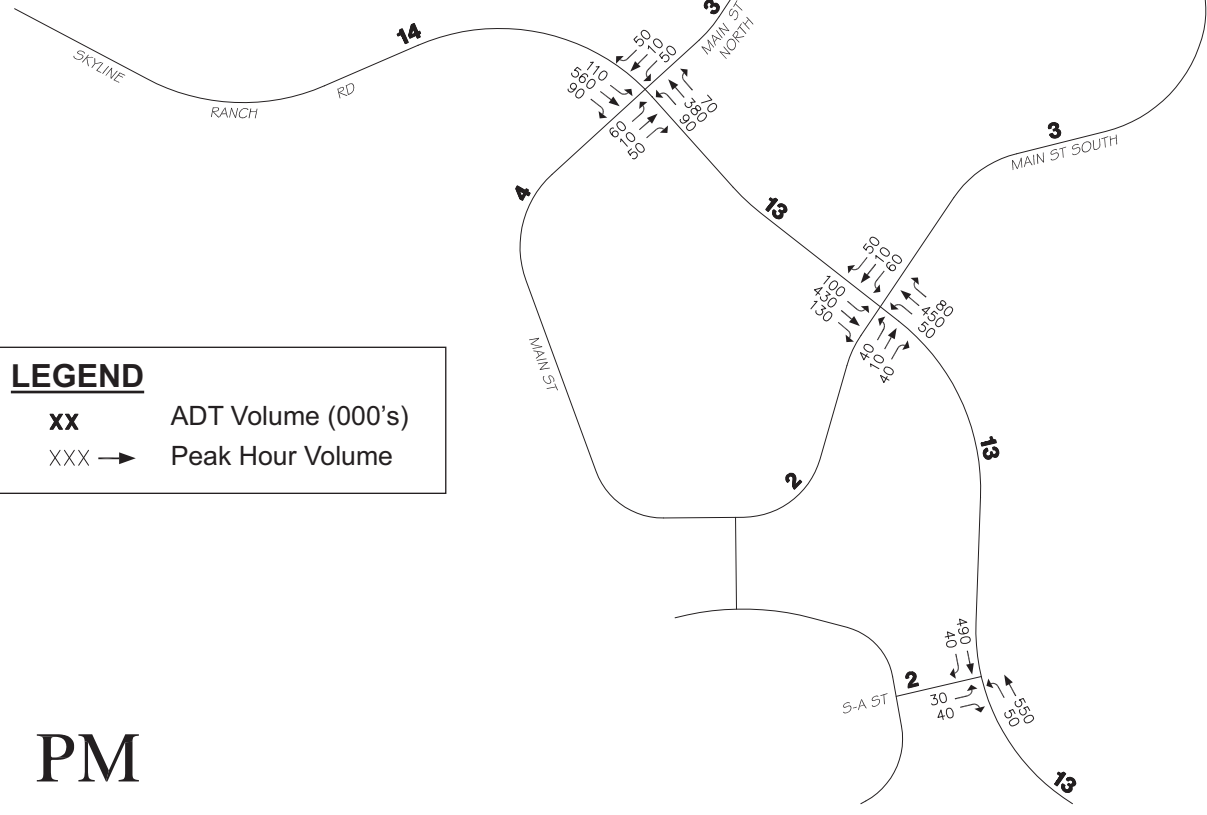
A design currently being proposed for the two locations where Main Street intersects Skyline Ranch Road consists of roundabouts instead of signalized intersections. The roundabouts would feature a two-lane circulating roadway with two-lane approaches on Skyline Ranch Road and single lane approaches on Main Street. An evaluation of the roundabout concept was conducted for the project, and Table 4.F-12, LOS Analysis for the Roundabout Configuration, on page 4.F-44 presents the resulting delay and level of service information for Main Street North and Main Street South intersections with Skyline Ranch Road. Each intersection is forecasted to operate at LOS A for both the A.M. and P.M. peak hours.

As an alternative to the roundabout configuration, an analysis has been prepared for the two Main Street intersections based on a conventional intersection design. A traffic signal warrant has been evaluated based on forecasts of peak-hour traffic, for both peak-hour traffic and



LEGEND
 xx ADT Volume (000's)
 xxx → Peak Hour Volume

AM



LEGEND
 xx ADT Volume (000's)
 xxx → Peak Hour Volume

PM



Not to scale

Figure 4.F-15
 Peak Hour Intersection Volumes
 Internal Project Intersections

Table 4.F-12

LOS Analysis for the Roundabout Configuration

Location	A.M. Peak Hour		P.M. Peak Hour	
	Average Delay	LOS	Average Delay	LOS
Skyline Ranch Road at Main Street North	3.9	A	3.9	A
Skyline Ranch Road at Main Street South	3.8	A	4.6	A

Delay = Average Vehicle Delay (in seconds).

Calculations are based on “existing + ambient + project + cumulative” conditions.

Source: Austin-Foust Associates, October 2008.

for ADT traffic. The evaluation indicated that based on a conventional intersection design, the Main Street North and Main Street South intersection would warrant the installation of a traffic signal for forecasted A.M. and P.M. peak hour and ADT volumes. The S-A Street intersection does not meet the peak hour or ADT traffic signal warrant. Since the purpose of these intersections is to serve the project site only, County policy is for the project to be solely responsible for the design and installation of the traffic signals. Table 4.F-13, LOS Analysis for the Conventional Intersection Configuration, on page 4.F-45 presents the ICUs and the corresponding LOS for the two intersections using the signalized intersection design. Similar to the roundabout configuration, each intersection is forecasted to operate at LOS A for both the A.M. and P.M. peak hours.

Since the intersection of S-A Street and Skyline Ranch Road does not meet the warrant for the installation of a traffic signal, the intersection LOS was evaluated based on stop sign control for the side street as shown, based on average vehicle delay and corresponding LOS. The result of this evaluation is summarized in Table 4.F-14, LOS Analysis for the Stop Control Intersections, on page 4.F-46. As shown in Table 4.F-14, the side street is forecast to operate at LOS B and the left-turn lanes from Skyline Ranch Road onto S-A Street are forecast to operate at LOS A.

(9) Pedestrian Safety

Pedestrian access routes to the proposed elementary school onsite would be provided by fully improved streets with full-width sidewalks. Pedestrians crossing Skyline Ranch Road would be able to use the crosswalks or the traffic signal adjacent to the school at Skyline Ranch Road and Main Street South. The Sulphur Springs Union School District would also provide a plan for the safe arrival and departure of students in accordance with the “School Area

Table 4.F-13**LOS Analysis for the Conventional Intersection Configuration**

Location	A.M. Peak Hour		P.M. Peak Hour	
	ICU	LOS	ICU	LOS
Skyline Ranch Road at Main Street North	0.39	A	0.44	A
Skyline Ranch Road at Main Street South	0.38	A	0.44	A

Calculations are based on “existing + ambient + project + cumulative” conditions.

Source: Austin-Foust Associates, October 2008.

Pedestrian Safety” manual published by the California Department of Transportation, 1987 edition (CCR, Title 5, § 14010(e)).⁵ The Caltrans Pedestrian Safety Manual (also known as the Manual on Uniform Traffic Control Devices 2003, California Supplement, Part 7: Traffic Controls for School Areas, published by the Federal Highway Administration) outlines procedures to be followed in establishing school routes and crossings, including warning signs and other traffic control devices.

The plan would include all feasible measures to ensure a high level of pedestrian safety. These measures may include pedestrian signal lighting, school warning and speed limit signs, school crosswalks, pavement markings, passenger loading zones, and school bus loading zones. In addition, the Sulphur Springs Union School District would establish a “Suggested Route to School Plan,” which would map the suggested crossings to be used from each block in the school walking attendance area.⁶ Compliance with the Caltrans Pedestrian Safety manual would ensure that impacts related to pedestrian safety would be less than significant. In addition, and independent of the proposed project, a traffic study addressing the school site will be required by the County when a detailed site plan for the school is developed by the District.

4. MITIGATION MEASURES

The proposed project would be subject to payment of Bouquet Canyon and Eastside B&T District fees. These fees would be collected at the time of recordation of the final tentative tract

⁵ Diane Tennen, Assistant Superintendent, Business, Sulphur Springs School District, telephone conversation, March 7, 2005.

⁶ Similar to the plan for an adjacent school (Leona Cox Elementary School), the “Suggested Route to School Plan” would identify the best route from each of the students’ homes (within walking distance) to the school. The plan would identify marked crosswalks, stop signs, traffic signals, other traffic controls, and traffic. Crossing points would be located at these controls wherever possible, even though a longer walk may sometimes be necessary (Diane Tennen, Assistant Superintendent, Business, Sulphur Springs School District, facsimile of the “Suggested Route to School Plan” for Leona Cox Elementary School, March 8, 2005).

Table 4.F-14

LOS Analysis for the Stop Control Intersections

Location	A.M. Peak Hour		P.M. Peak Hour	
	Average Delay (seconds)	LOS	Average Delay (seconds)	LOS
S-A Street Approach at Skyline Ranch Road	11.3	B	10.9	B
Skyline Ranch Road Left-Turns on to S-A Street	8.6	A	8.6	A

Calculations are based on “existing + ambient + project + cumulative” conditions.

Source: Austin-Foust Associates, February 2008.

map. Each of the following mitigation measures would be funded and implemented through the use of the B&T District fees or through the provision of credited improvements, as part of the overall program for transportation improvements within the Santa Clarita Valley to support its build out unless otherwise noted.

a. County Intersections

4.F-1(a) *Plum Canyon Road at Skyline Ranch Road/Heller Circle (South):* Prior to issuance of a certificate of occupancy, the project shall redesign and construct the new east leg (Skyline Ranch Road) to include one left-turn lane, one shared left/through lane, and one right-turn lane; and restripe the existing west leg (Heller Circle South) to consist of one left-turn lane and one shared through/right-turn lane; and restripe the existing north leg (Plum Canyon Road) left-turn pocket to allow the left-turn movement. Implementation of improvements and fair share determination shall be coordinated with adjoining Tract 46018, since many of the stated improvements are conditions of approval for Tract 46018 and are required to be in place prior to occupancy of Tract 46018 or the proposed project.

4.F-1(b) *Golden Valley Road at Plum Canyon Road:* The project shall pay its fair share (53 percent) to restripe the northbound Golden Valley Road approach to provide a second left-turn lane, for a total of two northbound left-turn lanes, one northbound through lane, and one northbound right-turn lane. Timing of improvement shall be determined by the County based on Bridge and Thoroughfare (B&T) District priorities.

b. City Intersections

4.F-2(a) *Sierra Highway at Soledad Canyon Road:* The project shall pay its fair share (100 percent) to add a second southbound left-turn lane, for a total of five

approach lanes and reconfigure the approach lanes as two left-turn lanes, two through lanes, and one right turn lane, so as to mirror the northbound approach. This improvement may require the acquisition of additional right-of-way to widen the southbound approach of the north leg. Timing of improvement shall be determined by the City based on B&T District priorities.

- 4.F-2(b)** *Sierra Highway at Skyline Ranch Road: Prior to the issuance of the first building permit the project shall construct a new intersection for project access; provide one northbound left-turn lane, two northbound through lanes, two southbound through lanes, one eastbound left-turn lane, and two eastbound right-turn lanes; and install a traffic signal. The placement of the new west leg should be of sufficient distance from the Sierra Highway centerline to allow for the eventual addition of a third southbound through lane as identified in the City of Santa Clarita General Plan Circulation Element.*

c. State Highways

- 4.F-3** *In the event the State approves a Caltrans impact fee mitigation program prior to implementation of the proposed project, the applicant shall pay a fair share to fund programmed improvements to Highway 14 that would mitigate the project's contribution to cumulative impacts on the highway. Such improvements may include the addition of HOV lanes, truck lanes, and additional mixed flow lanes to the segments of Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange, that have been identified in the Short Range Plan outlined in the North County Combined Highway Corridors Study.*

5. CUMULATIVE PROJECT IMPACTS

For intersections under County jurisdiction, the project's traffic impacts are evaluated under the following scenarios: "Existing + Ambient + Project" conditions (Table 4.F-5) and "Existing + Ambient + Project + Cumulative" conditions (Table 4.F-15, ICU and LOS Summary—Existing Plus Ambient Plus Project Plus Cumulative (Related Project) Conditions, on page 4.F-48. This methodology is also used to determine cumulative traffic impacts on intersections within the County of Los Angeles.

For intersections within the City of Santa Clarita, the project's traffic impacts are evaluated under the following scenarios: "Cumulative Conditions" and "Cumulative Conditions With Project," as presented previously on Table 4.F-6. Because related projects (i.e., cumulative projects) have already been evaluated for City intersections, cumulative traffic impacts are the same as the project's traffic impacts that have been identified. As shown in Table 4.F-15 and in

Table 4.F-15

**ICU and LOS Summary—Existing Plus Ambient Plus
Project Plus Cumulative (Related Project) Conditions**

Intersections ^a	Existing + Ambient				Existing + Ambient + Project + Cumulative				Increase	
	A.M.		P.M.		A.M.		P.M.		A.M.	P.M.
Highway 14 NB Ramps at Via Princessa ^b	0.61	B	0.95	E	0.61	B	0.80	C	0.00	-0.15
Highway 14 SB Ramps at Via Princessa ^b	0.76	C	0.69	B	0.79	C	0.63	B	0.03	-0.06
Golden Valley Road at Plum Canyon Road	0.68	B	0.50	A	0.78	C	0.71	C	0.10*	0.21
Plum Canyon Road at Skyline Ranch Road/Heller Circle(South)	0.37	A	0.43	A	0.58	A	0.66	B	0.21	0.23
Sierra Highway at Sand Canyon Road	0.59	A	0.69	B	0.61	B	0.69	B	0.02	0.00

^a County intersections only. City intersections have been analyzed in Table 4.F-16.

^b Joint jurisdiction with Caltrans.

* Significant Project Impact.

Level of Service Ranges:

- 0.00–0.60 A
- 0.61–0.70 B
- 0.71–0.80 C
- 0.81–0.90 D
- 0.91–1.00 E
- Above 1.00 F.

Source: Austin-Foust Associates, October 2008.

Table 4.F-6, the proposed project and the related projects would result in a significant cumulative impact at the following intersections unless mitigated:

- Sierra Highway at Soledad Canyon Road (during the P.M. peak hour); and
- Golden Valley at Plum Canyon Road (during the A.M. peak hour).

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Table 4.F-16, ICU and LOS Summary with Mitigation, on page 4.F-49, summarizes the resulting ICUs and LOS with implementation of the mitigation measures identified above. As shown, ICUs would either remain the same or improve at most of the significantly impacted intersections. If all of the related projects are approved, each would be required to provide its fair share of the improvements to each of the affected intersections and therefore no significant unavoidable project traffic and access impacts would occur at any of the study intersections. With respect to impacts on the regional transportation system, project-specific environmental analysis for other cumulative projects would be required to comply with the requirements of the

Table 4.F-16

ICU and LOS Summary with Mitigation

Intersection	Without Project ^a				With Project & Mitigation				Change	
	A.M.		P.M.		A.M.		P.M.		A.M.	P.M.
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS		
COUNTY INTERSECTIONS										
Existing + Ambient + TT 46018 Conditions										
Plum Canyon Road at Skyline Ranch Road/Heller Circle (South)	0.54	A	0.76	C	0.50	A	0.77	C	-0.04	0.01
Existing + Ambient + Cumulative Conditions										
Golden Valley Road at Plum Canyon Road	0.68	B	0.50	A	0.74	C	0.60	A	0.06	0.10
CITY INTERSECTIONS										
Existing + Ambient + Cumulative Conditions										
Sierra Highway at Soledad Canyon Road	0.95	E	0.93	E	0.95	E	0.93	E	0.00	0.00
Sierra Highway at Skyline Ranch Road	--	--	--	--	0.84	D	0.71	C	--	--

^a Without project conditions are based on "Existing + Ambient" conditions for County intersections and "Existing + Ambient + Cumulative" conditions for City intersections, per the respective County and City impact analysis procedures.

Level of Service Ranges: 0.00–0.60 A
0.61–0.70 B
0.71–0.80 C
0.81–0.90 D
0.91–1.00 E
Above 1.00 F.

Source: Austin-Foust Associates, October 2008.

CMP, which provides lead agencies with the opportunity to assess each project's improvement program to ensure that it meets its mitigation goal. Implementation of the mitigation measures identified above would reduce project and cumulative impacts to less-than-significant levels.

Due to the speculative nature of the timing of implementation and availability of funding to implement the planned improvements to Highway 14, the reduction of cumulative impacts on Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange to less than significant levels cannot be guaranteed, and as such, cumulative impacts to Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange would remain significant and unavoidable.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

G. NOISE

1. INTRODUCTION

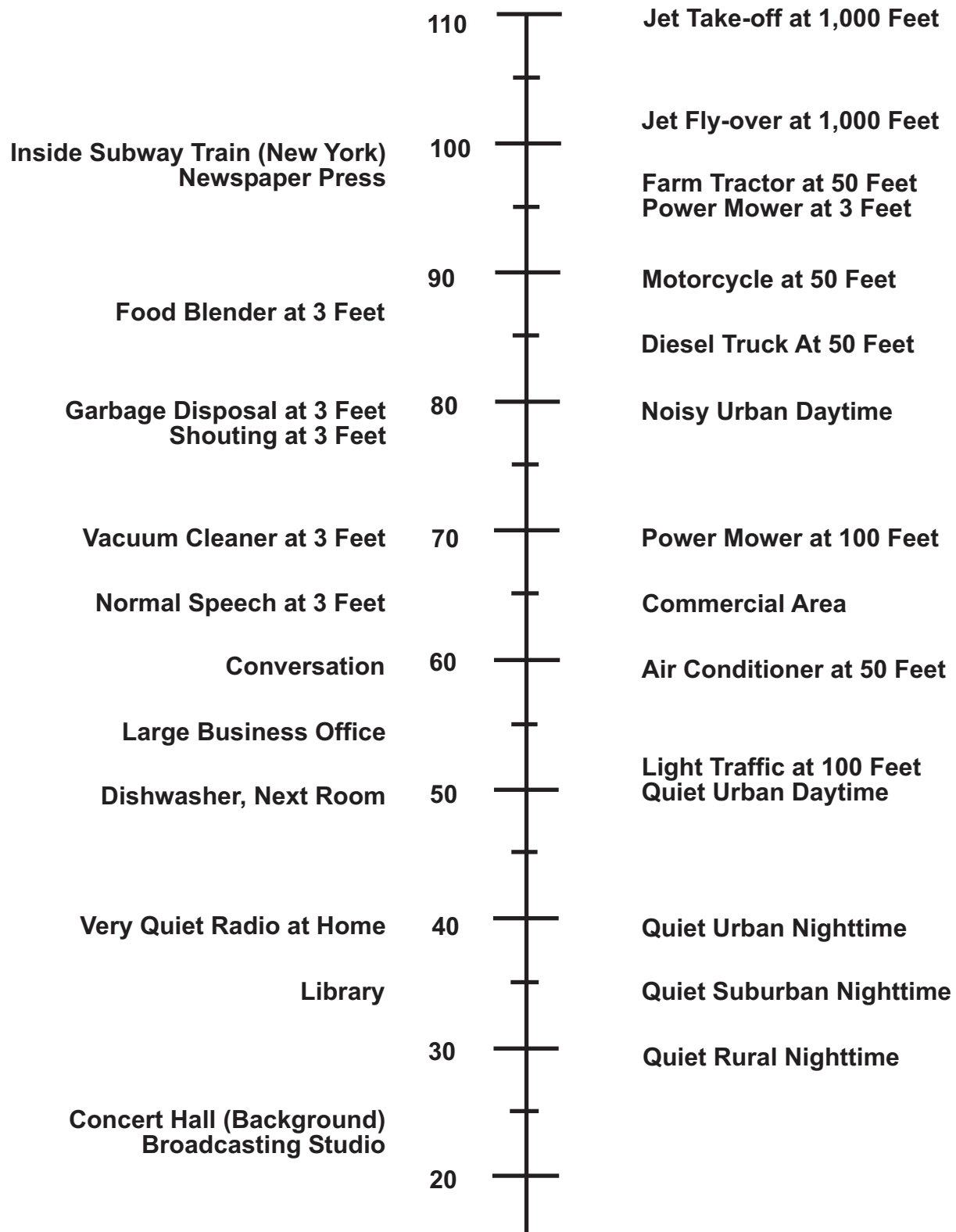
The following analysis describes the existing noise environment within the project area, estimates future noise levels and ground-borne vibration levels at surrounding land uses resulting from construction and operation of the proposed project, and identifies the potential for significant impacts where noise or vibration levels would exceed thresholds of significance. Mitigation measures are provided to address significant impacts. Noise modeling worksheets are included in Appendix G of this Draft EIR.

2. ENVIRONMENTAL SETTING

a. Noise and Vibration Basics

(1) Noise

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perceptibility of sound is subjective and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The A-weighted sound level is expressed in “dBA.” This scale de-emphasizes low frequencies to which human hearing is less sensitive and focuses on mid- to high-range frequencies. Due to the physical characteristics of noise transmission and reception, an increase of 10 dBA is normally required to achieve a doubling of the “loudness,” as perceived by the human ear. In addition, a 3-dBA increase is recognizable to most people. A change in noise level will usually not be detectable unless the new noise source is at least as loud as the ambient conditions. Typical A-weighted sound levels measured for various sources, as well as people’s responses to these levels, are provided in Figure 4.G-1, A-Weighted Sound Levels, on page 4.G-2.



A-Weighted Decibels



Figure 4.G-1
A-Weighted Sound Levels

Source: Compiled by Hodges & Shutt from Various Sources (December 1993)

Objects that obstruct the line-of-sight between a noise source and a receptor reduce the noise level if the receiver is located within the “shadow” of the obstruction, such as behind a sound wall. This type of sound attenuation is known as “barrier insertion loss.” If a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight not fully blocked), some barrier insertion loss would still occur, however to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise.

Time variation in noise exposure is typically expressed in terms of the average energy over time (L_{eq}), or alternatively, as a statistical description of the sound level that is exceeded over some fraction of a given period of time. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time. Half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_8 and L_{25} represent the noise levels that are exceeded 8 and 25 percent of the time, respectively, or for 5 and 15 minutes during a 1-hour period, respectively.

Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum noise levels observed during a measurement period. Maximum and minimum noise levels, as compared to the L_{eq} , are a function of the characteristics of the noise source. For example, sources such as compressors, generators, and transformers have maximum and minimum noise levels that are similar to L_{eq} since noise levels for steady-state noise sources do not substantially fluctuate. However, as another example, vehicular noise levels along local roadways result in substantially different minimum and maximum noise levels when compared to the L_{eq} since noise levels fluctuate during pass by events.

Although the A-weighted scale accounts for the range of people’s response, and therefore, is commonly used to quantify individual event or general community sound levels, the degree of annoyance or other response effects also depends on several other perceptibility factors. These factors include:

- Ambient (background) sound level;
- Magnitude of sound event with respect to the background noise level;
- Duration of the sound event;
- Number of event occurrences and their repetitiveness; and
- Time of day that the event occurs.

Several methods have been devised to relate noise exposure over time to human response. A commonly used noise metric for this type of study is the Community Noise Equivalent Level (CNEL). The CNEL, originally developed for use in the California Airport Noise Regulation, adds a 5 dBA penalty to noise occurring during evening hours from 7:00 P.M. to 10:00 P.M., and a 10 dBA penalty to sounds occurring between the hours of 10:00 P.M. to 7:00 A.M. to account for the increased sensitivity to noise events that occur during the quiet late evening and nighttime periods. Thus, the CNEL noise metric provides a 24-hour average of A-weighted noise levels at a particular location, with an evening and a nighttime adjustment, which reflects increased sensitivity to noise during these times of the day.

(2) Ground-Borne Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. According to data published by the California Department of Transportation (Caltrans), 0.1 inch/sec PPV is the level at which continuous vibrations begin to annoy people, and 0.2 inch/sec PPV is the threshold at which there is a risk of "architectural" damage to normal dwelling structures that contain plastered walls and/or ceilings.¹ In addition, the Federal Transit Administration (FTA) recommends protecting existing structures by limiting vibration levels to 0.2 inch/sec PPV.² Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source.

b. Regulatory Framework

Many government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise. Standards and guidelines that may be applicable to this project are discussed below.

¹ California Department of Transportation, *Transportation Related Earthborne Vibrations, Technical Advisory Number TAV-02-01-R9601, February 20, 2002.*

² Federal Transit Authority, *Transit Noise and Vibration Impact Assessment, Final Report, April 1995.*

(1) Applicable Federal Policies

(a) Noise

The United States Department of Housing and Urban Development (HUD) has set a goal of 45 dBA L_{dn} as a desirable maximum interior noise standard for HUD-assisted residential units. This same noise level is also generally accepted within the State of California. While HUD does not specify acceptable exterior noise levels, standard construction of residential dwellings under Title 24 standards typically provides 20 dBA of attenuation with windows closed. Based on this attenuation, the exterior L_{dn} should not exceed 65 dBA.³

(b) Ground-Borne Vibration

There are no Federal standards for ground-borne vibration; however, the FTA has established a PPV threshold of 0.2 inch per second for vibration in proximity to fragile buildings.

(2) Applicable State Policies

(a) Noise


The State of California, Department of Health Services, Environmental Health Division, has published recommended guidelines for noise and land use compatibility referred to as the Guidelines for Noise and Land Use Compatibility (the State Guidelines). The State Guidelines, illustrated in Figure 4.G-2, State Land Use Compatibility Guidelines for Noise, on page 4.G-6 indicate that residential land uses and other noise sensitive receptors generally should be located in areas where outdoor ambient noise levels do not exceed 65 to 70 dBA (CNEL or L_{dn}). Application of this compatibility matrix to development projects is not mandated by the Department of Health Services; however, each jurisdiction is required to consider the State Guidelines when developing its general plan noise element and when determining acceptable noise levels within its community.⁴ The State Department of Housing and Community Development, however, has required that new residential units should not be exposed to outdoor ambient noise levels in excess of 65 dBA (CNEL or L_{dn}), and, if necessary, sufficient noise


³ *The day-night average level (L_{dn}) is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of ten decibels to sound levels during the night time from 10 P.M. to 7 A.M. The 10-decibel penalty is applied to account for increased noise sensitivity during the nighttime hours. The L_{dn} represents the daily energy noise exposure averaged on an annual basis.*


⁴ *These Guidelines are also published by the Governor's Office and Planning and Research in the State of California General Plan Guidelines (2003).*


LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE					
	Ldn or CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL LOW DENSITY SINGLE FAMILY, DUPLEX,	█	█			█	█
RESIDENTIAL MULTIPLE FAMILY	█	█			█	█
TRANSIENT LODGING- MOTELS, HOTELS	█	█			█	█
SCHOOL, LIBRARIES, PLACES OF WORSHIP, HOSPITALS, NURSING HOMES	█	█			█	█
AUDITORIUMS, CONCERT HALLS, AMPHITHEATERS				█	█	█
OUTDOOR SPECTATOR SPORTS					█	█
PLAYGROUNDS, PARKS, NEIGHBORHOOD PARKS	█	█			█	█
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES	█	█			█	█
OFFICE BUILDINGS, BUSINESS, COMMERCIAL AND PROFESSIONAL	█	█			█	█
INDUSTRIAL, MANUFACTURING UTILITIES	█	█			█	█

INTERPRETATION

 **NORMALLY ACCEPTABLE**
Specified land use is satisfactory. Based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

 **CONDITIONALLY ACCEPTABLE**
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

 **NORMALLY UNACCEPTABLE**
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

 **CLEARLY UNACCEPTABLE**
New construction or development should generally not be undertaken.

Source: Guidelines for the Preparation and Content of the Noise Element of the General Plan, California Department of Health Services, in coordination with the office of Planning and Research.



Figure 4.G-2
State Land Use Compatibility
Guidelines for Noise

insulation must be provided to reduce interior ambient levels to 45 dBA.⁵ Within a 65 dBA exterior noise environment, interior noise levels are typically reduced to acceptable levels (to at least 45 dBA CNEL) through conventional construction, but with closed windows and fresh air supply systems or air conditioning.

According to the State Guidelines, an exterior noise level of 60 dBA CNEL is considered to be a “normally acceptable” noise level for single-family, duplex, and mobile homes involving normal, conventional construction, without any special noise insulation requirements. Exterior noise levels up to 65 dBA CNEL are typically considered “normally acceptable” for multi-family units and transient lodging without any special noise insulation requirements. Between these values and 70 dBA CNEL, exterior noise levels are typically considered “conditionally acceptable,” and residential construction should only occur after a detailed analysis of the noise reduction requirements is made and needed noise attenuation features are included in the project design. Exterior noise attenuation features include, but are not limited to, setbacks to place structures outside the conditionally acceptable noise contour, orienting.

Under the State Guidelines, an exterior noise level of 70 dBA CNEL is typically the dividing line between an acceptable and unacceptable exterior noise environment for all other noise sensitive uses, including schools, libraries, churches, hospitals, day care centers, and nursing homes of conventional construction. Noise levels below 75 dBA CNEL are typically acceptable for office and commercial buildings, while levels up to 75 dBA CNEL are typically acceptable for industrial uses (for the purposes of this analysis, however, noise impacts will only be evaluated for the noise sensitive uses that are proposed on the site). In unacceptable interior noise environments, additional noise insulation features, such as extra batting or resilient channels⁶ in exterior walls, double paned windows, air conditioners to enable occupants to keep their windows closed, solid wood doors, noise baffles on exterior vents, etc., are typically needed to provide acceptable interior noise levels. The best type of noise insulation for a land use should be based on detailed acoustical analyses that identify all practical noise insulation features and that confirm their effectiveness.

(b) Ground-Borne Vibration

There are no adopted State policies or standards for ground-borne vibration. The traditional view has been that common vibrations related to roadway traffic and construction

⁵ *The U.S. Environmental Protection Agency identified an indoor CNEL of 45 dB as necessary to protect against sleep interference. Assuming a conservative structural noise insulation of 20 dB for typical dwellings, 45 dB corresponds to an outdoor CNEL of 65 dB as minimizing sleep interference.*

⁶ *A resilient channel is a pre-formed section of sheet metal approximately 0.5” deep x 25” wide x 12” long that is installed between wallboard panels and framing to reduce sound transmission through walls. By preventing the wallboard from lying against the studs, the channel inhibits the transmission of sound through the framing.*

activities pose no threat to buildings or structures. However, Caltrans does recommend that extreme care be taken when sustained pile driving occurs within 7.5 meters (25 feet) of any building, and 15-30 meters (50-100 feet) of a historic building or a building in poor condition.

(3) Applicable County of Los Angeles Policies and Regulations

(a) Noise

The County of Los Angeles' Noise Ordinance identifies exterior noise standards for point noise sources, and specific noise restrictions, exemptions, and variances for exterior point and stationary noise sources. Several of these ordinance requirements are applicable to the proposed project and are discussed below.

The County Noise Ordinance states that exterior noise levels caused by point noise sources shall not exceed the levels identified in Table 4.G-1, County of Los Angeles Exterior Noise Standards for Stationary and Point Noise Sources, on page 4.G-9, or the ambient noise level,⁷ whichever is greater, when the ambient noise level is determined without the noise source operating. The County Noise Ordinance also states that interior noise levels resulting from outside point or stationary sources within multi-family residential units shall not exceed 45 dBA L_{eq} between 7:00 A.M. and 10:00 P.M., and 40 dBA L_{eq} between 10:00 P.M. and 7:00 A.M.⁸

The County Noise Ordinance identifies specific restrictions regarding construction noise. The operation of equipment used in construction, drilling, repair, alteration or demolition work is prohibited between the hours of 7:00 P.M. to 7:00 A.M. and anytime on Sundays or legal holidays if such noise would create a noise disturbance across a residential or commercial real-property line.⁹ The County Noise Ordinance further states that the contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in Table 4.G-2, County of Los Angeles Construction Noise Restrictions, on page 4.G-10. All mobile and stationary internal-combustion-powered equipment and machinery

⁷ Ambient noise level is the existing background noise level at the time of measurement or prediction.

⁸ This requirement is consistent with the California Noise Insulation Standards of 1988 (California Building Code Title 24, Section 3501 et seq.), which establishes inter-dwelling (between units in a building) and exterior sound transmission control measures. It requires that interior noise levels from the exterior source be reduced to 45 decibels (dB) or less in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings. Measurements are based on a day/night average sound level (L_{dn}) or the community noise equivalent level (CNEL). Both L_{dn} and CNEL utilize averaging, not single-event exposure.

⁹ County of Los Angeles Ordinance No. 11743, §12.08.440. Noise disturbance is not defined in the noise ordinance. The County Health Officer has the authority to define and determine the extent of a noise disturbance on a case-by-case basis.

Table 4.G-1

**County of Los Angeles Exterior Noise Standards
for Stationary and Point Noise Sources ^a**

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level dBA L _{eq} ^b
I	Noise Sensitive Area ^c	Anytime	45
II	Residential Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	45 50
III	Commercial Properties	10:00 P.M. to 7:00 A.M. 7:00 A.M. to 10:00 P.M.	55 60
IV	Industrial Properties	Anytime	70

^a This Table is used by the County to develop noise standards based on the duration of the noise source. These standards are described below.

^b **Standard No. 1** shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level; or, if the ambient L₅₀ exceeds the forgoing level, then the ambient L₅₀ becomes the exterior noise level for Standard No. 1.

Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from Standard 1 plus 5 dBA; or, if the ambient L₂₅ exceeds the forgoing level, then the ambient L₂₅ becomes the exterior noise level for Standard No. 2.

Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from Standard 1 plus 10 dBA; or, if the ambient L_{B8.3} exceeds the forgoing level, then the ambient L_{B8.3} becomes the exterior noise level for Standard No. 3.

Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from Standard 1 plus 15 dBA, or, if the ambient L_{1.7} exceeds the forgoing level, then the ambient L_{1.7} becomes the exterior noise level for Standard No. 4.

Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 4 shall be the applicable noise level from Standard 1 plus 20 dBA; or, if the ambient L₀ exceeds the forgoing level, then the ambient L₀ becomes the exterior noise level for Standard No. 4.

^c Not defined in the County Noise Ordinance. To be designated by the County Health Officer.

Source: County of Los Angeles Ordinance No. 11743, §12.08.390.

is also required to be equipped with suitable exhaust and air-intake silencers in proper working order.

The County exempts all vehicles of transportation (with a few exceptions) that operate in a legal manner within the public right-of-way, railway, or air space, or on private property, from the standards of the County Noise Ordinance. The County has no adopted ordinance regulating individual motor vehicle noise levels. These are regulated by the State.

Table 4.G-2

County of Los Angeles Construction Noise Restrictions

	Single-Family Residential	Multi-Family Residential	Commercial ^a
<u>Residential Structures</u>			
Mobile Equipment: Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and legal holidays; 7:00 A.M. to 8:00 P.M.	75 dBA L _{eq}	80 dBA L _{eq}	85 dBA L _{eq}
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	60 dBA L _{eq}	64 dBA L _{eq}	70 dBA L _{eq}
Stationary Equipment: Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:			
Daily, except Sundays and legal holidays; 7:00 A.M. to 8:00 P.M.	60 dBA L _{eq}	65 dBA L _{eq}	70 dBA L _{eq}
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	50 dBA L _{eq}	55 dBA L _{eq}	60 dBA L _{eq}
<u>Business Structures</u>		<u>All Structures</u>	
Mobile Equipment; Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:			
Daily, including Sunday and legal holidays, all hours		85 dBA L _{eq}	

^a Refers to residential structures within a commercial area. This standard does not apply to commercial structures.

Source: County of Los Angeles Ordinance No. 11743, §12.08.440.

(b) Ground-Borne Vibration

The County has established a vibration threshold within the Noise Ordinance. According to Section 12.08.560 of the Ordinance, citizens are prohibited from operating a device that creates vibration that is above the vibration threshold of any individual at or beyond the property boundary of the source if on private property, or at least 150 feet from the source if on a public space or public right-of-way. The perception threshold is defined as a motion velocity of 0.01 inch per second.

(4) Applicable City of Santa Clarita Policies and Regulations

The project site is located within the County of Los Angeles. However, the southern portion of the project site directly abuts the City of Santa Clarita and certain areas of the City

will be subject to increased noise from the project. Therefore, the policies and regulations of the City are relevant to this project.

(a) Noise

(i) General Plan Noise Element

The Noise Element of the City of Santa Clarita General Plan (pp. N-6 and N-7) has incorporated a slightly modified version of the State's Guidelines for Noise and Land Use Compatibility.¹⁰ These City Guidelines are referred to as Noise and Land Use Compatibility Guidelines in the Noise Element and are illustrated in Figure 4.G-3, City of Santa Clarita Guidelines for Noise and Land Use Compatibility, on page 4.G-12. The Noise Element is herein incorporated by reference and is available for review at the City of Santa Clarita Planning and Building Services Department.

(ii) Municipal Code

The City has also adopted an ordinance in the Municipal Code to control point source noise. This ordinance is also incorporated herein by reference and is available for review at the City's website.¹¹ Three sections of the ordinance are particularly pertinent to the proposed project: Sections 11.44.040, 11.44.070, and 11.44.080, as amended.

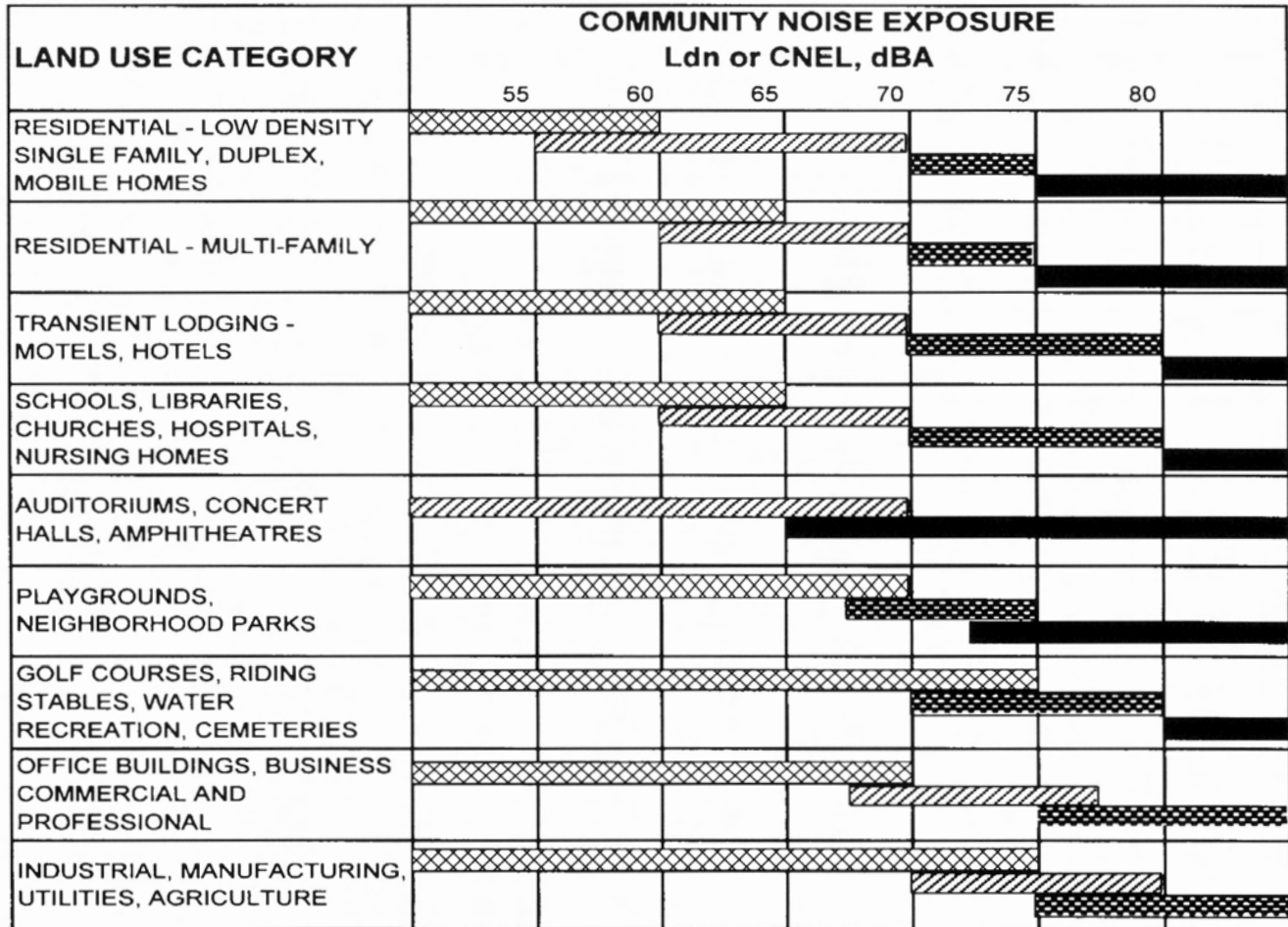
Section 11.44.040. In general, Section 11.40.040, Noise Limits, sets the following noise levels for residential, commercial, and manufacturing uses taking place on private property and for construction activities on private property outside of the hourly limits provided in Section 11.40.080 as shown in Table 4.G-3, City of Santa Clarita Ordinance Noise Limits, on page 4.G-13.

Wherever a boundary line occurs between a residential property and a commercial/manufacturing property, the noise level of the quieter zone is to be used. Construction work performed in conformance with Section 11.44.080 (below) is exempt from Section 11.44.040.¹²

¹⁰ *City of Santa Clarita General Plan Noise Element Amendment (Santa Clarita, California: 23 May 2000), p. N-7. The City's General Plan Noise Element may be found at the City of Santa Clarita Planning Department.*

¹¹ www.santa-clarita.com/cityhall/admin/code/

¹² *Telephone conversation with Jeff Hogan, City of Santa Clarita Planning and Building Services Department, Santa Clarita, California, December 2003.*



INTERPRETATION



NORMALLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



NORMALLY UNACCEPTABLE
New construction or development should generally be discouraged. If new construction or development does proceed, an analysis of the noise reduction requirements must be conducted and needed noise insulation features included in the design



CONDITIONALLY ACCEPTABLE
New construction or development should be undertaken only after an analysis of the noise reduction requirements is conducted and needed noise insulation features are included in the design. Conventional construction, with closed windows and fresh air supply systems or air conditioning will normally suffice.



CLEARLY UNACCEPTABLE
New construction or development should generally not be undertaken.



Figure 4.G-3
City of Santa Clarita Guidelines
for Noise and Land Use Compatibility

Table 4.G-3

City of Santa Clarita Ordinance Noise Limits

Region	Time	Exterior Sound Level (dB)
Residential Zone	Day	65
Residential Zone	Night	55
Commercial and Manufacturing	Day	80
Commercial and Manufacturing	Night	70

Source: Santa Clarita City Code, Section 11.40.080.

Section 11.44.070. Section 11.44.070 states, “any noise level from the use or operation of any machinery, equipment, pump, fan, air conditioning apparatus, refrigerating equipment, motor vehicle, or other mechanical or electrical device, or in repairing or rebuilding any motor vehicle, which exceeds the noise limits as set forth in Section 11.44.040 at any property line, or, if a condominium or rental units, within any condominium or rental unit within the complex, shall be a violation of this chapter.” Construction work performed in conformance with Section 11.44.080 (below) is exempt from Section 11.44.070.¹³

Section 11.44.080, as Amended. Section 11.44.080, as amended by Ordinance No. 93-4 and No. 00-3, prohibits construction work requiring a building permit on sites within 300 feet of a residentially zoned property from operating except between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 6:00 P.M. on Saturday. Construction work is prohibited on Sundays, New Years Day, Independence Day, Thanksgiving Day, Christmas Day, Memorial Day, and Labor Day. The Planning and Building Services Department of the City of Santa Clarita may issue a permit for work to be done outside of these hours provided that containment of construction noise is provided. Section 11.44.080, as amended, represents an exception to Section 11.44.040 and 11.44.070 of the Noise Ordinance.¹⁴

(b) Ground-Borne Vibration

The City of Santa Clarita does not provide construction or operation vibration guidelines for residential areas.

¹³ *Ibid.*

¹⁴ *Ibid.*

c. Existing Conditions

(1) Noise-Sensitive Receptor Locations

Certain land uses are particularly sensitive to noise including schools, residences, hospitals, rest homes, long-term medical and mental care facilities, parks, and recreation areas. Sensitive receptors near the project site are displayed in Figure 4.G-4, Noise Sensitive Receptors, on page 4.G-15. As shown therein, the closest noise-sensitive uses within the project vicinity include single-family residences located adjacent and to the west of the project boundary. Single- and multi-family residences are interspersed throughout the City of Santa Clarita near the project boundary. There are also residences near the project site in the County of Los Angeles along Sierra Highway. For purposes of this analysis, future residents on the project site were also considered sensitive receptors.

In addition to sensitive residential receptors, there are sensitive educational, recreational, and transient lodging receptors in the project vicinity. All of these sensitive receptors are located within the City of Santa Clarita. Sensitive noise receptors bordering major roadways include Sierra Vista Junior High and Canyon High School along Whites Canyon Road north of Soledad Canyon Road and the Bethlehem Lutheran Kindergarten and Preschool along Soledad Canyon Road east of Whites Canyon Road. Montessori Pre-School is located along the Sierra Highway north of Soledad Canyon Road. Santa Clarita Little People Daycare and Pre-School is also located along Sierra Highway near the proposed Skyline Ranch Road entrance. In addition, Canyon Country Pre-School is located along Soledad Canyon Road east of Sierra Highway and the Leona Cox Community School is located southwest of the project site approximately one-quarter mile east of Soledad Canyon Road. Regarding other sensitive receptors, Canyon Country Park is located along Soledad Canyon Road west of Sand Canyon Road and a Super-8 Motel and a Travelodge are located along Sierra Highway near the proposed entrance.

(2) Existing Noise Environment

The proposed development area of the Skyline Ranch site is largely undeveloped and maintains no roadways open to the public. Sierra Highway to the southeast represents the nearest major source of mobile noise that would be audible on the site. But given the distance of the proposed development area from Sierra Highway and intervening topography, roadway noise from Sierra Highway would generally not be considered a substantial source of noise to the proposed development area. Mobile noise generated on low speed roadways serving existing residential uses to the west may also be audible on the project site. To a lesser extent than mobile noise, noise sources in the project vicinity include incidental noise from residential uses to the west, and distant aircraft over-flights.

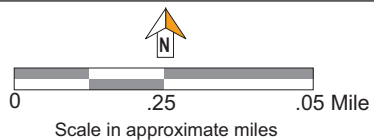
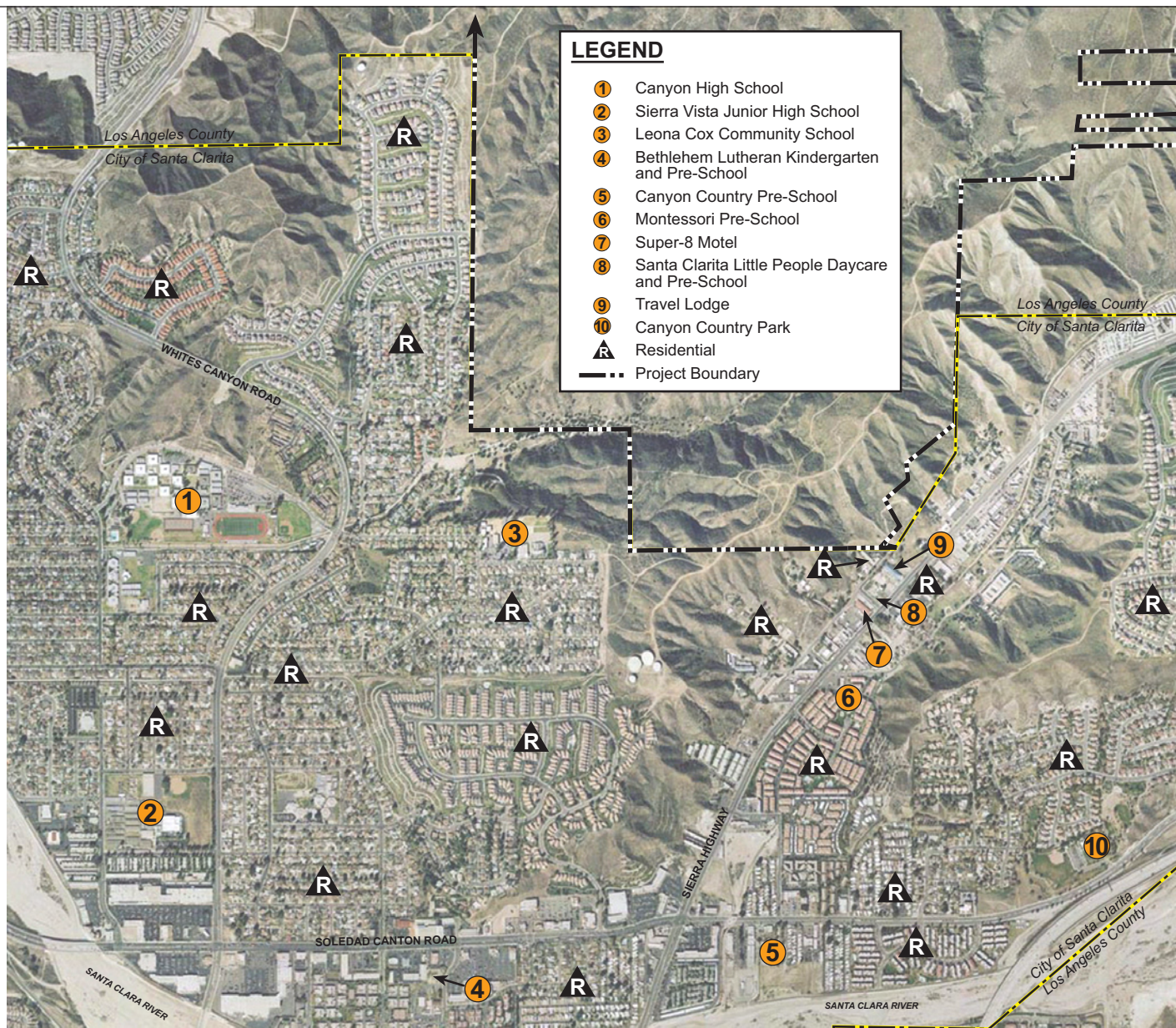


Figure 4.G-4
Noise Sensitive Receptors

Source: PRC Services Corporation 2007; Google Earth Pro, 2006

(a) Ambient Noise Levels

One 10-minute noise measurement was taken at the southwest corner of the site approximately 40 feet north of the northerly terminus of paved Beneda Lane at 9:55 A.M. on Monday, August 2, 2004. The noise measurement was conducted using a Quest Technologies NoisePro Deluxe Type 2 sound level meter (serial number NXD010059) placed 5 feet above the ground on a tripod. The purpose of this measurement was to determine if the mobile noise model used in the analysis required calibration to account for any site-specific circumstances. Surrounding land uses include undeveloped land to the west and northwest, a single-family residence to the northeast, undeveloped land to the east and Sierra Highway, and single- and multi-family residences to the south. The measured ambient noise level was 53.3 dBA L_{eq} . An additional short-term (15 minutes) noise reading was recorded along Sierra Highway near the Santa Clarita Little People Daycare and Pre-School. The noise measurement was performed on January 4, 2007 at 3:30 P.M. The noise survey was conducted using a Larson-Davis Model 820 Type 1 sound level meter. The sound level meter was placed in front of the daycare/preschool, approximately 20 feet from the edge of the Sierra Highway and 5 feet above the local grade. The measured ambient noise level was 70.9 dBA L_{eq} . Traffic on Sierra Highway was the main noise source.

(b) Roadway Noise Levels

The CNEL generated by existing traffic on local roadways was established using roadway noise equations provided in the Caltrans Technical Noise Supplement (TeNS) document and traffic data (dated January 2008) provided by the Project's traffic consultant.¹⁵ As indicated in Table 4.G-4, Existing Roadway Noise Levels at Noise Sensitive Locations, on page 4.G-17, the calculated CNEL for the analyzed roadway segments as a result of existing traffic volumes ranged from 59.4 dBA CNEL to 71.3 dBA CNEL at a distance of 50 feet from the edge of the roadway, based on surface-street traffic volumes only. As shown, noise levels at the nearest sensitive receptors to each analyzed roadway segment exceed normally acceptable noise levels at all locations except at Bethlehem Lutheran Preschool and Kindergarten that is located along Soledad Canyon Road east of Whites Canyon Road, Canyon Country Park that is located north of Soledad Canyon Road and west of Sand Canyon Road, and single-family residential uses that are located along Plum Canyon Road west of Whites Canyon Road.

¹⁵ *The roadway noise calculation procedures provided in TeNS are consistent with Federal Highway Administration RD-77-108 "industry standard" roadway noise prediction methodologies.*

Table 4.G-4

Existing Roadway Noise Levels at Noise Sensitive Locations

Roadway Segment ^a	Existing Noise Sensitive Land Uses ^b	Normally Acceptable Noise Level, CNEL ^c	Predicted Existing Noise Levels at 50 feet from Roadway CNEL, dBA	Exceeds Normally Acceptable Noise Level?
Whites Canyon Road				
n/o Soledad Canyon Road	Single-Family Residential	60	71.3	Yes
n/o Soledad Canyon Road	Sierra Vista JHS	65	71.3	Yes
n/o Soledad Canyon Road	Canyon High School	65	69.2 ^d	Yes
s/o Soledad Canyon Road	Multi-Family Residential	65	70.4	Yes
Plum Canyon Road				
w/o Whites Canyon Road	Single-Family Residential	60	59.4 ^e	No
e/o Bouquet Canyon Road	Single-Family Residential	60	60.5 ^e	Yes
Bouquet Canyon Road				
n/o Plum Canyon Road	Single-Family Residential	60	64.7.	Yes
s/o Plum Canyon Road	Single-Family Residential	60	67.4	Yes
Soledad Canyon Road				
e/o Rainbow Glen Drive	Multi-Family Residential	65	66.1 ^e	Yes
e/o Rainbow Glen Drive	Mobile Home Park	60	66.1 ^e	Yes
e/o Whites Canyon	Bethlehem Lutheran School	65	64.5 ^{d,e}	No
e/o Whites Canyon	Mobile Home Park	65	66.5 ^e	Yes
w/o Sand Canyon Road	Single-Family Residential	60	68.8	Yes
w/o Sand Canyon Road	Canyon Country Park	70	66.8 ^d	No
w/o Sand Canyon Road	Multi-Family Residential	65	68.8	Yes
w/o Sand Canyon Road	Mobile Home Park	60	63.8 ^e	Yes
e/o Sierra Highway	Pre-School	65	69.1	Yes
Sierra Highway				
s/o Soledad Canyon Road	Multi-Family Residential	65	70.6	Yes
n/o Soledad Canyon Road	Pre-School	65	68.6	Yes
n/o Soledad Canyon Road	Single-Family Residential	60	68.6	Yes
s/o Proposed Skyline Ranch Road	Daycare/Pre-School and Motels	65	71.3 ^f	Yes
s/o Proposed Skyline Ranch Road	Single-Family Residential	60	69.7	Yes
s/o Sand Canyon Road	Single-Family Residential	60	64.6	Yes

^a For roadway segment limits, please refer to Figure 1-1 in the traffic study (Appendix F).

^b Nearest representative land use to roadway.

^c Normally acceptable noise levels are from the applicable adopted noise guidelines for each jurisdiction.

^d Distance to receptor from roadway equals 100 feet.

^e Noise level incorporates a 5 dBA barrier insertion loss.

^f Distance to receptor from roadway equals 25 feet. Calculations are provided in Appendix G.

Source: PCR Services Corporation, 2008.

(3) Vibration-Sensitive Receptor Locations

Residential uses immediately west of the project site are within the area of potential effect for perceptible vibration during project construction. With respect to structures, vibration-sensitive receptors generally include historic buildings, buildings in poor condition, and uses that require precision instruments (e.g., operating rooms or scientific laboratories). No vibration-sensitive structures are present within the area that may be affected by the project.

(4) Existing Ground-Borne Vibration Environment

The only source of ground-borne vibration in the project vicinity is vehicular travel (refuse trucks, delivery trucks, school buses, and transit buses) on local roadways. There are no substantial ground-borne vibration sources present within the general project vicinity.

3. PROJECT IMPACTS

a. Thresholds of Significance

The following thresholds of significance were developed for this noise impact analysis based on the plans and policies identified previously in this EIR section. The operational thresholds apply to both project and cumulative impacts.

(1) Construction Noise

Based on criteria set forth in the County of Los Angeles Code, the project would result in a significant construction impact if:

- Construction noise levels exceed the standards displayed in Figure 4.G-2. Specifically, an impact would result if noise levels exceed 60 L_{eq} at single-family residences or 65 dBA L_{eq} at multi-family residences or transient lodging.

Although areas within the City of Santa Clarita are potentially affected by construction noise, the City does not have a numeric significance threshold for construction noise. Therefore, the County threshold presented above is applied to all areas with the potential for construction noise impacts.

(2) Construction Vibration

Neither the County of Los Angeles nor the City of Santa Clarita have a specific significance threshold to assess vibration impacts as relates to construction activities. Thus, the FTA and the Caltrans standards will be applied for the protection of sensitive receptors. Therefore, if occupants of the proposed project or occupants of off-site uses are subject to project-related construction vibration levels in excess 0.1 inches per second PPV (annoyance threshold) at an occupied structure/dwelling unit, or 0.2 inches per second PPV (architectural damage threshold) at an unoccupied structure or if sustained pile driving activity occurs within 25 feet of any building, a significant construction noise impact would occur.

(3) Operational Noise

(a) On-Site Noise

A significant on-site mobile source noise impact would occur if on-site exterior frequent use areas¹⁶ for noise-sensitive receptors were to be exposed to noise levels above the normally acceptable noise levels identified in the State Guidelines. These Guidelines are utilized by the County (i.e., 60 dBA CNEL for single-family residences and 70 dBA CNEL for schools and parks uses as identified in Figure 4.G-2 on page 4.G-6). Furthermore, if occupants of the proposed project were to be subject to point source noise levels originating on or off the site that are above County or City Noise Ordinance standards identified in Table 4.G-2 and Table 4.G-3 on pages 4.G-10 and 4.G-13, respectively, for the types of uses proposed, a significant on-site noise impact would occur.

(b) Off-Site Noise

For uses within unincorporated Los Angeles County, a significant mobile source noise impact would occur if off-site exterior frequent use areas would be exposed to noise levels above the normally acceptable noise levels identified in the State Guidelines identified in Figure 4.G-2 on page 4.G-6 and exceed the criteria set forth below. A significant point source noise impact would occur if point source noise levels from the proposed project exceed the noise standards identified in the County's Noise Ordinance.

¹⁶ A frequent use area is an exterior location in which people would congregate for recreation or other purposes. Frequent use areas include backyards of single family residences, recreation areas in condominium and apartment complexes, active or passive recreational areas in parks, play areas at schools, and specified areas of other uses, such as churches.

For uses within the City of Santa Clarita, a significant mobile source noise impact would occur if off-site exterior frequent use areas would be exposed to noise levels above the normally acceptable noise levels identified in the City's Guidelines identified in Figure 4.G-3 on page 4.G-12 and exceed the criteria set forth below. A significant point source noise impact would occur if point source noise levels from the proposed project exceed the noise standards identified in the City's Noise Ordinance.

Criteria 1 and 2 below are based upon community responses to changes in noise levels whereby a change in noise level from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise, while a 5 dBA increase is readily noticeable.

Criterion 1: An increase of 5 dBA or greater in noise level from project-related activities if levels remain within the same land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels remain within the normally acceptable range); or

Criterion 2: An increase of 3 dBA or greater in noise level from project-related activities which results in a change in land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels change from normally acceptable to conditionally acceptable); and/or

Criterion 3: Any increase in noise levels where existing noise levels are already considered unacceptable under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City.

(c) Vibration

If on- or off-site sensitive receptors were subject to a perceptible level of vibration (i.e., 0.01 inch per second PPV from project-related activities), a significant vibration impact would occur.

b. Methodology

(1) Construction Noise

Construction noise impacts were evaluated by: (1) determining the noise levels generated from construction activity using USEPA-published construction equipment noise exposure levels; (2) calculating the construction-related noise level at nearby sensitive receptor property line locations using standard distance attenuation (i.e., 6-dBA per doubling of distance drop-off rate for point-source noise) and barrier insertion loss sound calculation procedures; and (3) comparing construction-related noise to ambient noise levels (i.e., noise levels without construction noise) to determine significance.

(2) Roadway Noise

The CNEL generated by existing traffic on local roadways was established using roadway noise equations provided in the Caltrans Technical Noise Supplement (TeNS) document and traffic data provided by the project traffic consultant.¹⁷ This methodology allows the user to define roadway configurations, barrier information (if any), and receptor locations. Roadway-noise attributable to project development was calculated and compared to baseline noise levels that would occur under the future without project condition to determine significance.

(3) Stationary Point-Source Noise

Determination of future point source noise levels on the project site and in its vicinity is based on available technical reports and literature that are cited throughout this EIR section. Point noise sources associated with the project include day-to-day activities at the site once it is built (e.g., people talking, doors slamming, parking lot cleaning, air conditioning units, lawn care equipment, stereos, domestic animals, etc.).

(4) Ground-Borne Vibration

Ground-borne vibration impacts were evaluated by: (1) identifying the potential ground-borne vibration level for construction equipment such as scrapers, dozers, and haul trucks from U.S. Department of Transportation-published data; (2) measuring the distance between vibration sources and surrounding structure locations; and (3) making a significance determination.

¹⁷ *The roadway noise calculation procedures provided in TeNS are consistent with Federal Highway Administration RD-77-108 "industry standard" roadway noise prediction methodologies.*

c. Impact Analysis

A total of 1,260 residential dwelling units, an approximately 11 acre elementary school site, approximately 12 acres of public parkland, approximately 6 acres of private parkland, supporting roadways (including the proposed Whites Canyon Road extension to Sierra Highway), and infrastructure improvements are proposed on 622 acres in the southern portion of the 2,173-acre Skyline Ranch site. The remaining 1,551 acres in the northern portion of the site would remain undeveloped. The 622-acre development area would be graded, with grading and building construction activities occurring as close as 25 feet from the existing residential subdivisions to the west. Grading would also occur along the southernmost property line, which abuts large lot single-family residences and multi-family residences north of Beneda Lane and Stonehill Way. The project site also abuts residences along Hillfield Lane and Sierra Cross Avenue west of Sierra Highway, however, no grading or construction is proposed in close proximity to these residences. There are also offsite construction activities associated with the utility and road improvements planned for Foxlane Drive, Canyon Crest, Bookham Drive, Bakerton Avenue, and Goodvale Road near west and southwest portion of the project boundary; and within Beneda Lane and Sierra Highway, near the project entrance.

(1) Construction Noise Impacts

(a) Background

Project development activities would primarily include site preparation (grading and excavation) and construction of internal roadways and other infrastructure, driveways, and structures. The project applicant proposes to develop approximately 622 acres of the site with 1,260 single-family residential lots along with an approximately 11-acre elementary school site, approximately 12 acres of public parkland, and approximately 6 acres of private parkland. Off-site construction activities would occur on approximately 29.5 acres for the extension of Whites Canyon Road/Plum Canyon Road from the northwest to the project site and associated drainage basins, approximately 2 acres for landscaped slope area to the east, and approximately 1.4 acres for the extension of Skyline Ranch Road to Sierra Highway to the south. Offsite construction would also include cul-de-sac/hammerhead turnaround improvements at Canyon Crest, Beneda Lane, and Bookham Drive; a 78-inch storm drain and trapezoid channel that extends to the southwest near Goodvale Road and proposed storm drains within Bookham Drive and Bakerton Avenue; and downsizing an existing debris basin at the easterly terminus of Foxlane Drive. In addition, the project would include a sewer line and water line within Sierra Highway. Construction of the off-site portion of the 78-inch (approximately 0.88 acres) would extend approximately 1,300 feet to the southwest and require approximately 16,000 cubic yards of grading. A materials processing facility is also proposed to be located in the northeast corner of the development area and away from existing residential areas (approximately 3,000 feet to the

east and northeast and separated by major ridgelines). The facility would process approximately 68,000 cubic yards of excavated soil for use as base material for concrete and asphalt.

Overall project construction would be phased over an approximate seven year period, depending on phasing, with mass grading occurring for approximately 24 months, with completion of the first phase expected in 2011.¹⁸ Additional units would be built incrementally through 2017. Therefore, the project site would include concurrent construction and residential activity. In order to construct the proposed improvements, the on- and off-site areas would be graded with a total of approximately 20.8 million cubic yards of earthwork. The cut and fill would be balanced at the project site and soil is not expected to be imported or exported. Site preparation activities typically involve the use of heavy equipment, such as scrapers, dozers, tractors, loaders etc. Trucks would also be used to deliver equipment and building materials, and to haul away landscape and construction debris. Smaller equipment, such as jackhammers, pneumatic tools, saws, and hammers would also be used throughout the site during the construction phases. This equipment would generate both steady-state and episodic noise that would be heard both on and off the project site.

Individual pieces of construction equipment that would be used for project construction produce maximum noise levels of 74 dBA to 91 dBA at a reference distance of 50 feet from the noise source, as shown in Table 4.G-5, Maximum Noise Levels Generated by Typical Construction Equipment, on page 4.G-24. These maximum noise levels would occur when equipment is operating under full power conditions or during “impact” activities such as percussive pile driving. However, equipment used on construction sites often operate under less than full power condition, or part power. Actual measurements performed while equipment is performing work indicate that shift-long equivalent L_{eq} sound levels are typically 2 dBA to 15 dBA less than the maximum noise levels identified in Table 4.G-5.¹⁹

To more accurately characterize construction-period noise levels, the average (L_{eq}) noise level associated with each construction stage is provided in Table 4.G-6, Construction Average L_{eq} Noise Levels by Distance and Construction Stage, on page 4.G-25. These average noise levels are based on the quantity, type, and usage factors for each type of equipment that would be used during each construction stage, and is typically attributable to multiple pieces of equipment operating simultaneously. As shown in Table 4.G-6, the average construction-period noise level is expected to range from 77 dBA to 86 dBA at a reference distance of 50 feet. For project-long (i.e., total duration of construction activity) L_{eq} noise levels, these conservative worst-case noise

¹⁸ In order to analyze a worse-case construction scenario, a grading duration of 30 months (which could potentially expose a greater number of on-site receptors to construction noise), was evaluated.

¹⁹ Beranek and Ver, *Noise and Vibration Control Engineering, Principles and Applications*, p. 652, 1992.

Table 4.G-5

Maximum Noise Levels Generated by Typical Construction Equipment

Type of Equipment	Sound Levels at Maximum Engine Power with Mufflers at Indicated Distance (dBA)			
	25 feet	50 feet	100 feet	200 feet
Air Compressor	87	81	75	69
Backhoe	91	85	79	73
Backup Beep	91	85	79	73
Concrete Mixer	91	85	79	73
Crane, Mobile	89	83	77	71
Dozer	86	80	74	68
Grader	91	85	79	73
Jack Hammer	94	88	82	76
Loader	85	79	73	67
Paver	95	89	83	77
Pneumatic Tool	91	85	79	73
Pump	82	76	70	64
Roller	80	74	68	62
Saw	84	78	72	66
Scraper	94	88	82	76
Truck	97	91	85	79
Minimum Sound Level	80	74	68	62
Maximum Sound Level	97	91	85	79

Assumes a drop-off rate of 6-dB per doubling of distance, which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation over a hard surface propagation path.

Sources: USEPA, Bolt, Beranek, and Newman, Noise Control for Buildings and Manufacturing Plants, 1987; and PCR Services Corporation, 2005.

values would be reduced to account for the percentage of time that equipment actually operate on the construction site.²⁰

In general, the first and noisiest construction phase is site preparation (i.e, grading and excavation), which would involve movement of construction equipment to the project site, earth moving, and compaction of soils. High noise levels created during site preparation would be associated with the operation of heavy-duty trucks, scrapers, dozers, graders, backhoes, and front-end loaders. When construction equipment is operating, noise levels are approximately 86 dBA at a distance of 50 feet from individual pieces of equipment.

²⁰ *Ibid.*

Table 4.G-6

Construction Average L_{eq} Noise Levels by Distance and Construction Stage

Construction Stage	Sound Level in dBA (L_{eq}) at Indicated Distance				
	25 Feet	50 Feet	100 Feet	150 Feet	200 Feet
Site Preparation	92	86	80	76	74
Foundations	83	77	71	67	65
Structural	89	83	77	73	71
Finishing	92	86	80	76	74

Assumes a hard surface propagation path drop-off rate of 6-dB per doubling of distance, which is appropriate for use in characterizing point-source (such as construction equipment) sound attenuation.

Sources: EPA, Noise from Construction Equipment and Operations, Building Equipment and Home Appliances, PB 206717, 1971; and PCR Services Corporation, 2005.

During the second stage of construction, foundation forms are constructed and concrete foundations are poured. Primary noise sources include heavy concrete trucks and mixers, cranes, and pneumatic drills. At 50 feet from the source, noise levels are approximately 77 dBA.

The third and fourth stages consist of interior and exterior building construction, and site cleanup. Primary noise sources associated with the third phase include hammering, diesel generators, compressors, and light truck traffic. Noise levels are typically 83 dBA range at a distance of 50 feet. The fourth and final stage typically involves the use of trucks, landscape rollers and compactors, with noise levels in the 86 dBA range.

This construction noise impact analysis assumes a worse-case scenario that site grading and major roadway/infrastructure construction would occur over two phases, which there would be some degree of overlap. In such an event, the overlap would cause only minimal increases in construction noise because, among other reasons, sound pressure levels are added logarithmically rather than arithmetically and construction activities would be spatially located in different areas of the project site.

(b) Noise Impacts

Occupied noise-sensitive uses with an uninterrupted line of sight to the construction noise sources could periodically be exposed to temporary noise levels that exceed the County's construction noise standards (depending on the location of the uses), which would be a significant impact. Onsite grading and building construction activities could occur as close as 25 feet from the existing residential subdivisions to the west of the project site and east of Falcon Crest Drive and Bakerton Avenue. General grading would occur within 25 feet of the southernmost property line, which abuts large single-family residential lots and multi-family residential development north of Beneda Lane. Grading for the southeastern segment of the

proposed Skyline Ranch Road entrance would also occur within 50 feet of existing single- and multi-family residences and transient lodging located north of the intersection of Sierra Highway and Adon Avenue. Off-site and associated with the widening of the entrance to proposed Skyline Ranch Road at Sierra Highway and infrastructure improvements at Beneda Lane, Sierra Highway, Foxlane Drive, Canyon Crest and Bookham Drive, grading activities would occur within 25 feet of existing residential homes. Grading activities could also occur within 50 feet of residential homes when the existing sewer line is replaced within Sierra Highway. A 78-inch storm drain and concrete-lined trapezoid channel are proposed that would extend approximately 3,300 linear feet, of which 1,300 feet would extend offsite to the southwest. The proposed storm drain and channel would connect with an existing County Department of Public Works flood control channel. Grading activities would occur within 65 feet of a single-family residence southwest of the project site, within 50 feet of residential homes along Goodvale Road and within 100 feet of homes along Damar Court. The construction of this facility would take approximately six months and would occur during the second phase of grading.

(i) Movement of Construction Equipment

Heavy construction equipment would be taken to the site using heavy-duty trucks, which have a noise level of approximately 91 dBA at 50 feet.²¹ There would be no daily movement of heavy-duty construction equipment to and from the site as construction equipment would be taken to the project site at the commencement of grading and removed from the project site at the completion of grading. Depending on the construction phase, construction equipment would access the site via the proposed Whites Canyon Road extension from Sierra Highway or Whites Canyon Road/Plum Canyon Road to the west. Residents and other sensitive receptors along Sierra Highway and Whites Canyon Road/Plum Canyon Road would be exposed to this truck traffic noise in those few instances when heavy equipment is brought into and taken from the project site.

Off-site sensitive receptors along the truck route that would have a direct line of sight to the truck route include multi-family residences and transient lodging located along the proposed Skyline Ranch Road entrance north of the Sierra Highway and proposed residential developments east of the Whites Canyon Road and Plum Canyon Road on north and south sides of Farrell Road (TM 46018). These receptors would experience temporary, instantaneous noise levels up to 91 dBA at 50 feet from the roadway. Receptors located further away would experience less noise due to their greater distance from the roadway and to any intervening structures that may exist between them and the noise source.

²¹ *United States Environmental Protection Agency, Noise From Construction Equipment and Operations, Building Equipment, and Home Appliances (NTID 300-1), (Washington, D.C.: United States Environmental Protection Agency), 1971.*

As discussed above, mass grading would occur over a total period of approximately 24 months. No residences would be constructed on the project site during the first phase of site mass grading; therefore, there would be no on-site noise impacts from the movement of construction equipment to the site during this first phase. However, it is anticipated that future homes would be constructed and occupied prior to the second phase of mass grading. Similar to the off-site receptors, future on-site residences facing the proposed Skyline Ranch Road would be exposed to heavy truck noise up to 91 dBA at 50 feet from the roadway.

The noise impacts for both existing off-site and future on-site noise sensitive receptors would be temporary and instantaneous as the trucks pass by these receptors. The truck traffic noise would diminish rapidly as the trucks travel away from the receptors. However, in those few instances when heavy equipment is brought into and taken from the site, noise levels would exceed thresholds of significance and would result in a significant impact without incorporation of mitigation measures.

(ii) Grading Noise Impacts

High noise levels created during grading would be associated with the operation of heavy-duty haul trucks, scrapers, graders, backhoes, front-end loaders, and water trucks. When construction equipment is operating, noise levels would be approximately 86 dBA at a distance of 50 feet from the perimeter of construction activities. Grading would occur over much of the proposed development area, with grading occurring within 25 feet of the western and southernmost boundaries.

Grading noise associated with the construction of the proposed Skyline Ranch Road access point on the northwestern portion of the developed area would likely be audible to residents within proposed TM 46018 located east of where Whites Canyon Road becomes Plum Canyon Road. The nearest proposed residence in TM 46018 to off-site grading activities associated with the drainage basins would be less than 100 feet to the northwest. A noise level of 80 dBA would be expected at the nearest residence within proposed TM 46018 during the grading activities at the offsite drainage basins. Therefore, in the event that TM 46018 is approved, developed, and occupied prior to grading for the Skyline Ranch project, noise levels would exceed thresholds and impacts would be significant without incorporation of mitigation measures.

Within the City of Santa Clarita, residences are currently located west and south of the project site. The closest existing residences to the proposed graded areas are along the eastern side of Falcon Crest Drive and Bakerton Avenue approximately 25 to 350 feet from the proposed grading areas. Grading would also occur within 25 feet of the southernmost property line and the rear lot lines of the single- and multi-family residences south of the entry road along Sierra Highway. At 25 feet, grading equipment (including scraper, loader, dozer and grader), noise

could be in excess of 86 dBA (85 dBA – 94 dBA). A noise level of 86 dBA at 50 feet would attenuate to approximately 70 dBA at 350 feet. Therefore, residents along the eastern side of Falcon Crest Drive and Bakerton Avenue and south of the entry road along Sierra Highway would experience noise levels that would exceed thresholds of significance and impacts would be significant without incorporation of mitigation measures. Similar noise impacts are also expected for residents located along Sierra Highway, southwest of the project site entrance.

The Leona Cox Community School is located approximately 1,200 feet from the nearest point of project grading. Grading noise levels would be approximately 52 dBA and would be below the 60 dBA significance threshold at this distance. Therefore, grading impacts would be less than significant at the Leona Cox Community School.

During grading activities, heavy-duty equipment would only intermittently pass near the project boundaries as the majority of grading would take place more central to the project site. In general, grading noise levels would attenuate to less than the 60 dBA single-family residential significance threshold and the 65 dBA multi-family residential and transient lodging significance threshold at distances of 1,000 feet, and 600 feet, respectively. However, approximately 40 single-family residences along the eastern side of Falcon Crest Drive and Bakerton Avenue would be exposed to grading noise levels that would exceed construction noise thresholds of significance. Additional residences further west of these uses may be exposed to adverse grading noise levels; however, the first row of residences along the eastern side of Falcon Crest Drive and Bakerton Avenue would serve to further attenuate grading noise at residences located further from the project site. While these impacts are considered significant without mitigation, the noise effects would be temporary and would only occur for that period of time when grading occurs in close proximity to the identified uses. Grading activities would also occur for the construction of offsite infrastructure improvements at Beneda Lane, Foxlane Drive, Canyon Crest, and Bookham Drive that would expose residential uses within 25 feet of grading equipment to noise levels of 86 dBA or greater resulting in a temporary significant impact.

As previously described, site grading would occur over approximately 24 months. Because on-site grading could occur after occupancy of earlier phases, future on-site residences could be exposed to noise from grading operations. The nearest on-site residences located east of Skyline Ranch Road and north of internal roadway loop are approximate 300 feet and have direct line-of-sight to the grading areas. The grading activity noise level at the nearest future on-site residences would be 70 dBA, which would exceed the 60 dBA construction noise thresholds of significance. As discussed above, these impacts are considered significant without mitigation; however, noise impacts would be temporary and would only occur when grading activities are located at the boundary closest to the noise receptors.

The construction of the sewer line within Sierra Highway is expected to progress at the rate of approximately 50 feet per day, for approximately two to three months. The sewer line

installation would use open-cut trenching techniques, and would proceed in the following general order: demolition and excavation, installation of new sewer line, backfill, and trench restoration. Construction activities could occur within 50 feet of noise sensitive receptors (residents and school) along the sewer line replacement alignment. It is anticipated that sewer line construction related activities would generate noise levels up to 86 dBA at the noise sensitive receptors, which would exceed the project's thresholds of significance. Short-term significant noise impacts on noise sensitive receptors are expected from the construction of the sewer line replacement. However, the noise impacts would temporary, approximately one week period when the construction is in close proximity, and would be limited to the daytime hours.

The construction of 78-inch storm drain and concrete-lined trapezoid channel installation would also use open-cut trenching techniques. Construction noise levels would be expected up to 86 dBA at the noise sensitive receptors within 50 feet near Goodvale Road. Construction noise from the storm drain and concrete-lined trapezoid channel installation would be considered a temporary significant impact. The estimated 86 dBA noise level represents the worst-case condition when heavy construction equipment would be operating near Goodvale Road. A materials processing facility would be located in the northeast corner of the development area. The facility would process approximately 68,000 cubic yards of excavated soil for use as base material for concrete and asphalt. The nearest noise-sensitive uses, single-family residential uses, are located approximately 3,000 feet to the east and northeast of the Materials processing facility site and separated by major ridgelines. The grading activity related noise level of 86 dBA at a reference distance of 50 feet would be up to 51 dBA at the single-family residential uses. As the grading related noise would not exceed 60 dBA threshold of significant, impacts would be less than significant

(iii) Building Construction Noise Impacts

This phase includes infrastructure, building construction, finish grading, and site cleanup. Primary noise sources associated with this phase include backhoes, loaders, hammering, diesel generators, compressors, forklifts, cranes, concrete trucks (for sidewalks, driveways, and patios), and light truck traffic. Noise levels would typically range from 77 to 86 dBA range at a distance of 50 feet. Finally, as the residences, the school, and the parks are constructed, trucks carrying materials to the site and trucks carrying away construction debris would traverse Skyline Ranch Road (the Whites Canyon Road extension through the site) via the new access to Sierra Highway. Truck traffic would be most frequent during the phases of the project's construction when materials are being transported to the site, when asphalt is being laid, and when concrete is being poured. Noise impacts from these heavy duty trucks would be approximately 91 dBA at 50 feet.

Within the County, noise levels generated during building construction would primarily affect occupants of on-site uses constructed in the project's early development phases. Any

on-site location with an uninterrupted line of sight to the construction noise sources could periodically be exposed to temporary noise levels that would exceed 75 dBA at less than 100 feet, which would exceed the 60 dBA construction noise threshold resulting in a significant temporary noise impact unless mitigated.

Within the City, future project building pads would range from approximately 150 to 200 feet from the rear lot lines of approximately ten sensitive receptors located to the south of the project site and north of Beneda Lane and Stonehill Way; however, given site topography and proposed grading to the south of these proposed lots, lines of the sight to the building pads would be impeded. At 200 feet, 86 dBA would attenuate to 74 dBA, but in the case of the proposed project, the noise level would attenuate to less than 60 dBA with incorporation of attenuation from intervening topography and would not adversely affect residents to the south.

In addition, the Leona Cox Community School is located approximately 1,200 feet from the nearest future building pad. Construction noise levels would be approximately 56 dBA L_{eq} and would be below the 60 dBA significance threshold at this distance. Therefore, building construction impacts would be less than significant at the Leona Cox Community School.

Multi-family residential and transient lodging uses along the access site via the proposed Whites Canyon Road extension from Sierra Highway may experience increased noise levels from construction-related haul trucks. These noise levels would be significant without incorporation of mitigation measures. However, it should be noted that heavy-duty truck travel along this roadway during the building construction period would be intermittent and would not be a continuous noise source. Road construction associated with the Skyline Ranch Road connection to Whites Canyon Road/ Plum Canyon Road is expected to generate noise levels ranging from 79 to 88 dBA at the distance of 50 feet from the construction equipment. However, there are no residential homes within close proximity to the proposed road construction. It is assumed that the housing development (TM 46018) on the south side of the Skyline Ranch Road connection to Whites Canyon Road/ Plum Canyon Road would not be occupied until after the construction of this road connection. In the unlikely event the housing development were occupied at the time of road construction, at the nearest single family residence, approximately 400 feet from the edge of the road) just west of the project boundary, road construction is estimated to generate noise levels in the range of 60 to 70 dBA. Construction noise levels would exceed the 60 dBA noise threshold resulting in a significant temporary noise impact unless mitigated.

Also within the City, the distance between future project building pads and rear yard lot lines along the western project site boundary range from 100 feet (along the eastern side of Falcon Crest Drive) to 550 feet at approximately 40 single-family residences. At 100 feet, 86 dBA would attenuate to 80 dBA while at 550 feet, it would attenuate to approximately

64 dBA. Therefore, noise levels would exceed the 60 dBA construction noise threshold, resulting in a significant temporary noise impact.

(iv) Construction Vibration Impacts

Project construction can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receptor building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibrations from construction activities rarely reach levels that damage structures. The FTA has published standard vibration velocities for construction equipment operations. The peak particle velocities for construction equipment pieces expected to be used during project construction are listed in Table 4.G-7, Typical Vibration Velocities for Potential Project Construction Equipment, on page 4.G-32.

Based on the FTA ground-borne data provided in Table 4.G-7, vibration velocities from the operation of typical construction equipment that could be used on the project site range from 0.003 to 0.089 inches per second PPV at 25 feet from the source of activity. At 75 feet from the source of activity, vibration velocities range from 0.001 to 0.017 inches per second PPV. Ground-borne vibration intensive activities such as pile driving or blasting would not be required during project construction. With regard to the proposed project, ground-borne vibration would be generated primarily during the site clearing, grading, and soils compaction processes. The PPV from bulldozer and heavy truck operations is shown to be 0.089 PPV and 0.076 inches per second PPV, respectively, at a distance of 25 feet. These ground-borne vibration values are below the architectural damage PPV threshold of 0.2 inches per second as well as the annoyance PPV threshold of 0.1 inches per second, for all vibration-sensitive receptors. As such, vibration impacts associated with construction would be less than significant.

(2) Operational Noise Impacts

As the project builds out, on- and off-site noise levels would increase with contributions from project-generated traffic, and from residential, school and park related activities on the project site itself. These potential noise impacts are discussed separately below.

(a) Roadway Noise

As stated in Section 4.F, Traffic/Access, of this EIR, the proposed project is projected to, generate approximately 13,100 average daily trips when completed and fully operational. Post-

Table 4.G-7

Typical Vibration Velocities for Potential Project Construction Equipment

Equipment	Approximate Peak Particle Velocity at 25 ft. (inch/second)	Approximate Peak Particle Velocity at 75 ft. (inch/second)^a
Large bulldozer	0.089	0.017
Caisson drilling	0.089	0.017
Loaded trucks	0.076	0.015
Jackhammer	0.035	0.007
Small bulldozer	0.003	0.001

^a $PPV \text{ at } 75 \text{ feet} = PPV \text{ at } 25 \text{ feet} * (25/75)^{1.5}$

Source: USDOT Federal Transit Administration, 1995.

project on- and off-site traffic noise levels were calculated using the FHWA Highway Traffic Noise Prediction Model.²²

(i) On-Site Roadway Noise

Results of the noise modeling demonstrates that proposed single-family residences located within 50 feet from Skyline Ranch Road right-of-way central to the project site would experience a noise level in excess of 60 dBA CNEL without mitigation. In addition, the eastern portion of the proposed school would experience significant noise impacts unless mitigated. However, it should be noted that the proposed school would be constructed using Federal, State, and local design standards meant to limit noise levels to those compatible with a learning environment. Noise levels along Skyline Ranch Road through the project site would be less than the 70 dBA CNEL significance threshold for the proposed parks and impacts would be less than significant. All noise calculations are provided in Appendix G of this EIR.

(ii) Off-Site Roadway Noise

Future roadway noise levels were calculated at various sensitive receptors along arterial and highway segments within the project study area that would be utilized by project traffic. Roadway segments evaluated in this noise impact analysis include:

- Whites Canyon Road n/o Soledad Canyon Road;

²² As previously discussed, the FHWA Highway Traffic Noise Prediction Model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified by the California Department of Transportation (Caltrans) to reflect average vehicle noise rates identified for California.

- Whites Canyon Road s/o Soledad Canyon Road;
- Plum Canyon Road w/o Whites Canyon Road;
- Plum Canyon Road e/ o Bouquet Canyon Road;
- Bouquet Canyon Road n/o Plum Canyon Road;
- Bouquet Canyon Road s/o Plum Canyon Road;
- Soledad Canyon Road e/o Rainbow Glen Drive;
- Soledad Canyon Road e/o Whites Canyon Road;
- Soledad Canyon Road w/o Sand Canyon Road;
- Sierra Highway s/o Soledad Canyon Road;
- Sierra Highway n/o Soledad Canyon Road; and
- Sierra Highway s/o Sand Canyon Road.
- Proposed Skyline Ranch Road e/o Whites Canyon Road/Plum Canyon Road

The predicted future (2017) with and without project noise levels at the sensitive receptors nearest to each roadway are presented below in Table 4.G-8, Off-Site Roadway Noise Impacts at Noise Sensitive Locations at Project Buildout, on page 4.G-34. As shown therein, the project contribution to noise levels at these land uses along the existing roadways would be 2.4 dBA or less, which would be a less than significant impact under Significance Criteria 1 and 2.^{23,24} Along proposed Skyline Ranch Road, project related traffic would increase by a maximum of 3.9 dBA along the segment just east of Whites Canyon Road/Plum Canyon Road. The increase in noise would be less than significant under Significance Criteria 1, 2 and 3, as the noise increase would not result in a change in land use compatibility or result in an unacceptable noise level. However, noise levels at noise- sensitive uses along Whites Canyon Road, Plum

²³ *Criterion 1 relates to an increase of 5 dBA or greater in noise level from project-related activities if levels remain within the same land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels remain within the normally acceptable range).*

²⁴ *Criterion 2 relates to an increase of 3 dBA or greater in noise level from project-related activities which results in a change in land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels change from normally acceptable to conditionally acceptable).*

Table 4.G-8

**Off-Site Roadway Noise Impacts at Noise Sensitive Locations
at Project Buildout**

Roadway Segment ^a	Existing Noise-Sensitive Land Use ^b	Predicted Roadway Noise at 50 feet from the Roadway CNEL, dBA			Project Increase CNEL	Criteria 1 or 2 ^c Significant Impact?	Criterion 3 ^c Significant Impact?
		Existing	Future Without Project	Future With Project			
<u>Whites Canyon Road</u>							
n/o Soledad Canyon Road	Single-Family Residential	71.3	71.6	71.4	-0.2	No	No
n/o Soledad Canyon Road	Sierra Vista JHS	71.3	71.6	71.4	-0.2	No	No
n/o Soledad Canyon Road	Canyon High School ^d	69.2	69.6	69.3	-0.3	No	No
s/o Soledad Canyon Road	Multi-Family Residential	70.4	71.8	71.7	-0.1	No	No
<u>Plum Canyon Road</u>							
w/o Whites Canyon Road	Single-Family Residential ^e	59.4	60.9	60.2	-0.7	No	No
e/o Bouquet Canyon Road	Single-Family Residential ^e	60.5	61.5	61.7	0.2	No	No
<u>Bouquet Canyon Road</u>							
n/o Plum Canyon Road	Single-Family Residential	64.7	66.1	66.1	0.0	No	No
s/o Plum Canyon Road	Single-Family Residential	67.4	67.0	67.0	0.0	No	No
<u>Soledad Canyon Road</u>							
e/o Rainbow Glen Drive	Multi-Family Residential ^e	66.1	65.9	65.8	-0.1	No	No
e/o Rainbow Glen Drive	Mobile Home Park ^e	66.1	65.9	65.8	-0.1	No	No
e/o Whites Canyon	Bethlehem Lutheran. School ^{d,e}	64.5	65.0	64.8	-0.2	No	No
e/o Whites Canyon	Mobile Home Park ^e	66.5	67.0	66.8	-0.2	No	No
w/o Sand Canyon Road	Single-Family Residential	68.8	68.8	68.8	0.0	No	No
w/o Sand Canyon Road	Park Activity Area ^d	66.8	66.8	66.8	0.0	No	No
w/o Sand Canyon Road	Multi-Family Residential	68.8	68.8	68.8	0.0	No	No
w/o Sand Canyon Road	Mobile Home Park ^e	63.8	63.8	63.8	0.0	No	No
e/o Sierra Highway	Canyon Country Pre-School	69.1	70.7	70.8	0.1	No	No
<u>Sierra Highway</u>							
s/o Soledad Canyon Road	Multi-Family Residential	70.6	69.1	69.6	0.5	No	Yes
n/o Soledad Canyon Road	Pre-School	68.6	69.8	70.6	0.8	No	No
n/o Soledad Canyon Road	Single-Family Residential	68.6	69.8	70.6	0.8	No	No

Table 4.G-8 (Continued)

**Predicted Off-Site Roadway Noise Levels at Noise Sensitive Locations
at Project Buildout**

Roadway Segment ^a	Existing Noise-Sensitive Land Use ^b	Predicted Roadway Noise at 50 feet from the Roadway CNEL, dBA			Project Increase CNEL	Criteria 1 or 2 ^c Significant Impact?	Criterion 3 ^c Significant Impact?
		Existing	Future Without Project	Future With Project			
s/o Proposed Skyline Ranch Road	Daycare/Pre-School and Motels ^f	71.3	72.5	73.2	0.7	No	Yes
s/o Proposed Skyline Ranch Road	Single-Family Residential	69.7	70.9	73.3 ^j	2.4	No	No
s/o Sand Canyon Road	Single-Family Residential	64.6	66.1	66.5	0.4	No	No
Skyline Ranch Road (Proposed)							
e/o Whites Canyon Road/Plum Canyon Road	Planned Single- and Multi-Family Residential ^g	--	60.7	64.6	3.9	No	No
w/o Sierra Highway	Existing Multi-Family Residential on Beneda Lane	55.6 ^h	56.8 ^h	58.0 ⁱ	1.2	No	No

^a For roadway segment limits, please refer to Figure 1-1 in the traffic study (Appendix F).

^b Nearest representative land use to the roadway.

^c Criterion 1: An increase of 5 dBA or greater in noise level from project-related activities if levels remain within the same land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the city (e.g., noise levels remain within the normally acceptable range); or
 Criterion 2: An increase of 3 dBA or greater in noise level from project-related activities which results in a change in land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the city (e.g., noise levels change from normally acceptable to conditionally acceptable); or
 Criterion 3: Any increase in noise levels where existing noise levels are already considered unacceptable under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the city.

^d Distance to receptor from roadway equals 100 feet.

^e Noise level incorporates a 5 dBA barrier insertion loss.

^f Distance to receptor from roadway equals 25 feet.

^g Estimated noise level at 50 feet from roadway.

^h Based on traffic on Sierra Highway.

ⁱ Based on traffic on Sierra Highway and proposed Skyline Ranch Road.

^j Estimated noise level at 22 feet from the Roadway for "Future with Project" due to proposed Road widening.

Source: PCR Services Corporation, 2008. Calculations are provided in Appendix G.

Canyon Road, Bouquet Canyon Road, Soledad Canyon Road, and Sierra Highway are already considered unacceptable under the City and State Guidelines and project noise impacts (increase in noise levels) at sensitive receptors along Sierra Highway, south of Soledad Canyon Road (e.g., multi-family residential) and south of proposed Skyline Ranch Road (e.g., daycare/preschool and motels) are considered to be significant under Criterion 3.²⁵

(b) Point Source Noise Impacts

Future residents of Skyline Ranch would generate and would be exposed to point source noise, including people talking, doors slamming, parking lot cleaning, air conditioning units, lawn care equipment, stereos, domestic animals, etc. These noise sources contribute to the ambient noise levels experienced in all similarly-developed areas and typically do not exceed the noise standards for the types of land uses proposed on the Skyline Ranch site. In addition, these noise sources are consistent with adjacent uses in the project vicinity and nearest off-site residences to the west of the site would experience project-related noise levels consistent with noise levels generated with those existing residences. Therefore, residential-related point source noise impacts would not be significant.

Project-related residential development would surround the proposed public school and park. Noise from the public school and park would be generated by a variety of sources including voices, public address systems, parking lot noise, and most notably sports activities. These noise levels may be in excess of the exterior noise standards presented in the County Code for single-family residences. It should be noted that public schools and parks are commonly located near residential areas with little or no compatibility problems. In general, the public school and park would be designed in such a way that they would not generate noise levels that exceed the standards set forth in the County Code. These design features may include, but would not be limited to, constructing classrooms such that they serve as a buffer between play field and residences, locating student pick-up and drop-off areas as far away from residences as feasible and erecting noise attenuation barriers between play fields and residences. Nonetheless, public school and park uses could generate noise levels in excess of the standards set forth in the County Code for single-family residences if proper design consideration and features were not put in place. Therefore, it is accepted that noise impacts on residential uses from the public school and park activities could be significant without incorporation of mitigation measures.

²⁵ *Criterion 3 relates to an increase in noise levels where existing noise levels are already considered unacceptable under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City.*

4. MITIGATION MEASURES

a. Construction

(1) Movement of Construction Equipment Noise

4.G-1(a) *Construction truck routes and equipment shall, to the extent feasible, avoid residential areas and roadways adjacent to noise sensitive receptors.*

4.G-1(b) *Wherever heavy duty truck traffic associated with project construction utilizes roadways with adjacent noise sensitive receptors, the trucks shall avoid peak hour traffic in order to minimize potential truck idling in proximity to these receptors.*

(2) Grading/Building Construction Noise

4.G-2(a) *All construction activities within 300 feet of an occupied single- or multi-family residential lot shall be restricted to between the hours of 7:00 A.M. and 7:00 P.M. Monday through Friday, and between 8:00 A.M. and 6:00 P.M. on Saturday. Construction work shall be prohibited on Sundays, New Year's Day, Independence Day, Thanksgiving Day, Christmas Day, Memorial Day, and Labor Day.*

4.G-2(b) *The construction contractor shall provide at least 72-hour advance notice of the start of construction activities to all noise sensitive uses within 300 feet of on-site and off-site occupied residences. Notification shall be by mail. The announcement shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints. Notices shall provide tips on reducing noise intrusion, for example, by closing windows facing the planned construction.*

4.G-2(c) *When construction operations occur within 300 feet of on- or off-site occupied residences, all feasible measures to reduce construction equipment noise levels at the residences shall be employed. These measures shall include among other things changing the location of stationary construction equipment to increase the distance between the equipment and the receptors, shutting off idling equipment, notifying residents in advance of construction work, and installing temporary acoustic barriers around stationary construction noise sources.*

4.G-2(d) *Prior to construction of structures on the residential lots east of existing residences east of Falcon Crest Drive and Bakerton Avenue, temporary acoustic barriers, shall be erected along the rear lot lines within 300 feet of*

the western site boundary. The extent of this requirement, including the height, length, number of properties, etc., shall be determined by an acoustical consultant retained by the applicant with access to project-related design and construction information. These barriers may be constructed of any solid material, shall be continuous with no gaps, and shall remain in place until building construction on these lots is completed.

b. Operational Mitigation Measures

(1) On-Site Roadway Noise

4.G-3(a) *Prior to construction of any residential development along Skyline Ranch Road a detailed acoustical analysis report prepared by a qualified acoustical consultant shall be submitted to the County for review and approval. For all on-site single family residences that have rear and/or side yard lines within 100 feet from the centerline of the proposed Skyline Ranch Road, the acoustical analysis report shall describe and quantify the noise sources impacting the area and the measures required to meet the 60 dBA CNEL residential noise standard. Based on a preliminary acoustical analysis included in Appendix G of this Draft EIR, the placement of a 6-foot high solid masonry wall is recommended at the locations shown in Appendix G, Figures 1 through 8, in order to achieve this noise standard.*

4.G-3(b) *Balconies, greater than six (6) feet in depth, are considered exterior living areas and must also meet the exterior noise standard. Therefore, balconies shall either be discouraged from exposure to exterior noise levels greater than the 65 dBA CNEL (residences that are within 50 feet from the edge of the proposed Skyline Ranch Road) standard for single-family residences through architectural or site design, or balconies shall be enclosed by solid noise barriers, such as 3/8-inch glass or 5/8-inch Plexiglas or other equally effective construction materials to a height specified by a qualified noise consultant.*

4.G-3(c) *All on-site single-family residences within 50 feet of the Skyline Ranch Road right-of-way shall include whole-house air conditioning so that windows facing the roadway may be closed without compromising a comfortable interior living environment.*

(2) Point Source Noise

4.G-4(a) *Prior to issuance of building permits, a detailed acoustical analysis study shall be prepared by a qualified acoustical consultant for all on-site single family residences that have rear and/or side yard lines within line-of-site of the proposed school and/or park and shall be submitted to the County. This*

acoustical analysis report shall describe and quantify the noise sources impacting the area. In the event the report shows that noise levels for the residences would exceed applicable standards, measures shall be required to reduce noise to levels that are within applicable standards. Such measures may include:

- *Locate student pick-up/drop-off and parking areas as far away from residences as feasible;*
- *Arrange school buildings such that they will provide shielding between the play field and the residences; or*
- *Provide acoustical walls with sufficient mass, length and height to break the line-of-sight between the residences and the play field.*

The acoustical analysis report shall be subject to review and approval by the County and shall ensure compliance with applicable noise standards in the County Code.

- 4.G-4(b)** *Prior to completion of plans for the proposed elementary school and public park, a detailed acoustical analysis report shall be prepared by a qualified acoustical consultant in consultation with the Sulfur Springs School District and the County of Los Angeles Department of Parks and Recreation. The requirements set forth in the report shall ensure that on-site single family residences that have rear and/or side yard lines within line-of-site of the proposed school and/or park are not subject to unacceptably high levels of noise (i.e., noise levels in excess of the standards provided in the County Code) from school yard or park activities. The acoustical analysis report, subject to review and approval by the County, shall include requirements relating to the locations of courts and playfields and the materials and heights of property walls as necessary to support compliance with applicable noise standards in the County Code.*

5. CUMULATIVE IMPACTS

Given the low level of point source noise that would be generated by on-site uses, cumulative noise impacts would primarily occur as a result of increased traffic on local roadways due to the proposed project and other developments (related projects) in the project study area as identified in Sections 4.F, Traffic/Access and 3.0, Cumulative Impact Analysis Methodology, of this EIR. Cumulative noise impacts have been assessed based on the difference between noise generated by existing traffic volumes and projected future traffic volumes at project build out year (2017), which includes existing volumes plus ambient growth, related projects, and project traffic. The predicted cumulative traffic noise levels are presented in Table 4.G-9, Cumulative Roadway Noise Impacts at Noise Sensitive Locations, on page 4.G-40.

Table 4.G-9

Cumulative Roadway Noise Impacts at Noise Sensitive Locations

Roadway Segment ^a	Existing Noise-Sensitive Land Uses ^b	Predicted Roadway Noise Levels at 50 feet from the Roadway CNEL, dBA		Decrease/ Increase in CNEL	Change in Land Use Classification?	Significant Under Criterion 1? ^c	Significant Under Criterion 2? ^c	Significant Under Criterion 3? ^c
		Existing	Future Project Buildout					
<u>Whites Canyon Road</u>								
n/o Soledad Canyon Road	Single-Family Residential ^d	71.3	71.4	0.1	No	No	No	Yes
n/o Soledad Canyon Road	Sierra Vista JHS ^d	71.3	71.4	0.1	No	No	No	Yes
n/o Soledad Canyon Road	Canyon High School ^{d,e}	69.2	69.3	0.1	No	No	No	Yes
s/o Soledad Canyon Road	Multi-Family Residential	70.4	71.7	1.3	No	No	No	Yes
<u>Plum Canyon Road</u>								
w/o Whites Canyon Road	Single-Family Residential ^f	59.4	60.2	0.8	Yes	No	No	No
e/o Bouquet Canyon Road	Single-Family Residential ^{d,f}	60.5	61.7	1.2	No	No	No	No
<u>Bouquet Canyon Road</u>								
n/o Plum Canyon Road	Single-Family Residential	64.7	66.1	1.4	No	No	No	No
s/o Plum Canyon Road	Single-Family Residential	67.4	67.0	-0.4	No	No	No	No
<u>Soledad Canyon Road</u>								
e/o Rainbow Glen Drive	Multi-Family Residential ^f	66.1	65.8	-0.3	No	No	No	No
e/o Rainbow Glen Drive	Mobile Home Park ^f	66.1	65.8	-0.3	No	No	No	No
e/o Whites Canyon	Bethlehem Lutheran School ^{e,f}	64.5	64.8	0.3	No	No	No	No
e/o Whites Canyon	Mobile Home Park ^f	66.5	66.8	0.3	No	No	No	No
w/o Sand Canyon Road	Single-Family Residential	68.8	68.8	0.0	No	No	No	No
w/o Sand Canyon Road	Park Activity Area ^e	66.8	66.8	0.0	No	No	No	No
w/o Sand Canyon Road	Multi-Family Residential	68.8	68.8	0.0	No	No	No	No
w/o Sand Canyon Road	Mobile Home Park ^f	63.8	63.8	0.0	No	No	No	No
e/o Sierra Highway	Canyon Country Pre-School	69.1	70.8	1.7	Yes	No	No	No

Table 4.G-9 (Continued)

Predicted Cumulative Roadway Noise Levels at Noise Sensitive Locations

Roadway Segment ^a	Existing Noise-Sensitive Land Uses ^b	Predicted Roadway Noise Levels at 50 feet from the Roadway CNEL, dBA		Decrease/ Increase in CNEL	Change in Land Use Classification?	Significant Under Criterion 1? ^c	Significant Under Criterion 2? ^c	Significant Under Criterion 3? ^c
		Existing	Future Project Buildout					
<u>Sierra Highway</u>								
s/o Soledad Canyon Road	Multi-Family Residential	70.6	69.6	-1.0	Yes	No	No	No
n/o Soledad Canyon Road	Pre School	68.6	70.6	2.0	Yes	No	No	No
n/o Soledad Canyon Road	Single-Family Residential	68.6	70.6	2.0	Yes	No	No	No
s/o Proposed Skyline Ranch Road	Daycare/Pre-School and Motels ^g	71.3	73.2	1.9	No	No	No	Yes
s/o Proposed Skyline Ranch Road	Single-Family Residential	69.7	73.3 ^k	3.6	Yes	No	Yes	No
s/o Sand Canyon Road	Single-Family Residential	64.6	66.5	1.9	No	No	No	No
<u>Skyline Ranch Road (Proposed)</u>								
e/o Whites Canyon Road/Plum Canyon Road	Planned Single- and Multi-Family Residential ^h	--	--	--	--	--	--	--
w/o Sierra Highway	Existing Multi-Family Residential on Beneda Lane	55.6 ⁱ	58.0 ^j	2.4	No	No	No	No

^a For roadway segment limits, please refer to Figure I-1 in the traffic study (Appendix F).

^b Nearest representative land use to the roadway.

^c Criterion 1: An increase of 5 dB (A) or greater in noise level from cumulative-related activities if levels remain within the same land use compatibility classification under the Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the city (e.g., noise levels remain within the normally acceptable range); or

Criterion 2: An increase of 3 dBA or greater in noise level from cumulative-related activities which results in a change in land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the city (e.g., noise levels change from normally acceptable to conditionally acceptable); or

Criterion 3: Any increase in noise levels where existing noise levels are already considered unacceptable under the State's Land Use Compatibility Guidelines for

Table 4.G-9 (Continued)

Predicted Cumulative Roadway Noise Levels at Noise Sensitive Locations

Roadway Segment ^a	Existing Noise-Sensitive Land Uses ^b	Predicted Roadway Noise Levels at 50 feet from the Roadway CNEL, dBA		Decrease/ Increase in CNEL	Change in Land Use Classification?	Significant Under Criterion 1? ^c	Significant Under Criterion 2? ^c	Significant Under Criterion 3? ^c
		Existing	Future Project Buildout					
<i>Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City of Santa Clarita.</i>								
^d <i>With construction of the proposed Golden Valley Road, Copper Hill Road, and the Whites Canyon Road extension through the these roadway segments would go down compared to existing conditions.</i>								
<i>Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the city.</i>								
^e <i>Distance to receptor from roadway equals 100 feet.</i>								
^f <i>Noise level incorporates a 5 dBA barrier insertion loss.</i>								
^g <i>Distance to receptor from roadway equals 25 feet.</i>								
^h <i>Not assessed as the homes are not yet built.</i>								
ⁱ <i>Based on traffic on Sierra Highway, distance to receptor from roadway equals 400 feet.</i>								
^j <i>Based on traffic on Sierra Highway (400 feet from receptor) and proposed Skyline Ranch Road (200 feet from receptor).</i>								
^k <i>Estimated noise level at 22 feet from the Roadway for "Future with Project" due to proposed Road widening.</i>								

Source: PCR Services Corporation, 2008. Calculations are provided in Appendix G.

As shown in Table 4.G-9, cumulative development would result in noise level increases of up to 3.6 dBA CNEL in the project study area. The noise levels shown are calculated for 50 feet or as indicated from the roadway right-of-way. Operation of the proposed Skyline Ranch Road and other roadways proposed in the project study area would result in a redistribution of traffic in the project study area, as well as a decrease in traffic volumes and associated noise levels on Bouquet Canyon Road south of Plum Canyon Road, Soledad Canyon east of Rainbow Glen Drive and Sierra Highway south of Soledad Canyon Road.

a. Impact Analysis Using Criterion 1

Criterion 1 refers to an increase of 5 dBA or greater in noise level from cumulative-related activities if levels remain within the same land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels remain within the normally acceptable range). No roadway segment would exceed Criterion 1 because no proposed land uses would experience an increase of 5.0 dBA or more. Therefore, cumulative impacts under Criterion 1 would be less than significant.

b. Impact Analysis Using Criterion 2

Criterion 2 refers to an increase of 3 dBA or greater in noise level from cumulative-related activities which results in a change in land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels change from normally acceptable to conditionally acceptable). Although there would be a change in land use compatibility classification at some of the analyzed roadway segments, only one roadway segment would have noise increase of more than 3 dBA. Sierra Highway just south of the new Skyline Ranch Road would increase noise level by 3.6 dBA due to cumulative increase in traffic volume and the proposed road widening. Therefore, cumulative impacts under Criterion 2 would be significant and unavoidable at one of the roadway segments.

c. Impact Analysis Using Criterion 3

Criterion 3 refers to any increase in noise levels where existing noise levels are already considered unacceptable under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City. Cumulative traffic noise contribution at the sensitive receptors and other similarly located receptors along the affected roadways would be 1.9 dBA or less and would not cause a perceptible noise increase at these locations. Nonetheless, because noise levels already exceed normally acceptable levels under the State and/or the City's

Guidelines for some roadway segments, any noise increases as a result of cumulative projects (including the proposed project) would result in significant noise impacts at sensitive receptors along the following roadway segments under Criterion 3:

- Whites Canyon Road n/o Soledad Canyon Road;
- Whites Canyon Road s/o Soledad Canyon Road; and
- Sierra Highway s/o the proposed Skyline Ranch Road.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

For sensitive receptors within the County of Los Angeles, construction noise levels would be as high as 93 dBA during movement of construction equipment, 57 dBA during grading, and 75 dBA during building construction. The mitigation measures prescribed above under subsection 4.a, would attenuate construction-related noise levels. However, noise levels would continue to exceed the County thresholds during the movement of construction equipment and grading phases even with implementation of the mitigation measures. Therefore, construction activity would result in a significant and unavoidable impact to receptors within the County of Los Angeles.

For sensitive receptors within the City of Santa Clarita, construction noise levels would be as high as 93 dBA during movement of construction equipment, 86 dBA during grading, and 77 dBA during building construction. The mitigation measures presented under subsection 4.a, above would attenuate construction-related noise levels. However, noise levels would continue to exceed thresholds of significance during the movement of construction equipment and grading phases even with implementation of the mitigation measures. Residential uses located southeast of the project site would also experience similar high noise levels during construction associated with the replacement of the sewer line in Sierra Highway between Sarabande Lane and Soledad Canyon Road, even with implementation of Mitigation Measures 4.G-2(a), 4.G-2(b), and 4.G-2(c). Therefore, construction activity would result in a significant and unavoidable impact to receptors within the City of Santa Clarita.

b. Operations

Based on preliminary calculations, Mitigation Measure 4.G-3(a) would require a 6-foot high barrier for residential uses within 100 feet from the centerline of Skyline Ranch Road to meet the 60 dBA CNEL residential noise standard. No on-site or off-site point source significant unavoidable operational noise impacts would result from the Skyline Ranch project with the implementation of the recommended mitigation measures. Regarding off-site sensitive receptors, the project would contribute a maximum noise level increase 3.9 dBA, which would

be a less than significant impact under Significance Criteria 1 and 2.^{26, 27} However, noise levels at noise-sensitive uses along a number of the roadway segments affected by project traffic are already considered unacceptable under the City and State Guidelines and project noise impacts at these locations are considered to be significant under Criterion 3.²⁸ Therefore, off-site mobile noise levels would result in significant and unavoidable impacts.

As discussed above, development of the proposed project and the related projects would result in significant cumulative noise impacts at sensitive receptor locations along segments of Sierra Highway and Whites Canyon Road under Significance Criteria 2 and 3.

²⁶ *Criterion 1 relates to an increase of 5 dBA or greater in noise level from cumulative-related activities if levels remain within the same land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels remain within the normally acceptable range).*

²⁷ *Criterion 2 relates to an increase of 3 dBA or greater in noise level from cumulative-related activities which results in a change in land use compatibility classification under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City (e.g., noise levels change from normally acceptable to conditionally acceptable).*

²⁸ *Criterion 3 relates to an increase in noise levels where existing noise levels are already considered unacceptable under the State's Land Use Compatibility Guidelines for Noise for receptors within Los Angeles County, or the City of Santa Clarita Guidelines for Noise and Land Use Compatibility for receptors within the City.*

4.0 ENVIRONMENTAL IMPACT ANALYSIS

H. AIR QUALITY

1. INTRODUCTION

This section addresses potential impacts on air quality associated with the projected air emissions generated by the construction and operation (post-construction) of the proposed project. The analysis also addresses the consistency of the proposed project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan, and the County of Los Angeles General Plan. The analysis of proposed project-generated air emissions focuses on whether the proposed project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Where significant impacts are identified, mitigation measures are proposed. An analysis of potential project impacts on global climate change and the County's Green Building Program is provided in Section 4.S, Global Climate Change.

2. EXISTING CONDITIONS

a. Regulatory Framework

A number of statutes, regulations, plans and policies have been adopted which address air quality concerns. The project site and vicinity is subject to air quality regulations developed and implemented at the Federal, State, and local levels. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of the Federal Clean Air Act (CAA). Some portions of the CAA (e.g., certain mobile source requirements and other requirements) are implemented directly by USEPA. Other portions of the CAA (e.g., stationary source requirements) are implemented through delegation of authority to State and local agencies.

(1) Federal Level

(a) Federal Clean Air Act

The CAA was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS), as shown in Table 4.H-1, Ambient Air Quality Standard, on pages 4.H-2 and 4.H-3, and specifies future dates for achieving compliance. The CAA also mandates that the state submit and implement the

Table 4.H-1

Pollutant	Averaging Time	Ambient Air Quality Standards ^a		Federal Standards ^b		
		California Standards ^a	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
		Concentration ^c				
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM ₁₀)	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5})	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	0.030 ppm (56 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m ³)		—		
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	—	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)		
	3 Hour	—		—		
Lead (Pb) ^h	1 Hour	0.25 ppm (655 µg/m ³)	Atomic Absorption	—	—	—
	30 Day Average	1.5 µg/m ³		—		
	Calendar Quarter	—		1.5 µg/m ³		
	Rolling 3- Month Average ⁱ	—		0.15 µg/m ³		

Table 4.H-1 (Continued)

Ambient Air Quality Standards^a

Pollutant	Averaging Time	California Standards ^a		Federal Standards ^b		
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
Visibility	8 Hour	Extinction coefficient of 0.23 per kilometer — visibility of ten miles or more (0.07 — 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.				
Reducing Particles		Method: Beta Attenuation and Transmittance through Filter Tape.				
Sulfates (SO ₄)		24 Hour	25 µg/m ³			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ^h	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

^a California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter (PM₁₀, and PM_{2.5}) and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than ozone, particulate matter, and those based on annual or 3-month averages or arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the USEPA for further clarification and current federal policies.

^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; (parts per million) ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

^d Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^g Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

^h The California Air Resources Board has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

ⁱ National lead standard, rolling 3-month average: final rule signed October 15, 2008.

Source: California Air Resources Board (<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>, dated 11/17/08; U.S. Environmental Protection Agency, "National Ambient Air Quality Standards for Lead," 73 FR 69964 (11/12/2008).

State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The City of Santa Clarita and the County of Los Angeles are within the South Coast Air Basin (Basin), and as such are designated a non-attainment areas for certain pollutants that are regulated under the CAA.

The 1990 Amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which would most substantially affect the development of the proposed project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: (1) Ozone (O₃); (2) Nitrogen Dioxide (NO₂); (3) Sulfur Dioxide (SO₂); (4) Particulate Matter (PM₁₀); (5) Carbon Monoxide (CO); and (6) Lead (Pb). Table 4.H-1 shows the NAAQS currently in effect for each criteria pollutant. The NAAQS were amended in September 2006 to include an established methodology for calculating PM_{2.5} as well as revoking the annual PM₁₀ threshold. The CAA sets certain deadlines for meeting the NAAQS within the Basin including: (1) 1-hour ozone by the year 2010; (2) 8-hour ozone by the year 2024; (3) PM₁₀ by the year 2006; and (4) PM_{2.5} by the year 2015. Nonattainment designations are categorized into seven levels of severity: (1) basic, (2) marginal, (3) moderate, (4) serious, (5) severe-15,¹ (6) severe-17, and (7) extreme. Table 4.H-2, South Coast Air Basin Attainment Status, on page 4.H-5 lists the criteria pollutants and their relative attainment status. On June 11, 2007, the USEPA reclassified the Basin as a federal “attainment” area for CO and approved the Basin’s CO maintenance plan.² It should be noted that the Basin met the PM₁₀ standards in 2006 at all stations except for western Riverside.³ The Basin fails to meet national standards for O₃, PM₁₀, and PM_{2.5} and therefore is considered a Federal “non-attainment” area for these pollutants. Mobile source emissions are regulated in accordance with Title II provisions. These provisions require use of cleaner burning gasoline, and other cleaner burning fuels such as methanol and natural gas. Manufacturers of on-road and off-road engines are also required to reduce tailpipe emissions of hydrocarbons, and NO_x.⁴

(b) United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) administers the CAA and other federal air quality legislation. As a regulatory agency, USEPA’s principal functions include the following: setting NAAQS; preparing guidance for and approval of SIPs to attain or

¹ The “-15” and “-17” designations reflect the number of years within which attainment must be achieved.

² “Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule.” *Federal Register* 72 (11 May 2007):26718-26721.

³ *South Coast Air Quality Management District, 2007 AQMP*.

⁴ NO_x is a collective term which includes all forms of nitrogen oxides (NO, NO₂, NO₃) which are emitted as byproducts of the combustion process. However, since most of these chemicals eventually convert to NO₂ in the atmosphere, all NO_x emissions are conservatively reported as the criteria pollutant NO₂.

Table 4.H-2

South Coast Air Basin Attainment Status

Pollutant	National Standards	California Standards
Ozone (1-hour standard)	N/A ^a	Non-attainment
Ozone (8-hour standard)	Extreme	N/A
Carbon Monoxide	Attainment ^b	Attainment ^c
Nitrogen Dioxide	Attainment ^c	Attainment ^c
Sulfur Dioxide	Attainment ^c	Attainment ^c
PM ₁₀ (24-hour standard)	Serious	Non-attainment
PM ₁₀ (annual standard)	N/A ^d	Non-attainment
PM _{2.5}	Serious	Non-attainment
Lead	Attainment ^c	Attainment ^c
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment ^c
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride	N/A	N/A ^e

N/A = not applicable

^a The NAAQS for 1-hour ozone was revoked on June 15, 2005 for all areas except Early Action Compact areas.

^b The Basin was officially reclassified by the USEPA on June 11, 2007. "Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule." *Federal Register* 72 (11 May 2007):26718-26721.

^c An air basin is designated as being in attainment for a pollutant if the standard for that pollutant was not violated at any site in that air basin during a three year period.

^d The NAAQS for annual PM₁₀ was revoked on September 21, 2006.

^e In 1990 the CARB identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the CARB does not monitor or make status designations for this pollutant.

Source: USEPA Region 9 and California Air Resources Board, 2007.

maintain these standards; establishing federal emission limits for major sources of air emissions; conducting research and developing standard methods for measuring air emissions; inspecting and monitoring emission sources; enforcing Federal air quality laws, and promulgating new regulations, and providing financial and technical support for air quality research and development programs. The USEPA also administers Federal conformity rules and regulations.

(2) State Level

(a) California Clean Air Act

The California Clean Air Act (CCAA), signed into law in September 1988, sets air quality standards in the State of California that are generally more stringent than the corresponding Federal requirements. The CCAA requires all areas of the State to achieve and

maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. California has also set standards for PM_{2.5}, sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Table 4.H-1 on pages 4.H-2 and 4.H-3 also shows the CAAQS currently in effect for criteria pollutants. By a separate State statute, the SCAQMD was established as the local air pollution control agency for the Basin.

Air pollution from commercial and industrial facilities is regulated by local air quality management districts. All air pollution control districts have been formally designated as attainment or nonattainment for each CAAQS. Table 4.H-1 lists the criteria pollutants and their relative attainment status.

Serious or worse nonattainment areas are required to prepare air quality management plans to include specified emission reduction strategies in an effort to meet clean air goals. The requirements include:

- Application of Best Available Retrofit Control Technology to all existing sources.
- Development of control programs for area sources (e.g., architectural coatings and solvents), and indirect sources (e.g., motor vehicle use generated by residential and commercial development).
- A District permitting system designed to allow no net increase in emissions from any new or modified emission sources.
- Implementation of reasonably available transportation control measures, and assurance of a substantial reduction in the growth rate of vehicle trips and miles traveled.
- Use of low emission vehicles by fleet operations.
- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions (or 15 percent or more in a 3-year period) for Reactive Organic Compounds (ROC), NO_x, CO, PM₁₀ and PM_{2.5}. However, air basins may use an alternative emission reduction strategy which achieves a reduction of less than 5 percent per year under certain circumstances; and
- Demonstrating compliance with the California Air Resources Board's established reporting periods for compliance with air quality goals. A 7-year initial reporting period from January 1, 1988, to December 31, 1994, was established. Subsequent reporting periods occur every 3 years (i.e., 1997, 2000, etc.). The 1991 Air Quality Management Plan (AQMP) sought to achieve a 35 percent emissions reduction for

the initial 3-year period, followed by a 15 percent reduction in emissions within each subsequent 3-year period.

(b) State Regulatory Agencies—California Air Resources Board

At the State level, the California Air Resources Board (CARB) is responsible for implementation of the CCAA. The CCAA sets forth requirements that apply to emission sources in the State in addition to the CAA. Some portions of the CCAA (e.g., mobile source and consumer product requirements) are implemented directly by CARB. Other portions (e.g., stationary source requirements) are implemented through delegation of authority to local and regional agencies.

The CARB is the State agency responsible for the coordination and administration of both state and federal air pollution control programs within California. The CARB undertakes research, sets CAAQS, provides technical assistance to local Air Quality Management Districts (AQMDs) and Air Pollution Control Districts (APCDs), compiles emission inventories, develops suggested control measures and provides oversight of local programs.

A key function of the CARB is to coordinate and guide regional and local air quality planning efforts required by the CCAA and to prepare and submit the SIP to the USEPA. The California SIP is comprised of plans developed at the regional or local level. Each of these plans is reviewed and approved by the USEPA prior to incorporation into the SIP. The CARB also establishes emission standards for motor vehicles. The CAA allows California to adopt more stringent vehicle emission standards than the rest of the nation due to the state's severe O₃ non-attainment status.

(3) Regional Level

(a) South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) has jurisdiction over an area of 10,743 square miles consisting of all of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Basin is a subregion of the SCAQMD's jurisdiction and covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. While air quality in this area has improved, with 2003 (the latest year for which comprehensive data are available) registering some of the lowest levels of air pollutant concentrations in decades, the Basin requires continued diligence to meet air quality standards.

The SCAQMD has adopted a series of Air Quality Management Plans (AQMP) to meet the CAAQS and NAAQS. The 2007 AQMP employs the most up-to-date science, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. Policies and measures currently contemplated by responsible agencies to achieve federal standards for healthful air quality in the Basin are built upon in the 2007 AQMP Plan. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources and area sources.

The 2007 AQMP Plan builds upon improvements accomplished from previous plans, and aims to incorporate all feasible control measures while balancing costs and socioeconomic impacts for the attainment of air quality standards. However, it highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under federal Clean Air Act.

The 2007 AQMP relies on a comprehensive and integrated control approach aimed at achieving the PM_{2.5} standard by 2015 through implementation of short-term and mid-term control measures and achieving the 8-hour ozone standard by 2024 based on implementation of additional long-term measures. These reductions are expected to be achieved through implementation of new and advanced control technologies as well as improvement of existing control technologies. Control techniques requiring substantial levels of committed funding for implementation would also fall under this category of long-term emission reductions. The 2007 AQMP control measures consist of four components: (1) the District's Stationary and Mobile Source Control Measures; (2) CARB's Proposed State Strategy; (3) the District Staff's Proposed Policy Options to Supplement CARB's Control Strategy; and (4) Regional Transportation Strategy and Control Measures provided by SCAG. Overall, the Plan includes 31 stationary and 30 mobile source measures. The District's control strategy for stationary and mobile sources is based on the following approaches: (1) facility modernization; (2) energy efficiency and conservation; (3) good management practices; (4) market incentives/compliance flexibility; (5) area source programs; (6) emission growth management; and (7) mobile source programs.

The SCAQMD also adopts rules to implement portions of the AQMP. Several of these rules would apply to construction or operation of the project. For example, Rule 403 requires the implementation of best available fugitive dust control measures during active operations capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. Rule 403 prohibits a construction site from causing an incremental PM₁₀ concentration impact at the property line of more than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) as determined through PM₁₀ high-volume sampling, but the concentration standard and associated PM₁₀ sampling do not

apply if specific measures identified in the rule (discussed below) are implemented and appropriately documented.

The purpose of Rule 403 is to reduce the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources (e.g., construction activity) by requiring actions to prevent, reduce or mitigate fugitive dust. The general requirement prohibits any person from causing or allowing emissions of fugitive dust from any active operation, open storage pile or disturbed surface area such that: (1) dust remains visible in the atmosphere beyond the property line of the emissions source; or (2) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook) if the dust emission is the result of movement of a motorized vehicle. However, these general requirements do not apply if all applicable Rule 403 dust control measures (discussed below) are implemented.

SCAQMD Rule 403 identifies three sets of specific dust control measures for certain types of operations or conditions that include: normal wind conditions, high wind conditions (i.e., greater than 25 mph), and large operations. Dust control measures under normal wind conditions are the minimum requirements for all construction sites. Some of these measures include: pre-watering soil before cut and fill activities, stabilizing exposed surfaces by watering twice daily, limiting vehicle speeds to 15 mph, providing track-out for vehicles, and covering or stabilizing loose soil. Rule 403 requirements under high wind conditions call for additional dust control measures on top of the minimum requirements, some of which include: ceasing all active operations, stabilizing exposed surfaces by watering at least three times a day, and stopping all vehicular traffic. Larger operations have need of a more stringent set of minimum requirements due to the magnitude of construction activities, but high wind conditions apply to all sites regardless of size.

Large operations are defined as active operations on property that contains 50 or more acres of disturbed surface area; or any earth moving operation with a daily earth-moving volume of 5,000 cubic yards or more three times during the most recent 365-day period. An example of dust control measures required for large operations would include: employing or contracting a certified dust control officer that is available to be on site within 30 minutes, maintaining soil moisture at a minimum of 12 percent, watering haul roads three times daily or applying chemical stabilizers, or applying water to at least 80 percent of all inactive disturbed surface areas on a daily basis.

As mentioned previously, the sampling requirement and the general requirement do not apply on the condition that the specific dust control measures identified in the rule are implemented and appropriately documented. For additional details on dust control measures and other requirements, Rule 403 in its entirety is provided in Appendix H of this Draft EIR.

The SCAQMD published the CEQA Air Quality Handbook (the Handbook) in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the Handbook with the Air Quality Analysis Guidance Handbook. While this process is underway, the SCAQMD recommends that the lead agency avoid using the screening tables in the Handbook's Chapter 6, because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristic of the land uses identified in these screening tables were based on the fifth edition of the ITE Trip Generation Manual, instead of the most current seventh edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L. The SCAQMD instead recommends using other approved models to calculate emissions from land use projects, such as the URBEMIS 2007 model.⁵

In addition, the SCAQMD has published a guidance document called the Localized Significance Threshold Methodology for CEQA Evaluations (June 2003) that is intended to provide guidance in evaluating localized effects from mass emissions during construction. This document was also used in the preparation of this analysis. Recently, the SCAQMD adopted additional guidance regarding PM_{2.5} in a document called Final-methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds (October 2006).

The SCAQMD has also adopted land use planning guidelines in the Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (May 2005), which also considers impacts to sensitive receptors from facilities that emit TAC emissions. SCAQMD's distance recommendations are the same as those provided by CARB (e.g. a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

(b) Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community

⁵ <http://www.aqmd.gov/ceqa/oldhdbk.html>.

development and the environment. SCAG serves as the Federally designated metropolitan planning organization (MPO) for the southern California region and is the largest MPO in the United States. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan (RTP) and Regional Transportation Improvement Plan (RTIP), which address regional development and growth forecasts. These plans form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of air quality forecasts and consistency analyses included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within the County General Plan.

(4) County Level

The County of Los Angeles General Plan is the primary policy document in the unincorporated areas of Los Angeles County. The General Plan does not include an Air Quality Element and the County has not established independent thresholds of significance for air quality.

(5) Consistency with Adopted Plans and Policies

The SCAQMD has adopted criteria for assessing consistency with regional plans and the AQMP in its *CEQA Air Quality Handbook*. In accordance with the procedures established in the SCAQMD *CEQA Air Quality Handbook*, the following criteria are required to be addressed in order to determine the project's consistency with SCAQMD and SCAG policies:

1. Will the project result in any of the following:
 - An increase in the frequency or severity of existing air quality violations; or
 - Cause or contribute to new air quality violations; or
 - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

SCAQMD methodologies require that an air quality analysis for projects such as the proposed project include forecasts of project emissions in a local context during project occupancy.

2. Will the project exceed the assumptions utilized in preparing the AQMP?

For determining consistency with SCAQMD and SCAG air quality policies, it must be recognized that air quality planning within the Basin focuses on the attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are

based on assumptions regarding population, housing and growth trends. Thus, the SCAQMD's second criteria for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP.

Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with population, housing, and employment growth projections; (2) proposed project mitigation measures; and (3) appropriate incorporation of land use planning strategies.

(6) Potential Health Impacts

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the prevalent air quality.

The following pollutants are regulated by the EPA and therefore are subject to emission reduction measures adopted by Federal, State and other regulatory agencies.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NOx) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing, and pain in the chest and throat thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles because of incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of moderate levels of carbon monoxide can cause nausea, dizziness, and headaches, and can be fatal at high concentrations.

Particulate Matter (PM_{10} and $PM_{2.5}$): The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than ten microns (PM_{10}) and even smaller particles with a aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), are trapped in the nose, throat, and upper respiratory tract. These small particulates enter the body and could potentially aggravate existing heart and lung

diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀ and PM_{2.5}. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulate could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Nitrogen Oxides (NO_x): Major sources of NO_x include power plants, large industrial facilities, and motor vehicles. Nitrogen oxides are emitted from combustion processes and irritate the nose and throat. It increases susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_x is as a precursor to the formation of ozone.

Sulfur Dioxide (SO₂): Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulate appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

b. Environmental Setting

(1) Regional Air Quality

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin making it an area of high pollution potential.

The greatest air pollution impacts throughout the Basin occur from June through September. This condition is generally attributed to the large amount of pollutant emissions,

light winds and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season and time of day. Ozone concentrations, for example, tend to be lower along the coast, higher in the near inland valleys and lower in the far inland areas of the Basin and adjacent desert. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California.

The SCAQMD has also published a Basin-wide air toxics study (MATES II, *Multiple Air Toxics Exposure Study*, March 2000). The MATES II study represents one of the most comprehensive air toxics studies ever conducted in an urban environment. The study was aimed at determining the cancer risk from toxic air emissions throughout the Basin by conducting a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize health risks for those living in the Basin. The study concluded that the average carcinogenic risk in the Basin is approximately 1,400 in one million. Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 70 percent of all risk is attributed to diesel particulate emissions, approximately 20 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 10 percent of all carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses such as dry cleaners and chrome plating operations).

(2) Local Air Quality

(a) Existing Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Basin and has divided the Basin into air monitoring areas or source receptor areas. The project site is located in the Santa Clarita Valley Monitoring Area. The monitoring station for this area is the Santa Clarita–Placerita Monitoring Station, which is located approximately 5 miles southwest of the project site at 12th Street and Placerita Canyon Road. This station presently monitors pollutant concentrations of O₃, CO, NO₂, and PM₁₀. The closest monitoring station that monitors PM_{2.5} is the Reseda Monitoring Station, located at 18330 Gault Street in the City of Reseda. It is located approximately 20 miles south of the project site. The closest monitoring station that monitors SO₂ is the Burbank Monitoring Station, located at 228 West Palm Avenue in the City of Burbank. It is located approximately 23 miles southeast of the project site. The most recent data available from these monitoring stations encompassed the years 2002 to 2006. The monitoring data, provided in Table 4.H-3, Pollutant Standards and Ambient Air Quality Data, on pages 4.H-15 and 4.H-16, shows the following pollutant trends:

Table 4.H-3

Pollutant Standards and Ambient Air Quality Data

Pollutant/Standard	2002	2003	2004	2005	2006
Ozone (O₃)					
<u>O₃ (1-hour)</u>					
Maximum Concentration (ppm)	0.17	0.19	0.16	0.17	0.16
Days > CAAQS (0.09 ppm)	81	89	69	65	62
Days > NAAQS (0.12 ppm)	32	35	13	11	20
<u>O₃ (8-hour)</u>					
Maximum Concentration (ppm)	0.15	0.15	0.13	0.14	0.12
Days > NAAQS (0.08 ppm)	56	69	52	47	40
Particulate Matter (PM₁₀)^a					
<u>PM₁₀ (24-hour)</u>					
Maximum Concentration (µg/m ³)	61	72	54	55	53
Days > CAAQS (50 µg/m ³)	7	10	2	1	1
Days > NAAQS (150 µg/m ³)	0	0	0	0	0
<u>PM₁₀ (Annual Average)</u>					
Annual Arithmetic Mean (50 µg/m ³)	33.3	31.8	28.1	25.8	23.4
Annual Geometric Mean (20 µg/m ³)	32.5	--	--	--	--
Particulate Matter (PM_{2.5})^b					
<u>PM_{2.5} (24-hour)</u>					
Maximum Concentration (µg/m ³)	48.8	47.5	56.2	39.6	44.1
Days > NAAQS (65 µg/m ³)	0	0	0	0	0
<u>PM_{2.5} (Annual Average)</u>					
Annual Geometric Mean (12 µg/m ³)	18.9	16.4	15.6	35.8	12.9
Carbon Monoxide (CO)					
<u>CO (1-hour)</u>					
Maximum Concentration (ppm)	3	3	5	2	2
Days > CAAQS (20 ppm)	0	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0	0
<u>CO (8-hour)</u>					
Maximum Concentration (ppm)	1.9	1.7	3.7	1.3	1.3
Days > CAAQS (9.0 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0

Table 4.H-3 (Continued)

Pollutant Standards and Ambient Air Quality Data

Pollutant/Standard	2002	2003	2004	2005	2006
Nitrogen Dioxide (NO₂)					
<u>NO₂ (1-hour—State Standard)</u>					
Maximum Concentration (ppm)	0.10	0.12	0.09	0.09	0.08
Days > CAAQS (0.25 ppm)	0	0	0	0	0
<u>NO₂ (Annual Average—National Standard))</u>					
Annual Arithmetic Mean (0.05 ppm)	0.02	0.02	0.02	0.02	0.02
Sulfur Dioxide (SO₂)					
<u>SO₂ (1-hour)</u>					
Maximum Concentration (ppm)	0.01	0.01	0.02	0.01	0.01
Days > CAAQS (0.25 ppm)	0	0	0	0	0
<u>SO₂ (24-hour)</u>					
Maximum Concentration (ppm)	0.007	0.005	0.01	0.006	0.004
Days > CAAQS (0.04 ppm)	0	0	0	0	0
Days > NAAQS (0.14 ppm)	0	0	0	0	0
<u>SO₂ (Annual Average)</u>					
Annual Arithmetic Mean	--	--	--	--	0.0006
Days > NAAQS (0.03 ppm)	--	--	--	--	--

ppm = parts per million $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter N/A = not available.

Note: Ambient data for airborne lead is not included in this table since the Basin is currently in compliance with state and national standards for lead.

^a PM₁₀ samples were collected every six days.

^b PM_{2.5} samples were collected every three days.

Source: South Coast Air Quality Management District, Air Quality Data 2002–2006.

Ozone—The maximum 1-hour ozone concentration recorded during the reporting period was 0.19 ppm (2003). During the 2002 to 2006 reporting period, the California standard of 0.09 ppm was exceeded between 62 and 89 times annually. The National standard of 0.12 ppm was exceeded between 11 and 35 times annually. The maximum 8-hour ozone concentration recorded during the reporting period was 0.15 ppm in 2003. During the 2002–2006 reporting period, the National standard of 0.12 ppm was exceeded between 40 and 69 times with the maximum number of exceedances occurring in 2003.

Particulate Matter (PM₁₀)—The highest recorded concentration during the reporting period was 72 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) of air particulates (2003). During this reporting period, the California PM₁₀ standard was calculated to be exceeded between 1 and 10 times annually, with the highest number of exceedances in 2003. No exceedances of the National standard occurred between 2002 and 2006. The highest annual arithmetic mean recorded was $33 \mu\text{g}/\text{m}^3$ in 2002. The highest annual geometric mean recorded was $33 \mu\text{g}/\text{m}^3$ in 2002.

Particulate Matter (PM_{2.5})—The highest recorded concentration during the reporting period was $56.2 \mu\text{g}/\text{m}^3$ of air particulates (2004). During this reporting period, no exceedances of the National standard occurred. The highest annual arithmetic mean recorded was 18.9 in 2002.

Carbon Monoxide—The highest recorded 1-hour CO and 8-hour CO concentrations were 5 ppm and 1.9 ppm, respectively. Neither the California nor National CO standards were exceeded during the reporting period.

Nitrogen Dioxide—The highest recorded 1-hour concentration of NO₂ during the reporting period was 0.12 ppm (2003) and the highest recorded annual arithmetic mean during the reporting period was 0.02 (2002–2006). Neither the California nor National NO₂ standards were exceeded during the reporting period.

Sulfur Dioxide—The highest recorded 1-hour and 24-hour SO₂ concentrations were 0.02 ppm (2004) and 0.007 ppm (2002), respectively. No violations of the California or National SO₂ standards were recorded during this reporting period.

Lead—The Basin is currently in compliance with California and National standards for Pb and, therefore, no ambient data for airborne Pb is available for the applicable monitoring station.

(b) Existing Health Risk in the Surrounding Area

According to the SCAQMD's MATES-II study, the proposed project area is within a cancer risk zone of approximately 200 to 300 in one million, which is largely due to diesel particulate emissions generated from mobile sources. In comparison, the average cancer risk in the Basin is 1,400 per million.

(c) Sensitive Receptors and Locations

Some population groups, such as children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air

pollution than others. Sensitive land use receptors in the vicinity of the proposed project site include single- and multi-family residences and school sites and are shown in Figure 4.H-1, Air Quality Sensitive Receptors, on page 4.H-19.

3. PROJECT IMPACTS

An analysis of potential air quality impacts was conducted for construction and operation (post-construction) of the proposed project. For each of these phases, an analysis was performed for regional emissions. The analysis also addresses local area concentrations of PM₁₀, PM_{2.5}, CO, and NO₂ for construction impacts.⁴⁸ CO is the primary pollutant of concern when analyzing local traffic-related air quality impacts, and it is the only pollutant from mobile sources for which standardized modeling methodologies for estimating localized concentrations have been developed and approved by the SCAQMD. All emissions calculation worksheets and air quality modeling output files are provided in Appendix H of this Draft EIR.

a. Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant impact on the environment. The County of Los Angeles has not adopted specific significance thresholds for air quality impacts; however, because of the SCAQMD's regulatory role in the Basin, the significance thresholds recommended in the SCAQMD CEQA Handbook and LST Guidance Document will be used in evaluating project impacts. Daily mass emissions thresholds are provided in Table 4.H-4, SCAQMD Burden Emissions Significance Thresholds, on page 4.H-20. In addition, the proposed project would have a significant impact with regard to air pollutant concentrations if any of the following were to occur:

- Construction emissions (i.e., fugitive dust and combustion emissions) cause an incremental increase in localized PM₁₀ or PM_{2.5} concentrations of 10.4 µg/m³ or cause a violation of NO₂ and CO CAAQS;⁴⁹
- The project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively;

⁴⁸ While an AAQS has been established for PM_{2.5}, no significance thresholds have been established for evaluating potential PM_{2.5} impacts. Therefore, PM₁₀ is used as an indicator for potential PM_{2.5} impacts.

⁴⁹ The current SCAQMD CEQA Air Quality Handbook does not include a concentration threshold for localized pollutants. However, SCAQMD currently recommends this threshold of significance for analyzing localized impacts. Source: *Localized Significance Threshold Methodology*, June 2003.

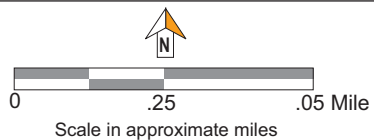
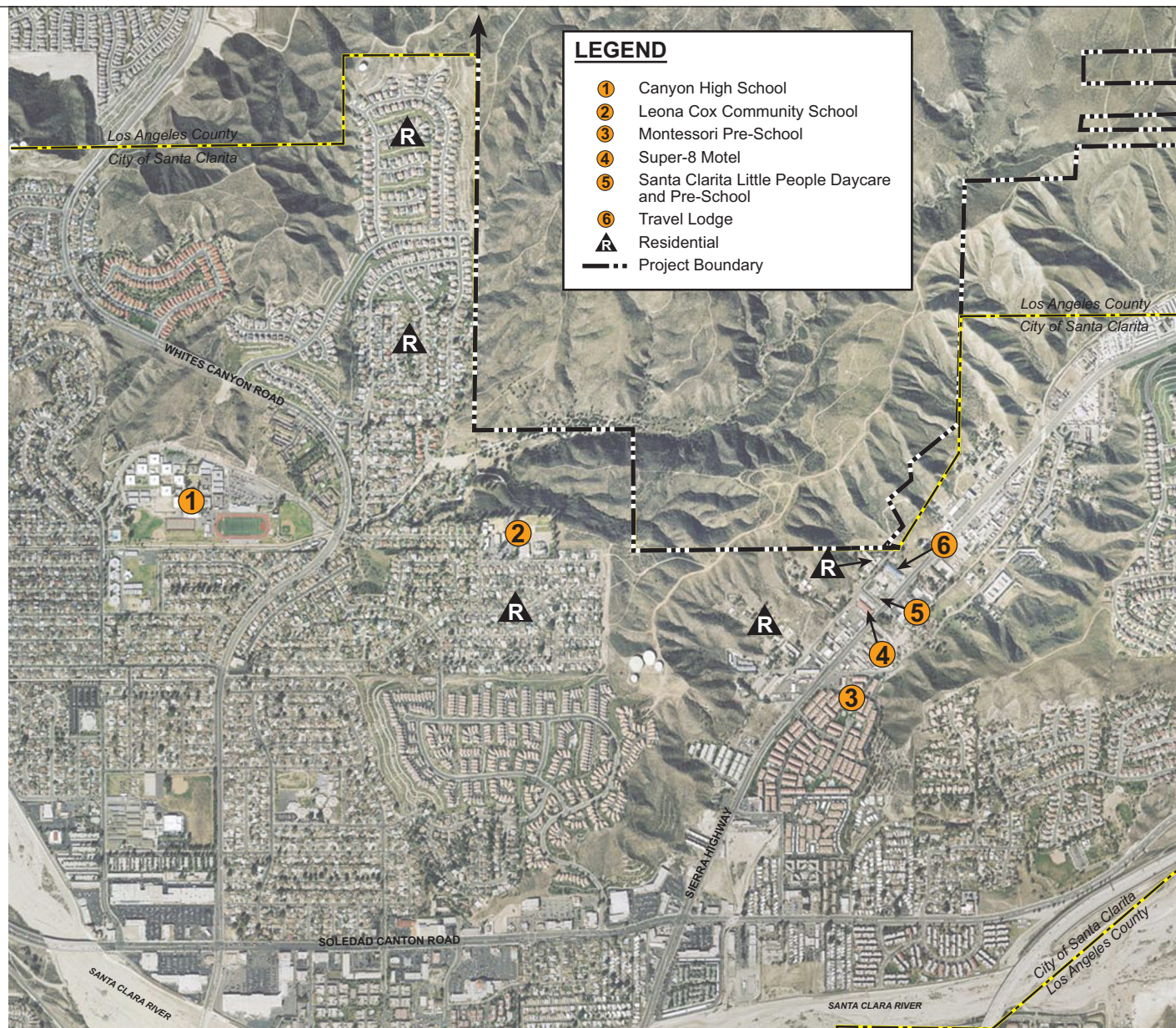


Figure 4.H-1
Air Quality Sensitive Receptors

Source: PRC Services Corporation 2007; Google Earth Pro, 2006

Table 4.H-4**SCAQMD Burden Emissions Significance Thresholds**

Criteria Pollutant	Construction-Period Emissions	Operations-Period Emissions
Carbon Monoxide	550 lbs/day	550 lbs/day
Nitrogen Oxides	100 lbs/day	55 lbs/day
Volatile Organic Compounds	75 lbs/day	55 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day
Fine Particulates (PM _{2.5})	55 lbs/day	55 lbs/day
Sulfur Oxides	150 lbs/day	150 lbs/day

Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, November 1993.

- The incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard or 0.45 ppm for the 8-hour CO standard;
- The project creates objectionable odors;
- Project emissions sources emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0;⁵⁰ or
- The project is found to be inconsistent with the AQMP.

b. Methodology

(1) Construction

The analyses of construction activities include analyses of regional emissions and local emissions of PM₁₀, PM_{2.5}, NO₂, and CO. In addition to these analyses, a qualitative analysis of potential odor impacts associated with construction of the project is provided. A qualitative analysis of odors is provided since the information and technology currently available does not allow a precise prediction of a community's reaction to an odor. Please refer to the Air Quality Technical Appendix, Appendix H of this Draft EIR, for a detailed discussion of modeling techniques, factors and assumptions for each analysis.

⁵⁰ SCAQMD Risk Assessment Procedures for Rules 1401 and 212, November 1998.

(2) Operations

For post-construction operations, the analysis addresses regional emissions of CO, VOC, NO_X, SO_X, PM₁₀ and PM_{2.5} as well as local area concentrations of a specific pollutant, CO, generated by mobile sources. The modeling techniques (e.g., EPA's Industrial Source Classification (ISC-ST) model for localized construction impacts, CARB's URBEMIS2007 for regional construction and operation impacts, and Caltrans' CALINE4 for localized CO traffic impacts), factors and assumptions for each analysis are discussed in the Impact Analysis section below. In addition to these analyses, a qualitative analysis of potential air toxics and odor impacts associated with the project operations is provided. A qualitative analysis of odors is provided since the information and technology currently available does not allow a precise prediction of a community's reaction to an odor. Please refer to the Air Quality Technical Appendix, Appendix H of this Draft EIR, for a detailed discussion of modeling techniques, factors and assumptions for each analysis.

Lead (Pb) emissions are not included in the analysis. The Basin is currently in compliance with State and federal lead standards, as the primary sources of atmospheric lead (leaded gasoline and lead-based paint) are no longer available in the Basin.

c. Impact Analysis

(1) Construction Impacts

Construction emissions for the project are based on both current emission factor data and the magnitude of development for the project. The total amount of construction, the duration of construction and the intensity of construction activity could have a substantial effect upon the amount of construction emissions, concentrations and the resulting impacts occurring at any one time. As such, the emission forecasts provided reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of these conservative assumptions, actual construction emissions would be, in all probability, less than those forecasted.

The project applicant proposes to develop approximately 622 acres of the site with 1,260 single-family residential lots along with an 11-acre elementary school site, and approximately 18 acres of parkland. Development would also include approximately 32 acres offsite for related road and other infrastructure improvements. As part of the proposed project, offsite roadway, remedial grading activities and infrastructure improvements would be required. Emissions from the off-site improvements are included in the overall project analysis.

The entire project construction duration is estimated to be seven years with site preparation and grading commencing in 2010 and building construction completed in 2017. It is assumed that site preparation would be performed in a single phase. Site preparation would consist of approximately 20.8 million cubic yards of earthwork which would occur on the southern 622 acres of the 2,173-acre site and on adjacent properties to the west and south for project access, and to the east for landscaped slopes. The cut/fill from this earthwork would be balanced at the project site and there would be no soil import or export. A portable material processing facility (rock crushing) is expected to be operated during the site preparation phase. Use of an on-site material processing facility would reduce the truck trips necessary for importing concrete and asphalt base. Emissions from the material processing facility are included in the overall project analysis. Details are presented in Appendix H.

Although site preparation and grading are expected to occur during a single phase, certain areas may be ready for building construction before the entire site is graded. It is assumed that building construction could occur in some areas while site grading is underway in other areas of the site. In order to represent a worse case analysis, it was assumed that site grading and several building construction phases would be occurring simultaneously (overlapping).

(a) Regional Emissions

Construction of the project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the project site. In addition, fugitive dust emissions would result from demolition and construction activities. Mobile source emissions, primarily NO_x, would result from the use of construction equipment such as bulldozers, wheeled loaders, and cranes. During the finishing phase, paving operations and the application of architectural coatings (i.e., paints) and other building materials would release volatile organic compounds. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Please refer to the Air Quality Appendix, Appendix H, for a detailed description of the methodology used to calculate emissions.

The URBEMIS2007 model separates the construction process into two major phases. The first phase is site grading with emissions resulting from fugitive dust, soil haul truck trips, equipment exhaust, and worker commute exhaust. The second phase is subdivided into building equipment, architectural coating, and asphalt. Emissions from the third phase of construction include equipment exhaust from building construction and asphalt paving, VOC emissions from architectural coating and asphalt paving, and worker commute exhaust. Equipment exhaust emissions were determined using URBEMIS2007 default values for horsepower and load factor but adjusted to account for ten hours of operation per day. Modeling outputs are provided in Appendix H, Project Construction Emissions.

Unmitigated daily construction-related regional emissions for the project during the site preparation (i.e., grading, off-site improvements and infrastructure) and the building erection phases are presented in Table 4.H-5, Estimate of Unmitigated Regional Construction Emissions, on page 4.H-24. As shown, regional emissions resulting from overlapping construction phases would exceed the SCAQMD daily significance thresholds for PM₁₀, PM_{2.5}, CO, NO_x, and VOC. Regional construction emissions would not exceed the SCAQMD daily significance thresholds for SO_x. Based on the above, project construction activities would result in a temporary but significant regional air quality impact without incorporation of mitigation measures.

(b) Local Emissions

During construction, the main source of air emissions occurs during the grading/site preparation phase where diesel powered construction equipment are involved with soil disturbance. During this phase of construction operations, not only are there combustion emissions from construction equipment, but it is during this phase that fugitive PM₁₀ and PM_{2.5} emissions are at their greatest magnitude. This condition (concurrent fugitive and equipment emissions) represents the period with the greatest potential for construction impacts with regard to localized emissions.

Emissions for the localized construction air quality analysis were compiled using localized significance thresholds (LST) methodology promulgated by the SCAQMD in June 2003. The methodology specifies the use of the USEPA Industrial Source Complex Short Term (ISCST) model for computing downwind pollutant concentrations from area/volume sources such as construction activity greater than 5 acres. The emissions established above were input into the ISCST model for analysis of the potential impacts of grading activity on sensitive receptors located in the surrounding community. The ISCST model was run using the SCAQMD mandated 1981 meteorological data from the Newhall Monitoring Station and provided on the SCAQMD website (www.aqmd.gov).

(i) PM₁₀ and PM_{2.5} Localized Impacts

Results of the PM₁₀ and PM_{2.5} dispersion modeling indicate that site grading emissions from development of the project could cause an exceedance of the 10.4 µg/m³ PM₁₀ and PM_{2.5} incremental threshold. Detailed dispersion modeling of site grading emissions took into account nearby sensitive receptors which include residences, schools and hotels. As shown in Table 4.H-6, Estimate of Unmitigated Local Construction Emissions, on page 4.H-25, construction-related PM₁₀ and PM_{2.5} concentrations at the residential sensitive receptor with the highest potential for air quality impacts (i.e., the residential uses west of the project site) would be approximately 170 µg/m³ for PM₁₀ and 37 µg/m³ for PM_{2.5}. Also shown in Table 4.H-6, other nearby sensitive receptors would exceed the 10.4 µg/m³ PM₁₀ and PM_{2.5} incremental threshold during site grading activities. As a result, project-related localized PM₁₀ and PM_{2.5} concentrations would result in a

Table 4.H-5

**Estimate of Unmitigated Regional Construction Emissions
(pounds/day)**

	VOC	NO _x	CO	SO _x	PM ₁₀ ^a	PM _{2.5} ^a
Maximum Daily Regional Emissions ^{b,c,d}						
Site Preparation	106	1,005	463	0	4,841	1,040
Infrastructure Improvements	6	40	23	0	3	2
Asphalt Paving	5	26	14	0	2	2
Building Construction	21	128	275	0	8	7
Architectural Coatings	11	0	1	0	0	0
Maximum Overlapping Regional Emissions	106	1,005	551	0	4,841	1,040
Regional Significance Threshold	75	100	550	150	150	55
Over (Under)	31	905	1	(150)	4,691	985
Exceed Threshold?	Yes	Yes	Yes	No	Yes	Yes
Maximum Daily Localized Emissions						
Site Preparation	104	989	439	0	4,840	1,040
Infrastructure Improvements	5	40	21	0	3	2
Asphalt Paving	4	15	8	0	1	1
Building Construction	10	69	40	0	4	4
Architectural Coatings	11	0	0	0	0	0
Maximum Overlapping Localized Emissions ^e	104	989	439	0	4,840	1,040

^a PM₁₀ and PM_{2.5} emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries. A copy of SCAQMD Rule 403 is included in the Air Quality Technical Appendix, Appendix H.

^b Maximum daily emissions represents the most conservative analysis whereas the most equipment would be used for the most hours per day.

^c On-Site emissions include construction equipment exhaust, fugitive emissions (dust) generated from construction activities.

^d Off-Site emissions include vehicle trips generated by employees and hauling of materials to and from the construction site.

^e For project sites larger than 5 acres, localized daily emissions thresholds are not available, and dispersion modeling is required to demonstrate air quality impacts.

Source: PCR Services Corporation, 2007.

significant impact and mitigation would be required. Dispersion modeling isopleths which show the geographic distribution of these impacts are provided in the Air Quality Technical Appendix, Appendix H to this Draft EIR.

The increase in PM₁₀ and PM_{2.5} concentrations as a result of soil disturbance activities would exceed local thresholds. Although PM₁₀ and PM_{2.5} impacts are significant, concentrations presented in Table 4.H-6 are representative of the worst-case SCAQMD mandated

Table 4.H-6

Estimate of Unmitigated Local Construction Emissions

Pollutant	Maximum Increase in Ambient Concentrations				
	Residential Receptor (West)	Residential Receptor (South)	School Receptor (Little People Daycare)	School Receptor (Leona Cox Community School)	Hotel Receptor (Travel Lodge)
PM₁₀ (24-Hour)					
Maximum Concentration Increase ($\mu\text{g}/\text{m}^3$)	170	106	57	156	68
Threshold ($\mu\text{g}/\text{m}^3$)	10.4	10.4	10.4	10.4	10.4
Over/(Under)	160	96	47	146	58
Significant Impact?	Yes	Yes	Yes	Yes	Yes
PM_{2.5} (24-Hour)					
Maximum Concentration Increase ($\mu\text{g}/\text{m}^3$)	37	23	12.3	33	14.6
Threshold ($\mu\text{g}/\text{m}^3$)	10.4	10.4	10.4	10.4	10.4
Over/(Under)	26	12	1.9	23	4.2
Significant Impact?	Yes	Yes	Yes	Yes	Yes
NO₂ (1-Hour)					
Maximum Concentration Increase ($\mu\text{g}/\text{m}^3$)	295	140	103	192	76
Threshold ($\mu\text{g}/\text{m}^3$)	245	245	245	245	245
Over/(Under)	50	(105)	(142)	(53)	(169)
Significant Impact?	No	No	No	No	No
CO (1-Hour)					
Maximum Concentration Increase ($\mu\text{g}/\text{m}^3$)	131	62	46	85	34
Threshold ($\mu\text{g}/\text{m}^3$)	19,550	19,550	19,550	19,550	19,550
Over/(Under)	(19,419)	(19,488)	(19,504)	(19,465)	(19,516)
Significant Impact?	No	No	No	No	No

Table 4.H-6 (Continued)

Estimate of Unmitigated Local Construction Emissions

Pollutant	Maximum Increase in Ambient Concentrations				
	Residential Receptor (West)	Residential Receptor (South)	School Receptor (Little People Daycare)	School Receptor (Leona Cox Community School)	Hotel Receptor (Travel Lodge)
CO (8-Hour)					
Maximum Concentration Increase ($\mu\text{g}/\text{m}^3$)	33	27	14	31	16
Threshold ($\mu\text{g}/\text{m}^3$)	8,151	8,151	8,151	8,151	8,151
Over/(Under)	(8,118)	(8,124)	(8,137)	(8,120)	(8,135)
Significant Impact?	No	No	No	No	No

^a The maximum concentration at a sensitive receptor other than a residence or a school was at the Travelodge motel located south of the project site.

^b The maximum residential receptor concentration was a single-family residential neighborhood located adjacent and to the west of the project site.

^c The maximum school receptor concentration was at the Santa Clarita Little People Daycare and Pre-School located south of the project site.

Source: PCR Services Corporation, 2009.

meteorological conditions with the maximum amount of construction equipment running simultaneously.

(ii) NO₂ and CO Localized Impacts

Based on the SCAQMD's LST guidance, an evaluation of localized NO₂ and CO air quality concentrations was conducted. The analysis evaluated whether project-related construction emissions would cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard based on future conditions with the project (i.e., adding the project's incremental concentration to the maximum ambient concentrations of that pollutant over the last three years of monitoring data at the relevant monitoring station). As shown in Table 4.H-6, project-related construction emissions would not cause ambient concentrations to exceed the NO₂ ambient air quality standard or the 1-hour or 8-hour CO ambient air quality standards at any analyzed receptor.

(c) Toxic Air Contaminants

The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. According to the SCAQMD's methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. An assessment of diesel particulate emissions was conducted to assess this potential risk using the same assumptions used for the localized PM₁₀ and PM_{2.5} analysis discussed above. As such, this analysis includes all diesel exhaust emissions associated with on-site heavy equipment and haul trucks that would occur over the construction period. The results of this analysis, which are documented in the Air Quality Technical Appendix, yields a maximum off-site individual cancer risk of 5.1 in a million at the sensitive receptor with the highest potential for air quality impacts (i.e., the residential uses west of the project site). In order to be consistent with OEHHA and SCAQMD methodology, cancer risk was calculated based on a 70 year exposure duration (construction occurring for 70 years). Since project construction would occur over approximately seven years, the actual cancer risk would be much lower. As the project would not emit carcinogenic or toxic air contaminants that individually or cumulatively exceed the maximum individual cancer risk of ten in one million, project-related toxic emission impacts would be less than significant during construction.

(d) Odors

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents and also from limited amounts of potentially contaminated

soils on site. As discussed above, SCAQMD Rule 1166 would limit the amount of volatile organic compound emissions from potentially contaminated soils. Also, SCAQMD Rule 1113 limits the amount of volatile organic compounds from architectural coatings and solvents. Via mandatory compliance with SCAQMD Rules, no construction activities or materials are proposed which would create objectionable odors. Therefore, no impact would occur and no mitigation measures would be required.

(2) Operational Impacts

(a) Regional Emissions

Operational emissions would be generated by area and mobile sources as a result of normal day-to-day activities on the project site. After occupation, area source emissions would be generated during the consumption of natural gas for space and water heating devices, during the operation of gasoline-powered landscape maintenance equipment and the use of consumer products (e.g., hair spray, deodorants, lighter fluid, air fresheners, automotive products, and household cleaners). Mobile source emissions would be generated by the motor vehicles traveling to and from the project site. Project features that would contribute to reductions in air emissions, such as sidewalks, direct pedestrian connections to off-site locations, street lighting, shade trees along sidewalks, pedestrian safety designs/infrastructure at crossings, bike circulation, and secure bicycle parking at the elementary school, were input into the URBEMIS2007 model. No point source emissions are expected to occur on the project site (e.g., dry cleaners, restaurants with charbroilers, gas stations, etc.). Therefore, no air quality impacts from point source emissions would occur.

URBEMIS2007 was used to calculate area and mobile source emissions from the project for both summertime and wintertime emissions. Model variables included project land use characteristics, trip generation information from the Traffic Impact Analysis prepared by Austin-Foust Associates, Inc. in February 2008, and the above-mentioned project features. As shown in Table 4.H-7, Estimated Operational Emissions Without Mitigation, on page 4.H-29, the project at buildout and in full operation would generate total emissions that would exceed the SCAQMD recommended thresholds for regional CO, VOC, NO_x, PM_{2.5} and PM₁₀. As the amount of emissions under each scenario would exceed the recommended significance thresholds for operational emissions, project air quality impacts would be significant unless mitigated.

(b) Concurrent Construction and Operational Activity Impacts

Single-family residences on the project site would be occupied while later phases of construction activities would be occurring. Therefore, emissions associated with concurrent construction and operation activities were evaluated.

Table 4.H-7

Estimated Operational Emissions Without Mitigation

Emissions Sources	Emissions in Pounds per Day					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Emissions						
Mobile Sources	75	101	861	1	228	44
Area Sources	273	45	564	2	86	83
Stationary Sources	0	37	6	4	1	1
Total	348	183	1431	7	315	128
SCAQMD Threshold	55	55	550	150	150	55
Difference	293	128	881	(143)	165	73
Exceeds Threshold?	Yes	Yes	Yes	No	Yes	Yes

Note: Totals in table may not appear to add exactly due to rounding in the computer model calculations.

Source: PCR Services Corporation, 2007. Emissions calculations are provided in Appendix H.

As summarized in Table 4.H-8, Unmitigated Concurrent Operation and Construction Emissions, on page 4.H-30, combined construction and operational emissions would exceed SCAQMD daily thresholds for CO, NO_x, PM₁₀, PM_{2.5} and VOC, but would not exceed the SCAQMD daily threshold for SO_x. Based on the above, significant regional air quality impacts would occur during concurrent construction and operational activities.

(c) Local Emissions

Within an urban setting, vehicle exhaust is the primary source of CO. Consequently, the highest CO concentrations are generally found within close proximity to congested intersection locations. Under typical meteorological conditions, CO concentrations tend to decrease as the distance from the emissions source (i.e., congested intersection) increases. For purposes of providing a conservative impact analysis, CO concentrations are typically analyzed at congested intersection locations, because if impacts are less than significant in close proximity of the congested intersections, impacts will also be less than significant at more distant sensitive receptor locations.

Project traffic, during the operational phase of the project, would have the potential to create local area CO impacts. The SCAQMD recommends a hot-spot evaluation of potential localized CO impacts when volume-to-capacity (V/C) ratios are increased by 2 percent at intersections with a level of service (LOS) of D or worse. The SCAQMD also recommends a CO hot-spot evaluation when an intersection decreases in LOS by one level beginning when LOS changes from an LOS of C to D. Intersections were selected for analysis based on information provided in the Traffic Impact Study prepared by Austin-Foust Associates, Inc. and provided in Appendix F.

Table 4.H-8

Unmitigated Concurrent Operation and Construction Emissions

Emission Source	CO ^a	NO _x ^b	PM ₁₀ ^c	PM _{2.5} ^c	VOC ^d	SO _x
Concurrent Operational and Construction Emissions						
Maximum Operational Emissions	1,315	171	277	112	310	6
Maximum Construction Emissions	551	1,005	4,841	1,040	106	0
Maximum Overlapping Emissions	1,504	1,005	4,841	1,040	334	7
SCAQMD Construction Significance Threshold	550	100	150	150	75	150
Over (Under)	954	905	4,691	890	259	(143)
Significant?	Yes	Yes	Yes	Yes	Yes	No
SCAQMD Operation Significance Threshold	550	55	150	55	55	150
Over (Under)	954	950	4,691	985	279	(143)
Significant?	Yes	Yes	Yes	Yes	Yes	No

^a The maximum concurrent CO emissions would occur in 2016.

^b The maximum concurrent NO_x emissions would occur in 2008.

^c The maximum concurrent PM₁₀ and PM_{2.5} emissions would occur in 2008.

^d The maximum concurrent ROC emissions would occur in 2016.

Source: PCR Services Corporation, 2008.

Local area CO concentrations were projected using the CALINE-4 traffic pollutant dispersion model. The analysis of CO impacts followed the protocol recommended by the California Department of Transportation and published in the document titled Transportation Project-Level Carbon Monoxide Protocol, December 1997. It is also consistent with procedures identified through the SCAQMD's CO modeling protocol, with all four corners of each intersection analyzed to determine whether project development would result in a CO concentration that exceeds Federal or State CO standards. As stated in the Protocol, receptor locations for the 1-hour analysis were located 3 meters from each intersection corner and receptor locations for the 8-hour analysis were located 7 meters from each intersection corner.

The project's CO concentrations for 1- and 8-hour time periods are presented in Table 4.H-9, Local Area Carbon Monoxide Dispersion Analysis, on page 4.H-31. As shown, the project would not have a significant impact upon 1-hour or 8-hour local CO concentrations due to mobile source emissions.

Since significant impacts would not occur at the intersections with the highest traffic volumes that are located adjacent to sensitive receptors, no significant impacts are anticipated to occur at any other locations in the study area as the conditions yielding CO hotspots would not be worse than those occurring at the analyzed intersections. Consequently, the sensitive receptors that are included in this analysis would not be significantly affected by CO emissions generated by the net increase in traffic which would occur under the project. As the project does

Table 4.H-9

Local Area Carbon Monoxide Dispersion Analysis

Intersection	Peak Period ^a	Maximum 1-Hour 2017 Base Concentration ^b (ppm)	Maximum 1-Hour 2017 w/ Project Concentration ^c (ppm)	Significant 1-Hour Impact ^d	Maximum 8-Hour 2017 Base Concentration ^e (ppm)	Maximum 8-Hour 2017 w/ Project Concentration ^f (ppm)	Significant 8-Hour Impact ^d
SR-14 SB Ramps & Via Princessa	A.M.	6.7	6.6	NO	3.72	3.65	NO
	P.M.	6.1	6.1	NO	3.3	3.3	NO
Bouquet Canyon Road and Plum Canyon Road	A.M.	6.6	6.6	NO	3.65	3.65	NO
	P.M.	6.3	6.4	NO	3.44	3.51	NO
Sierra Highway and Soledad Canyon Road	A.M.	7.3	7.5	NO	4.14	4.28	NO
	P.M.	7.1	7.3	NO	4.00	4.14	NO
Sierra Highway and SR-14 NB Off Ramp	A.M.	5.9	5.9	NO	3.16	3.16	NO
	P.M.	5.9	5.9	NO	3.16	3.16	NO
Sierra Highway and Via Princessa	A.M.	6.8	6.8	NO	3.79	3.79	NO
	P.M.	7.2	7.3	NO	4.07	4.14	NO
SB-14 NB Ramps & Via Princessa	A.M.	5.8	5.8	NO	3.09	3.09	NO
	P.M.	6.5	6.4	NO	3.58	3.51	NO
Whites Canyon Road and Soledad Canyon Road	A.M.	6.7	6.7	NO	3.72	3.72	NO
	P.M.	6.9	6.9	NO	3.86	3.86	NO
Sierra Highway and Skyline Ranch Road	A.M.	5.8	5.9	NO	3.09	3.23	NO
	P.M.	5.8	5.9	NO	3.09	3.23	NO

ppm = parts per million.

^a Peak hour traffic volumes are based on the Traffic Impact Analysis prepared for the project by Austin-Foust Associates, February 2008.

^b SCAQMD 20171-hour ambient background concentration (5.1 ppm) + 2017 Base traffic CO 1-hour contribution.

^c SCAQMD 20171-hour ambient background concentration (5.1ppm) + 2017 w/ project traffic CO 1-hour contribution.

^d The most restrictive standard for 1-hour CO concentrations is 20 ppm and for 8-hour concentrations is 9.0 ppm.

^e SCAQMD 20178-hour ambient background concentration (2.6 ppm) + 2017 Base traffic CO 8-hour contribution.

^f SCAQMD 2017 8-hour ambient background concentration (2.6 ppm) + 2017 w/ project traffic CO 8-hour contribution.

Source: PCR Services Corporation, 2008.

not cause an exceedance of an ambient air quality standard, the project's localized operational air quality impacts would, therefore, be less than significant.

(d) Toxic Air Contaminants

The primary source of potential air toxics associated with project operations include diesel particulates from delivery trucks (e.g., truck traffic on local streets and on-site truck idling). The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.⁵¹ Potential localized air toxic impacts from on-site sources of diesel particulate emissions would be minimal since only a limited number of heavy-duty trucks (delivery trucks) would access the project site and the trucks that do visit the site would not idle on the project site for extended periods of time. In addition, the project would result in small amounts of toxics from consumer household products (e.g., detergents, cleaning compounds, glues, polishes, floor finishes, cosmetics, perfume, antiperspirants, rubbing alcohol, room fresheners, car wax, paint and lawn care products). These sources are typical within the urban environment and would contribute small amounts of toxic air pollutants to the project vicinity which would be well below any levels that would result in a significant impact on human health. As such, the project would not release substantial amounts of toxic contaminants; and in this regard, no significant impact on human health would occur.

Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. The project would not include any of these potential sources, although minimal emissions may result from the use of consumer products. As such, the project would not release substantial amounts of toxic contaminants; and in this regard, no significant impact on human health would occur.

(e) Odors

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any uses identified by the SCAQMD as being associated with odors. Therefore, the project would not create adverse odors as discussed above and would have no impact related to objectionable odors.

(f) AQMP Consistency

In accordance with the procedures established in the SCAQMD *CEQA Air Quality Handbook*, the following criteria are required to be addressed in order to determine the project's

⁵¹ SCAQMD, *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions*, December 2002.

consistency with SCAQMD and Southern California Association of Governments (SCAG)⁵² policies:

1. Will the project result in any of the following:
 - An increase in the frequency or severity of existing air quality violations; or
 - Cause or contribute to new air quality violations; or
 - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. Will the project exceed the assumptions utilized in preparing the AQMP?

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis include forecasts of project emissions in a regional context during construction and project occupancy. These forecasts are provided earlier in this section. Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of the project's pollutant emissions on localized pollutant concentrations is used as the basis for evaluating project consistency.⁵³ As discussed in the preceding sections, localized concentrations for PM₁₀, CO, and NO₂ have been analyzed for the project. SO₂ emissions would be negligible during construction and long-term operations, and therefore would not have potential to cause or affect a violation of the SO₂ ambient air quality standard. There is no localized threshold for ROC emissions, only a regional emissions threshold.

PM₁₀ and PM_{2.5} are the primary pollutants of concern during construction activities, and, therefore, the project's PM₁₀ and PM_{2.5} emissions during construction were analyzed: (1) to ascertain potential effects on localized concentrations; and (2) to determine if there is a potential for such emissions to cause or affect a violation of the ambient air quality standard for PM (PM₁₀ and PM_{2.5}). Results of the PM dispersion modeling indicate that the increase in the ambient PM concentration during construction would exceed the SCAQMD-recommended significance thresholds of 10.4 µg/m³ for PM₁₀ and PM_{2.5} at multiple sensitive receptor locations. However, the potential for this impact would be short-term and would not have a long-term impact on the

⁵² SCAG is the federally designated Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. As the designated MPO, SCAG is mandated by the federal government to develop and implement regional plans that address transportation, growth management, hazardous waste management, and air quality issues.

⁵³ South Coast Air Quality Management District, *CEQA Air Quality Handbook*, p. 12-3, 1993.

region's ability to meet State and Federal air quality standards. In addition, the project would be required to comply with SCAQMD Rule 403 and would implement feasible mitigation measures for control of PM₁₀. Nevertheless, the project would have a significant temporary impact on localized PM concentrations.

In addition, the project's maximum potential NO₂ and CO daily emissions during construction were analyzed to ascertain potential effects on localized concentrations and to determine if there is a potential for such emissions to cause or affect a violation of an applicable ambient air quality standard. The analysis concluded that CO and NO₂ concentrations would not exceed their respective AAQS, and potential impacts would therefore be less than significant.

During long-term project operations, CO is the preferred pollutant for assessing local area air quality impacts from post-construction motor vehicle operations. Based on methodologies set forth by the SCAQMD, one measure of local area air quality impacts that can indicate whether the proposed project would cause or affect a violation of an air quality standard would be based on the estimated CO concentrations at selected receptor locations located in close proximity to the project site. As indicated earlier, CO emissions were analyzed using the CALINE-4 model. No violations of the State and Federal carbon monoxide standards are projected to occur. Overall, the project would result in less-than-significant impacts with regard to CO, NO₂ and SO₂ concentrations during project construction and operations. While PM₁₀ concentrations during construction would exceed the SCAQMD 10.4 µg/m³ significance threshold, the potential for this impact would be short-term and would not have a long-term impact on the region's ability to meet State and Federal air quality standards. As such, the project would not conflict with the first AQMP consistency criterion.

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, air quality planning within the Basin focuses on the attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the project exceeds the assumptions utilized in preparing the forecasts presented in the AQMP.

Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with the population, housing and employment growth projections; (2) project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis of each of these three criteria.

- Is the project consistent with the population, housing and employment growth projections upon which AQMP forecasted emission levels are based?

A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions which were used in the development of the AQMP. The 2007 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates, in part, SCAG's 2004 Regional Transportation Plan (RTP) socioeconomic forecast projections of regional population and employment growth. On May 8, 2008, SCAG adopted the 2008 RTP which is not incorporated into the 2007 AQMP. It is expected that the next update to the AQMP will be based on the 2008 RTP. For purposes of using the most current data, the 2008 RTP will be referenced in this analysis.

SCAG locates the project site within the North Los Angeles County Subregion. The proposed project is expected to add 1,260 new housing units, which represent 1.6 percent of the 79,223 new housing units projected in SCAG's RTP between 2007 and 2017 for the Subregion in which the project is located (i.e., North Los Angeles County Subregion). Such levels of population growth are well within and consistent with population forecasts for the Subregion as adopted by SCAG. Because the SCAQMD is expected to incorporate these same projections into the AQMP, it can be concluded that the proposed project would be considered consistent with the projections in the AQMP.

- Does the project implement all feasible air quality mitigation measures?

Implementation of all feasible mitigation measures is recommended to reduce air quality impacts to the extent feasible. The project would incorporate a number of key air pollution control measures identified by the SCAQMD, as described in Subsection 4, below. As such, the project would meet this AQMP consistency criterion.

- To what extent is project development consistent with the land use policies set forth in the AQMP?

The project would serve to implement a number of the County of Los Angeles and SCAG land use policies, as discussed in Section 4.Q, Land Use, of this EIR. For example, the Skyline Ranch project includes a mobility system with alternatives to automobile use, including a provisions for pedestrian and bicycle circulation that would link the residences with the proposed parks and school, and offsite locations. In addition, the project area is serviced by Santa Clarita Transit Routes 1, 2, and 5. Routes 1 and 2 provide service from Whites Canyon Road to the Princess and Newhall Metrolink Stations. Route 5 provides service between Sierra Highway and the Newhall and Santa Clarita Metrolink Stations and the McBean Transit Station. Development of the project would facilitate the extension of existing bus service along Skyline Ranch Road. As such, the project would minimize vehicle miles traveled within the project and within the Valley. Furthermore, the project would be required to comply with air quality regulations set forth by the SCAQMD and would include mitigation measures to reduce air quality emissions.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of the project on air quality in the Basin. Although the project may cause an exceedance of the localized PM₁₀ and PM_{2.5} significance criteria, this exceedance would be short-term in nature. This impact would only occur during the grading phase of project construction and would not have a long-term impact on the region's ability to meet State and federal air quality standards. In addition, the project would comply with SCAQMD Rule 403 and would implement all feasible mitigation measures for control of PM₁₀ and PM_{2.5}. Also, the project would be consistent with the goals and policies of the AQMP for control of fugitive dust. Therefore, given that the project would be consistent with AQMP strategies to bring the Basin into PM₁₀ and PM_{2.5} attainment, the project would be consistent with local air quality plans and policies.

4. MITIGATION MEASURES

a. Construction

(1) Regional Emissions

4.H-1(a) *Develop and implement a construction management plan, as approved by the County of Los Angeles prior to issuance of a grading permit, which includes the following measures recommended by the SCAQMD to implement SCAQMD Rule 403.*

- a. Ground cover shall be replaced in disturbed areas as quickly as practicable;*
- b. Soil stabilizers/dust suppressants shall be applied to inactive disturbed areas in sufficient quantity and frequency to maintain a stabilized surface;*
- c. Haul roads and site access roads shall be watered no less than three times daily;*
- d. Disturbed surfaces shall be watered no less than two times daily;*
- e. All stockpiles shall be covered with tarps as soon as practicable;*
- f. Travel speed on unpaved surfaces shall not exceed 15 miles per hour;*
- g. Provide a publicly visible sign and directly notify property owners in the vicinity of a contact person and telephone number to call regarding dust complaints; the contact person shall respond with appropriate corrective actions within 24 hours;*

-
- h. Prohibit construction vehicle idling in excess of 10 minutes;*
 - i. Stockpiles, haul routes, staging locations, and parking areas shall be located as far as possible from adjacent residential uses;*
 - j. Pave or place gravel on all construction access roads at least 100 feet on to the site from the main road;*
 - k. Configure construction parking to minimize traffic interference;*
 - l. Provide temporary traffic controls when construction activities have the potential to disrupt traffic to maintain traffic flow (e.g., signage, flag person, detours);*
 - m. Schedule construction activities that affect traffic flow to off-peak hours (e.g., between 7:00 P.M. and 6:00 A.M. and between 10:00 A.M. and 3:00 P.M.);*
 - n. Develop a construction traffic management plan that includes the following measures to address construction traffic that has the potential to affect traffic on public streets:*
 - Consolidate truck deliveries*
 - Provide temporary dedicated turn lanes for movement of construction trucks and equipment on and off of the site;*
 - o. Suspend use of all construction equipment operations during second stage smog alerts. Contact the SCAQMD at 800/242-4022 for daily forecasts;*
 - p. Use electricity from power poles rather than temporary fossil fuel-powered generators; and*
 - q. Use methanol- or natural gas-powered mobile equipment and pile drivers instead of diesel if readily available at competitive prices.*
- 4.H-1(b)** *Maintain construction equipment and vehicle engines in good condition and in proper tune as per manufacturers' specifications and per SCAQMD rules, to minimize exhaust emissions.*
- 4.H-1(c)** *All on-site heavy-duty construction equipment shall be equipped with diesel particulate traps as feasible.*

(2) Local Emissions

Please refer to Mitigation Measures 4.H-1(a), 4.H-1(b), and 4.H-1(c) above.

b. Operation**(1) Regional Emissions**

4.H-2(a) *Subdivisions and buildings will be required to exceed Title 24 of the California Code of Regulations (also known as the California Building Standards Code) 2005 requirements by 15 percent.*

4.H-2(b) *Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.*

(2) Concurrent Construction and Operational Activity

Please refer to Mitigation Measures 4.H-1(a), 4.H-1(b), 4.H-1(c), 4.H-2(a), and 4.H-2(b) above.

5. CUMULATIVE IMPACTS

With respect to construction-period air quality emissions and the Basin-wide cumulative air quality condition, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to federal Clean Air Act mandates. As demonstrated earlier, the project would comply with SCAQMD Rule 403 requirements, and would implement mitigation measures. In addition, the project would comply with adopted AQMP emissions control measures and these same requirements would be imposed on related projects. However, the project would contribute to a significant cumulative construction air quality impact given that the Basin is non-attainment for ozone, PM₁₀ and PM_{2.5} and that the project results in short-term regional construction impacts for ozone precursors (VOC and NO_x), PM₁₀ and PM_{2.5}.⁵⁴

⁵⁴ *The Basin has technically met the CO standards for attainment since 2002, but the official status has not been reclassified by the USEPA. Although project construction emissions exceed the SCAQMD daily emissions threshold, pollutant emissions are not expected to contribute to an exceedance of the AAQS or a cumulative significant CO impact.*

Potential cumulative impacts from localized construction emissions are a function of construction intensity and the distance between the source and the receptor. As demonstrated earlier, the project would result in localized construction impacts for PM₁₀ and PM_{2.5} and would implement all feasible mitigation measures to reduce these emissions. Project-related construction activity would likely be located far enough away from any related project that localized emissions from the proposed project and related-projects would not overlap. Regardless, emissions from the project would exceed the LSTs for PM₁₀ and PM_{2.5} at nearby sensitive receptors. Therefore, project-related localized construction emissions would contribute to a significant cumulative air quality impact.

With respect to long-term project operations, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this EIR, in which foreseeable future development within a given service boundary or geographical area is predicted and associated impacts measured. The SCAQMD's approach for assessing cumulative impacts is based on the SCAQMD's AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the Federal and State Clean Air Acts. This forecast also takes into account SCAG's forecasted future regional growth. As such, the analysis of cumulative impacts focuses on determining whether the project is consistent with forecasted future regional growth. If a project is consistent with the regional population, housing and employment growth assumptions upon which the SCAQMD's AQMP is based, then future development would not impede the attainment of ambient air quality standards and a significant cumulative air quality impact would not occur. As discussed above (AQMP Consistency discussion), the project would be consistent with the underlying growth assumptions on which the AQMP is based; and the long-term increase in emissions that would occur as a result of development of the project site would not be cumulatively considerable. Nevertheless, implementation of the project would result in an increase in emissions that exceed SCAQMD daily emission thresholds which would contribute to region-wide emissions on a cumulative basis and, thus, result in a cumulatively significant impact. In such cases, the SCAQMD recommends that all projects, to the extent possible, employ feasible mitigation measures, which has been done with regard to the proposed project.

With regard to cumulative localized air quality impacts, a localized CO impact analysis was conducted for cumulative traffic volumes from the project, related projects, and ambient growth. As demonstrated above, increases in localized CO concentrations from cumulative traffic volumes would not exceed SCAQMD significance thresholds. As such, project-related localized operations air quality impacts would be less than cumulatively considerable.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

a. Construction

Although the recommended mitigation measures would reduce the magnitude of construction-related emissions to some extent, they are not sufficient to reduce all emissions to below the SCAQMD's recommended thresholds of significance. The project's impacts to air quality from construction-related regional emissions of PM₁₀, PM_{2.5}, CO, NO_x, and VOC and local emissions of PM₁₀ and PM_{2.5}, while temporary, are considered significant and unavoidable.

Similarly, project construction would contribute to a significant and unavoidable cumulative air quality impact given that the Basin is non-attainment for ozone, PM₁₀ and PM_{2.5} and that the project results in significant short-term regional construction impacts for ozone precursors (VOC and NO_x), PM₁₀ and PM_{2.5}. In addition, project-related construction emissions would contribute to a significant unavoidable cumulative air quality impact based on LST.

b. Operation

Although the recommended mitigation measures would reduce the magnitude of operational emissions to some extent, they are not sufficient to reduce all emissions to below the SCAQMD's recommended thresholds of significance. The impacts resulting from the project's operational emissions of PM₁₀, PM_{2.5}, CO, NO_x, and VOC are considered significant and unavoidable.

In addition, implementation of the project would result in an increase in emissions which would contribute to region-wide emissions on a cumulative basis and as such, the project's contribution to cumulative air quality impact is concluded to be significant and unavoidable.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

I. WATER RESOURCES

1. INTRODUCTION

This section describes existing and projected water supplies available to serve the proposed project, as well as existing and proposed water supply infrastructure. The proposed project's potential impacts on groundwater recharge are also analyzed. A detailed description of water resources for the Santa Clarita Valley is provided in Appendix I-1, Water Resources Technical Report. As noted in greater detail below, water supplies are variable and subject to restrictions in accordance with water rights, water delivery contracts, and other permits. The Castaic Lake Water Agency's (CLWA) supplies include State Water Project (SWP) water, which has been the subject of recent Biological Opinions (BO) by the National Marine Fisheries Service (NMFS) (2009)¹ and U.S. Fish and Wildlife Service (USFWS) (2008)². Although the restrictions on SWP exports from the Delta that are included in the BOs are currently in effect, the California Department of Water Resources (DWR) has not issued formal guidance regarding how these BOs will affect the reliability of SWP supplies, and both of the BOs have been the subject of legal pleadings by several entities. Therefore, the exact implications of these recent decisions are still unclear. The Water Supply Assessment (WSA) completed for the proposed project by CLWA's Santa Clarita Water Division (SCWD) pursuant to Water Code Section 10910 is provided in Appendix I-2. A letter from SCWD confirming its approval of the WSA and the feasibility of providing water to the project is included in Appendix I-3. The WSA is based on the most current guidance provided by DWR.

A complete discussion of Global Climate Change as it relates to water resources is provided in Section 4.S of this EIR and included in Appendix I-1, Water Resources Technical Report.

¹ U.S. Fish and Wildlife Service, *Biological Opinion on the Proposed Coordinated Operations of the Central Valley Project and State Water Project*, December 2008.

² National Marine Fisheries Service, Southwest Region, *Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project*, June 2009.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) State - SB 610

By implementation of Senate Bill 610 (SB 610) (Costa; Chapter 643, Stats. 2001), the California Water Code requires public water agencies, parties, or purveyors that may supply water to certain proposed development projects to prepare a WSA for use by the planning agency in compliance with the California Environmental Quality Act (CEQA).³ A WSA is required for any “project” that is subject to *State CEQA Guidelines* including residential development of more than 500 dwelling units.⁴ Therefore, the proposed project is a qualifying project.

(2) County of Los Angeles Resolution and Ordinances

The County of Los Angeles, Board of Supervisors adopted a Resolution declaring a Countywide Water Supply and Conservation Alert and urging the County residents, businesses local water purveyors, and cities to intensify water conservation efforts to achieve an overall reduction in water demand of 15 to 20 percent; directing all County departments to evaluate water usage and immediately implement conservation measures to reduce consumption by a target amount of 10 percent by December 31, 2008 and report back to the Board of Supervisors with recommended measures to reduce consumption by an additional 10 percent; urging local water purveyors and cities to accelerate and intensify public outreach campaigns; urging cities to update and adopt water wasting ordinances and prepare for enforcement of the ordinances, if necessary; and encouraging County residents to follow ten easy tips to reduce their water consumption.⁵ In response to this directive, the Los Angeles County Board of Supervisors readopted the provisions stated in the Los Angeles County Code, Chapter 11.38, Water and Sewers, regarding water conservation requirements for the Los Angeles County area, such as prohibiting the wash down of driveways and sidewalks, limiting the hours and duration of watering any lawn or landscaping, and prohibiting water runoff into adjoining streets.⁶ In

³ *SB 610 amended section 21151.9 of the California Public Resources Code, and amended sections 10631, 10656, 10910, 10911, 10912, and 10915 of, repealed section 10913 of, and added and amended section 10657 of, the California Water Code.*

⁴ *Water Code § 10912(a)(1). This section also includes other types of development that are defined as a “project” by this section of the code.*

⁵ *A Resolution of the Board of Supervisors of the County of Los Angeles, California, Declaring a Countywide Water Supply and Conservation Alert, adopted August 5, 2008.*

⁶ *Los Angeles County Code, Title 11, Chapter 11.38 Water and Sewers, Part 4 Water Conservation Requirements for the Unincorporated Los Angeles County Area, previously terminated on January 1, 1993 and readopted on October 7, 2008.*

addition, Chapter 71 of the Los Angeles County Code, Water-Efficient Landscaping, includes regulations for designing, installing and maintaining water-efficient landscapes in new projects.⁷

The County of Los Angeles adopted a Green Building Program on November 18, 2008, in part, to improve design and construction techniques that would promote water conservation. As a component of the Green Building Program, the Green Building Standards Ordinance⁸ requires the installation of smart irrigation controllers and high-efficiency toilets; the Drought-Tolerant Landscaping Ordinance⁹ provides additional standards for the design and installation of landscaping using drought-tolerant plants that require minimal use of water and limitations on turf areas; and the Low Impact Development Ordinance¹⁰ encourages the preservation of watersheds, drainage paths, water supplies, and natural resources through compliance with additional development standards identified in the Low Impact Development Standards Manual (January 2009) and Green Building and Sustainability Guidelines for the County of Los Angeles (2008 Edition). Where a conflict exists between provisions of the Green Building Program and other ordinances, statutes, regulations, or requirements, the stricter provision shall apply.¹¹

b. Environmental Setting

(1) Overview of Water Supplier

(a) Castaic Lake Water Agency

The project site is within CLWA's service area. CLWA is a public water agency that serves an area of 195 square miles in Los Angeles and Ventura counties. CLWA is a water wholesaler that provides about half of the water used by Santa Clarita households and businesses. CLWA treats and delivers water to four local water retailers: CLWA SCWD (which is a division of CLWA); Los Angeles County Waterworks District No. 36; Newhall County Water District (NCWD); and Valencia Water Company. Collectively these retailers comprise the Local Purveyors. CLWA operates two (2) potable water treatment plants, storage facilities, and over 17 miles of transmission pipelines.

⁷ *Los Angeles County Code, Title 26, Chapter 71, Water-Efficient Landscaping.*

⁸ *Los Angeles County Code, Title 22, Chapter 22.52, Part 20, Green Building.*

⁹ *Los Angeles County Code, Title 21, Chapter 22.52, Part 21, Drought-Tolerant Landscaping.*

¹⁰ *Los Angeles County Code, Title 12, Chapter 12.84, Low Impact Development Standards.*

¹¹ *Los Angeles County Code, Title 22, Section 22.52.2200(B).*

(b) CLWA Santa Clarita Water Division

CLWA SCWD's service area includes portions of the City of Santa Clarita and unincorporated portions of Los Angeles County, including the communities of Saugus, Canyon Country, and Newhall (the Local Purveyors' service areas are shown on Figure 4.I-1 on page 4.I-5). CLWA SCWD delivered approximately 31,400 acre-feet (af) of water in 2007 and has approximately 27,900 connections.¹² CLWA SCWD supplies water from local groundwater and imported water from CLWA.

In 1999, CLWA acquired the Santa Clarita Water Company. After the purchase, Section 15.1 was added to the CLWA Law (Act 9099b of the California Water Code Uncodified Acts) to clarify CLWA SCWD's ability to provide retail water service. Section 15.1 authorizes CLWA SCWD to exercise retail water authority within a specified area (CLWA SCWD service area square). CLWA SCWD's service area square overlaps with portions of NCWD's boundaries. Within the overlap area, NCWD has the exclusive authority to provide water service, unless it consents to CLWA SCWD providing service. The project site is located within the overlap area. NCWD consented to CLWA SCWD serving the proposed project by entering into a Memorandum of Understanding (MOU) with CLWA on September 19, 2005. Accordingly, CLWA SCWD is authorized to serve the proposed project pursuant to Section 15.1 of CLWA Law, Water Code Section 12944.7,¹³ and the MOU.

The CLWA SCWD water supply infrastructure is the closest to the project site and CLWA SCWD would have the ability to more readily serve the proposed project. Existing CLWA SCWD infrastructure in the project area includes an 8-inch pipeline and a 10-inch pipeline in Sierra Highway near the southeastern corner of the project site from the North Oaks water tank farm shown in Figure 4.I-2 on page 4.I-6. In addition, the CLWA SCWD Deane water tank is located to the east. There are no existing water lines on the project site.

¹² *Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2007, April 2008.*

¹³ *Water Code Section 12944.7 authorizes any public agency that has executed a contract with the State for a water supply to sell any water available to that agency directly to any ultimate water consumer. It also restricts the ability of a public agency whose principle act limits the agency to the wholesale distribution of water to sell water directly to consumers only pursuant to written contract with a wholesaler to which the water would otherwise be sold or to a public entity water purveyor or water corporation providing water at retail within the area in which the consumer is located.*

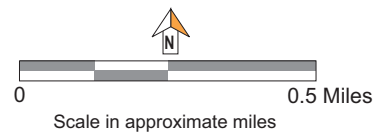
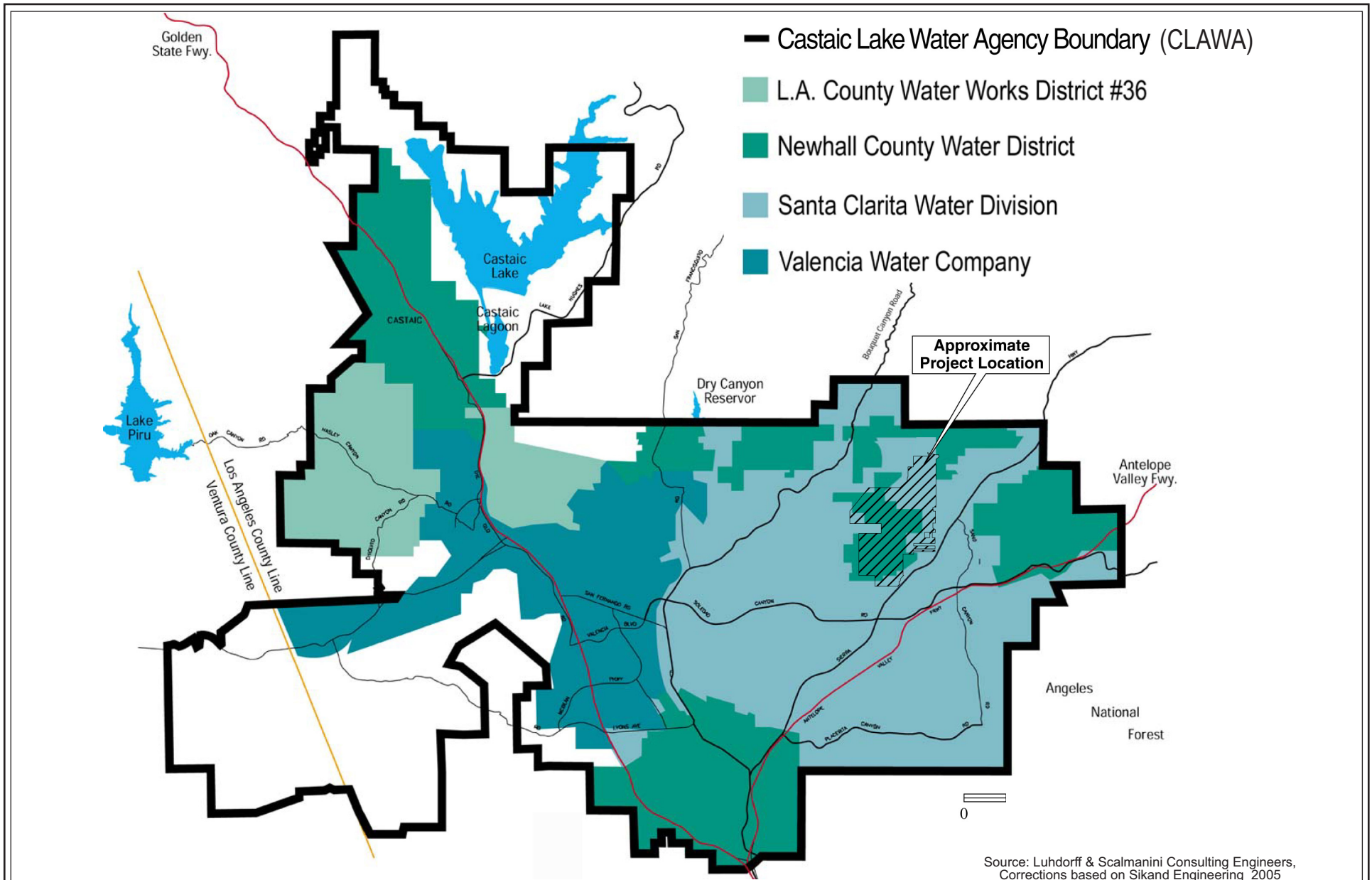
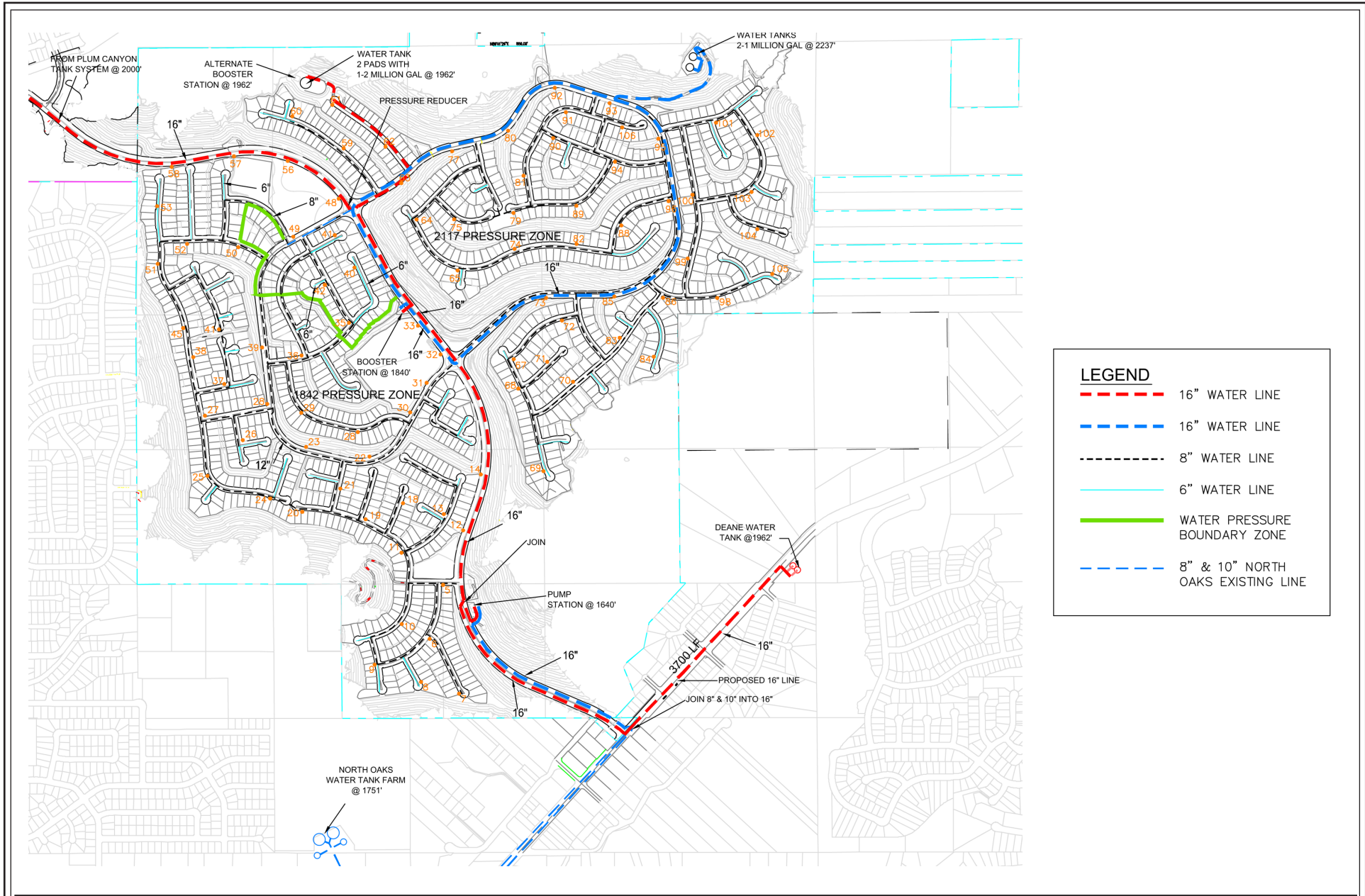


Figure 4.I-1
 CLAWA and Local Purveyors' Service Areas



LEGEND

- - - - - 16" WATER LINE
- - - - - 16" WATER LINE
- - - - - 8" WATER LINE
- - - - - 6" WATER LINE
- - - - - WATER PRESSURE BOUNDARY ZONE
- - - - - 8" & 10" NORTH OAKS EXISTING LINE

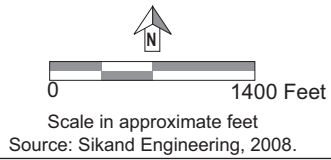


Figure 4.I-2
Conceptual Water Plan

(2) Overview of Water Supplies and Banking Programs

(a) Groundwater Supplies

The Santa Clarita Valley has historically depended for its water supply on an underground water basin (the East Subbasin of the Santa Clara River Valley Groundwater Basin [Basin]), or aquifer, divided into upper and lower levels. Overall, the groundwater basin covers about 84 square miles and includes a shallow upper basin, the Alluvial Aquifer, and a deeper layer called the Saugus Formation.

(i) Groundwater Management Plan

CLWA and the Local Purveyors¹⁴ adopted a regional Groundwater Management Plan (GWMP) in December 2003.¹⁵ The GWMP outlines four (4) specific management goals for the East Subbasin:¹⁶

1. Development of integrated surface water, groundwater, and recycled water supplies to meet existing and projected demands for municipal, agricultural, and other water supply;
2. Assessment of groundwater basin conditions to determine a range of operational yield values that will make use of local groundwater conjunctively with SWP and recycled water to avoid groundwater overdraft;
3. Preservation of groundwater quality, including active characterization and resolution of any groundwater contamination problems; and
4. Preservation of interrelated surface water resources, which includes managing groundwater to not adversely impact surface and groundwater discharges or quality to downstream basin(s).

The groundwater component of overall water supply in the Santa Clarita Valley is managed based on a groundwater operating plan developed over the last 20 years to meet water requirements (municipal, agricultural, small domestic) while maintaining the Basin in a

¹⁴ *The Local Purveyors are CLWA SCWD, Los Angeles County Waterworks District No. 36, Newhall County Water District, and Valencia Water Company.*

¹⁵ *Castaic Lake Water Agency, Groundwater Management Plan, Santa Clara River Valley Groundwater Basin, East Subbasin, Los Angeles County, California, December 2003.*

¹⁶ *Castaic Lake Water Agency), Groundwater Management Plan, Santa Clara River Valley Groundwater Basin, East Subbasin, Los Angeles County, California, December 2003.*

sustainable condition (i.e., no long-term depletion of groundwater or interrelated surface water). This operating plan also addresses groundwater contamination issues in the Basin. The groundwater operating plan is based on the concept that pumping can vary from year to year to allow increased groundwater use in dry periods and increased recharge during wet periods and to collectively ensure that the groundwater basin is adequately replenished through various wet/dry cycles. As formalized in the GWMP, the operating yield concept has been quantified as ranges of annual pumping volumes.

Following adoption of the GWMP in 2003, two (2) formal reports were produced under an MOU between CLWA, the Local Purveyors, and United Water Conservation District (UWCD).¹⁷ The first report, dated April 2004, documents the construction and calibration of the groundwater flow model for the Santa Clarita Valley. The second report, dated August 2005, presents the modeling analysis of the Local Purveyors' groundwater operating plan. The primary conclusion of the modeling analysis is that the groundwater operating plan is sustainable because it will not cause detrimental short- or long-term effects to the groundwater and surface water resources in the Valley.¹⁸

(ii) Alluvial Aquifer

The groundwater operating plan includes pumping from the Alluvial Aquifer in the range of 30,000 to 40,000 acre-feet per year (afy) in average/normal years and slightly reduced pumping (30,000 to 35,000 afy) in dry years.¹⁹ Current data indicate that the Alluvial Aquifer remains in good operating condition and can continue to support groundwater pumping in the range stated above without adverse results (e.g., long-term water level decline or degradation of groundwater quality).²⁰

¹⁷ UWCD manages surface water and groundwater resources in seven groundwater basins, all located in Ventura County, downstream of the East Subbasin of the Santa Clara River Valley Groundwater Basin (Basin), and is a partner in cooperative management efforts to accomplish the objectives (goals) for the Basin, particularly as they relate to preservation of surface water resources that flow through the respective basins.

¹⁸ From "Analysis of Groundwater Basin Yield, Upper Santa Clara River Basin, Eastern Subbasin, Los Angeles County, California," prepared by CH2M HILL and Luhdorff and Scalmanini Consulting Engineers, August 2005.

¹⁹ Castaic Lake Water Agency, 2005 Urban Water Management Plan, Prepared for the Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, November 2005.

²⁰ Castaic Lake Water Agency, 2005 Urban Water Management Plan, Prepared for the Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, November 2005.

(iii) Saugus Formation

The groundwater operating plan includes pumping from the Saugus Formation in the range of 7,500 to 15,000 afy in average/normal years; it also includes planned dry-year pumping from the Saugus Formation of 21,000 to 35,000 afy for one to three consecutive dry years.²¹ Such short-term pumping can be recharged during subsequent wet/normal years to allow groundwater levels and storage to recover, as it has in historical periods.

(iv) Ammonium Perchlorate

Ammonium perchlorate originating at the former Whittaker-Bermite propellant production facility has been a water quality concern in groundwater basins of the Santa Clarita Valley since it was first detected in four wells in the Saugus Formation in 1997.²² In November 2002, perchlorate was detected in one Alluvial well (Stadium well) near the Whittaker-Bermite site, and in early 2005, perchlorate was detected in a second Alluvial well. All six wells were removed from active water service, and one of the Alluvial wells has been returned to active water supply service with the operation of wellhead perchlorate removal technology approved for operation by the California Department of Health Services.²³ In addition, based on zone-specific monitoring, very low levels of perchlorate contamination (i.e., approximately 2 parts per billion) were detected in well NC-13.²⁴ However, this level is well below the action level and the well remains in operation.²⁵

In November 2000, CLWA and the Local Purveyors filed a suit against the then current and former owners of the Whittaker-Bermite site. The suit seeks to have the defendants cover all costs of response, contaminant removal, remedial actions, and any liabilities or damages caused by the contamination. In 2003, the parties reached an interim settlement and funding agreement, which expired in January 2005. The parties have since reached a settlement, which was approved by the court in July of 2007.²⁶ The parties to the lawsuit also jointly developed a plan to pump and treat contaminated water from some of the impacted wells to stop the movement of the plume.

²¹ *Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2006, May 2007.*

²² *See also Section 2.1.1 and Section 2.4.2 of Appendix I-1, Water Resources Technical Report.*

²³ *Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2005, April 2006.*

²⁴ *Cole, Steve, General Manager, Newhall County Water District, September 2007.*

²⁵ *Cole, Steve, General Manager, Newhall County Water District, September 2007.*

²⁶ *Ford, Jeff, Water Resources Planner, Castaic Lake Water Agency, 2008.*

CLWA and the affected Local Purveyors have undertaken a comprehensive groundwater containment, treatment, and restoration project to address perchlorate contamination.²⁷ The project will intercept the perchlorate plume in the Saugus Formation groundwater. Contaminated water will then be pumped from intercepting wells to the new treatment facility where the chemical will be removed and the treated water used as part of the Santa Clarita Valley drinking water supply.²⁸ Construction began in November of 2007 and treatment is anticipated to commence in August of 2009.²⁹

(b) Recycled Water

CLWA delivers highly treated recycled water from one of two water reclamation plants in the Santa Clarita Valley to meet non-potable water demands (golf course and landscape irrigation, etc.) in its service area. The water reclamation plants are owned by the Sanitation Districts of Los Angeles County.

CLWA first initiated recycled water service in July 2003. CLWA is permitted to deliver up to 1,700 afy of recycled water and is preparing to implement Phase II of its recycled water system, which would generate up to 1,740 additional acre-feet of recycled water³⁰. Future plans would allow the delivery of up to 17,400 afy, representing an annual increase of 15,700 af over the present supply. The amount of recycled water used for irrigation purposes, at a golf course and in roadway median strips, was approximately 470 af in 2007.³¹

Additionally, wastewater generated by development in the Newhall Ranch Specific Plan area will be treated by the proposed Newhall Ranch Water Reclamation Plant and will be reused within the Specific Plan area for non-potable uses. This is discussed in more detail below.

²⁷ *Castaic Lake Water Agency, Mitigated Negative Declaration for the Groundwater Containment, Treatment and Restoration Project, August 2005.*

²⁸ *Castaic Lake Water Agency, Mitigated Negative Declaration for the Groundwater Containment, Treatment and Restoration Project, August 2006; Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2005, April 2006.*

²⁹ *Ford, Jeff, Water Resources Planner, Castaic Lake Water Agency, 2009.*

³⁰ *Ford, Jeff, Water Resources Planner, Castaic Lake Water Agency, 2009.*

³¹ *Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2007, April 2008.*

(c) Imported Water**(i) SWP Table A Amount**

Since 1980, local groundwater supplies in the Santa Clarita Valley have been supplemented with imported water from the SWP. Imported water is provided to the CLWA service area via the SWP. The SWP is a complex system of reservoirs, dams, power plants, pumping plants, canals, and aqueducts for the storage and delivery of water authorized by an act of the California State Legislature in 1959.

The SWP includes 28 storage facilities, reservoirs and lakes; 20 pumping plants; six pumping-generating plants and hydroelectric power plants; and approximately 660 miles of aqueducts and pipelines. The primary water source for the SWP is the drainage of the Feather River, a tributary of the Sacramento River. Runoff released from Oroville Dam in Butte County flows down natural channels to the Sacramento-San Joaquin River Delta (Delta), where a portion of the water is pumped through the North Bay Aqueduct to Napa and Solano counties. In the southern Delta, water is pumped from the Clifton Court Forebay by the Harvey O. Banks Delta Pumping Plant into the 444-mile-long, Governor Edmund G. Brown California Aqueduct (California Aqueduct). The California Aqueduct conveys water to the primarily agricultural users in the San Joaquin Valley and the primarily urban regions of the San Francisco Bay Area, the Central Coast, and southern California. Water intended for use in southern California is conveyed through the West Branch to Castaic Lake and through the East Branch to Lake Perris, which are referred to as terminal reservoirs for the SWP.

DWR is the state agency charged with the statutory responsibility to build, manage, and operate the SWP. In 1960, DWR began executing individual Water Supply Contracts with public agencies throughout the state of California to finance and construct SWP facilities to deliver water to each public agency (public agencies that hold SWP Water Supply Contracts with DWR are collectively referred to as “SWP contractors” or “contractors”). CLWA is one of 29 SWP contractors and provides imported water supplies via the SWP to the CLWA service area.

Each Water Supply Contract identifies a Table A Amount, which is the annual maximum amount of water that DWR is contracted to deliver under Table A of the contract, if available for delivery, to each SWP contractor on an annual basis. DWR has historically delivered less water to the contractors than the Table A Amounts, in part, because the Table A Amounts were predicated on the state’s obligation to build out the SWP so as to deliver 4.23 million af to the contractors and because many contractors have historically not requested delivery of their full Table A Amount. However, the SWP infrastructure has not been completed, and DWR cannot deliver the full Table A Amounts (currently at 4.173 million af) to the contractors in most years

due to lack of storage facilities and other constraints. Overall reliable water supply is determined biannually by DWR through a process that is subject to public review and comment.³² Thus, the Table A Amounts do not guarantee that each contractor will receive the maximum amount of water granted to it in its Water Supply Contract; the Table A Amounts instead provide the basis for proportional allocation of available water among contractors.

Each contractor annually submits a request to DWR for water delivery in the following year, in any amount up to the contractor's Table A Amount. The Water Supply Contracts provide that in a year when DWR is unable to deliver total contractor requests, deliveries to all contractors will be reduced in proportion to Table A Amounts so that total deliveries equal total available supply for that year. While SWP contractors currently hold Table A Amounts totaling approximately 4.173 million af, the amount of water actually requested by contractors is less than that due to a number of contractors whose demands have not yet increased to their full Table A Amount. Even at these lower current demands, however, the SWP cannot meet all water delivery requests in some years, particularly in dry years, due to operational, hydrologic, and environmental constraints.

CLWA's contractual "right" to imported water via the SWP (i.e., its Table A Amount) is 95,200 af.³³ Climatic conditions and other factors can significantly alter the availability of SWP water in any year. DWR makes annual allocations of SWP water based on a number of factors including that year's hydrologic conditions, the amount of water in storage in the SWP system, and SWP contractors' requests for SWP supplies. Based on the information provided in the 2005 SWP Delivery Reliability Report, CLWA's average or normal year SWP supply, as shown in CLWA's 2005 Urban Water Management Plan (2005 UWMP), is anticipated to be approximately 73,300 af in 2025/2030.

As stated, DWR released a Draft 2007 SWP Delivery Reliability Report for public review and comment on January 28, 2008, and released the Final 2007 SWP Delivery Reliability Report in August of 2008.³⁴ The 2007 SWP Delivery Reliability Report updates the 2005 SWP

³² DWR publishes a reliability report every two years that contains data concerning the reliability of current and projected SWP deliveries. This reliability data is generated from CalSim II, DWR's computer simulation model of SWP operations. As discussed in this section, DWR released its Draft 2007 SWP Delivery Reliability Report on January 28, 2008, the period for public comments on the draft report ended on March 13, 2008, and DWR released the Final 2007 SWP Delivery Reliability Report in August of 2008. This is the most current report available.

³³ More detail is provided herein and in Appendix I-1, Water Resources Technical Report, Section 2.2.2 regarding the legal challenges related to the transfer of 41,000 af of Table A Amount from Kern County Water Agency (KCWA) and its member unit in Kern County, the Wheeler Ridge-Maricopa Water Storage District (WRMWS) to CLWA.

³⁴ California Department of Water Resources, 2008 and State Water Project Delivery Reliability Report, August 2007.

Delivery Reliability Report and describes key planning activities with objectives related to providing a sustainable Delta that may affect future SWP delivery reliability, including the Delta Vision process, the Bay Delta Conservation Plan (BDCP), the Delta Risk Management Strategy (DRMS), and the CALFED Ecosystem Restoration Program Conservation Strategy.

The 2007 SWP Delivery Reliability Report also describes three areas of significant uncertainty to SWP delivery reliability: the recent and significant decline in pelagic organisms in the Delta³⁵ (open-water fish such as striped bass, delta smelt³⁶ and longfin smelt),³⁷ climate

³⁵ *In late 2004 and early 2005, scientists became concerned about the numbers of many pelagic organisms, including delta smelt, which had been declining sharply since the early 2000's. Other pelagic fish with very low numbers in the Delta are striped bass, longfin smelt and threadfin shad, and by 2005, the decline was widely recognized as a serious issue and became known as the Pelagic Organism Decline (POD). Hypothesized factors contributing individually or in concert to lower pelagic productivity are: 1) toxic effects, 2) exotic species effects, and 3) water project effects. Studies over the last three years indicate that all these factors might be contributing to the decline in pelagic fishes, and their relative importance might vary depending upon year, season, and location within the Delta (Department of Water Resources, 2008 and State Water Project Delivery Reliability Report, August 2007).*

³⁶ *On May 31, 2007, DWR voluntarily shut down the Harvey O. Banks Delta Pumping Plant for 10 days as a preventative measure to protect delta smelt located near the DWR facilities. This action followed the observed entrainment of juvenile smelt between May 25, 2007 and May 31, 2007 at the Harvey O. Banks Delta Pumping Plant facility. DWR resumed limited pumping at the Harvey O. Banks Delta Pumping Plant on June 10, 2007. Pumping was increased beginning on June 17, 2007.*

³⁷ *The 2007 SWP Delivery Reliability Report notes that longfin smelt is being considered for listing under the California Endangered Species Act (CESA). On February 7, 2008, the California Fish and Game Commission (Commission) designated longfin smelt as a candidate species for listing under CESA. Under CESA, candidate species receive the same legal protection as listed threatened and endangered species. Under state law, take of candidate species (including incidental take by engaging in activities that may result in take) is prohibited unless authorized by the Commission or the California Department of Fish and Game (Department) under specified conditions. On February 17, 2009, DWR adopted a Negative Declaration (ND) for the ongoing SWP operations in the Sacramento-San Joaquin Delta for the protection of the longfin smelt as authorized by the DFG through issuance of a permit for take of longfin smelt under Section 2081 of CESA (California Fish and Game Code Section 2081). The permit issued by DFG allows the incidental take of longfin smelt until it expires on December 31, 2018. The action consists of operation of SWP facilities consistent with certain actions identified in the U.S. Fish and Wildlife Service Delta Smelt Biological Opinion of the Operating Criteria and Plan (OCAP) for the Coordinated Operations of the Central Valley Project and State Water Project. The action includes operation of SWP facilities from December through June to protect adult longfin smelt migration and spawning and larvae and juvenile rearing. The protection of longfin smelt is achieved through operations undertaken during the same period to protect delta smelt, which DWR found are sufficient for the protection of longfin smelt because of adaptive management provisions and the substantial overlap in timing and distribution of these species in the Sacramento-San Joaquin Delta. DFG also imposed additional mitigation measures as part of its Incidental Take Permit. On March 4, 2009, the California Fish and Game found that a threatened listing was warranted for longfin smelt, and its regulatory findings indicated that a variety of factors are affecting the fish and posing a threat to its recovery, including water project operations in the Delta, pollutants, dredging and sand mining operations, and commercial bait fishing for bay shrimp. On June 25, 2009, the Commission formally listed longfin smelt as a threatened species under CESA.*

On August 8, 2007, USFWS was petitioned to list only the San Francisco Bay-Delta population of longfin smelt as a Distinct Population Segment (DPS). On May 6, 2008, the USFWS published a 90-day finding that listing might be warranted. On April 9, 2009, the USFWS issued a full 12-month finding that it did not qualify as a (Footnote continued on next page)

change and sea level rise, and the vulnerability of Delta levees' to failure (refer to Chapter 4.S of this EIR and Appendix I-1, Water Resources Technical Report for additional discussion related to climate change and sea level rise, and Appendix I-1 for more discussion of levee issues). As stated in the report, the 2007 SWP Delivery Reliability Report is distinguished from earlier SWP delivery reliability reports by including estimates of the potential reductions to SWP delivery reliability due to the pelagic organism decline (POD) and future climate changes.

The 2007 SWP Delivery Reliability Report includes CalSim II simulations that were conducted to evaluate current (2007) SWP delivery reliability and incorporate actions to protect the delta smelt as required by the federal court ruling in *Natural Resources Defense Council, et al. v. Kempthorne*, Case No. 1:05-cv-01207-OWW-NEW.^{38,39} As described in the report,

DPS. They also announced a new status review of the species through its entire range. On April 8, 2009, the USFWS announced that the Bay-Delta population of longfin smelt does not meet the legal criteria for protection as a species subpopulation under the federal Endangered Species Act. The USFWS simultaneously announced that it is seeking additional information for a broader assessment of the longfin smelt that could lead to future action, although no decision can be made before reviewing any new information.

³⁸ *On May 25, 2007, the United States District Court (Eastern District of California, Fresno Division) in Natural Resources Defense Council, et al. v. Kempthorne, Case No. 1:05-cv-01207-OWW-NEW (Kempthorne) granted in part the plaintiff's motion for summary judgment and found that the USFWS's 2005 BO on the impacts of the long-term operations of the Central Valley Project (CVP) and the SWP on delta smelt was inadequate. In late June 2007, District Judge Oliver W. Wanger in Kempthorne heard and rejected Natural Resources Defense Council's and Earthjustice's motion for a temporary restraining order to curb southbound water shipments at least temporarily due to smelt issues. Judge Wanger ruled that the BO, consequently, must be remanded to the NMFS and the U.S. Bureau of Reclamation for further consultation in accordance with law and that the U.S. Bureau of Reclamation must continue to take no actions during reconsultation that make any irreversible or irretrievable commitment of resources that forecloses the formulation or implementation of reasonable and prudent alternative measures. On August 31, 2007, the court in Kempthorne issued an oral statement of decision granting a preliminary injunction and remedial order to protect delta smelt until a new delta smelt BO was issued by the USFWS. The decision, finalized on December 14, 2007, set interim operating limits for the joint SWP and CVP operations and required new steps to monitor delta smelt. The Kempthorne requirements were triggered by environmental conditions and the presence of specific delta smelt life stages and were focused on minimizing the negative entrainment effects caused when the combined export pumping of the SWP and the CVP reverses the flow in Old and Middle River (OMR). The decision required the USFWS to complete a new BO by September 15, 2008; however, the USFWS requested and was granted a three-month extension to complete the BO, which was then issued on December 15, 2008 (http://www.fws.gov/sacramento/es/documents/SWP-CVP_OPs_BO_12-15_final_OCR.pdf). The new BO supersedes the operating parameters and requirements set forth in the interim remedial order, but continues similar parameters and requirements. DWR estimates that water deliveries to cities, farms, and businesses throughout much of the state will be reduced about 20 to 30 percent on average, but that cuts could be even greater under certain hydrologic conditions (DWR News Release, December 15, 2008, Delta Water Exports Could Be Reduced By Up to 50 Percent Under New Federal Biological Opinion; DWR Director Snow Responds to Delta Smelt Biological Opinion). DWR, however, has not yet issued formal guidance regarding the effects of this BO on SWP reliability.*

³⁹ *Similar to the challenge to the delta smelt BO, a second BO, covering Sacramento River winter-run Chinook, Central Valley spring-run Chinook, Central Valley steelhead and other aquatic species, issued in October 2004 by the NMFS, was challenged in Pacific Coast Federation of Fishermen's Associations/Institute for Fisheries Resources, et al. v. Gutierrez, Case No. 1:06-cv-00245-OWW-GSA. Subsequent to the initiation of this lawsuit, the U.S. Bureau of Reclamation reinitiated consultation on the BO. On April 16, 2008, Judge Wanger issued a summary judgment order in this case invalidating the salmon and steelhead BO, finding it unlawful and (Footnote continued on next page)*

simulations to evaluate future (2027) SWP delivery reliability incorporate the current interim court-ordered operating rules related to delta smelt and a range of possible climate change impacts to hydrology in the Central Valley. The interim operating rules for delta smelt were simulated at a more-restricted level and a less-restricted level for Delta exports to provide a range of estimated water deliveries. Therefore, for 2007, two studies were conducted. For 2027, 10 simulations were used to reflect the four assumed scenarios for climate change and the two levels of operating rules. Results of these updated CalSim II simulations are presented in the 2007 SWP Delivery Reliability Report along with results from the 2005 SWP Delivery Reliability Report to help identify and explain impacts to delivery reliability due to actions to protect delta smelt and future climate change.

inadequate on a number of grounds. Judge Wanger ruled that the BO, consequently, must be remanded to the NMFS and the U.S. Bureau of Reclamation for further consultation in accordance with law (which, as noted above, is already ongoing) and that the U.S. Bureau of Reclamation must continue to take no actions during re-consultation that make any irreversible or irretrievable commitment of resources which forecloses the formulation or implementation of reasonable and prudent alternative measures. On June 4, 2009, NMFS released its BO (<http://swr.nmfs.noaa.gov/ocap.htm>), which concludes that CVP and SWP operations will jeopardize the covered species and destroy or adversely affect critical habitat. DWR estimates that restrictions included in the BO could reduce Delta exports on average by 300,000 to 500,000 af (News Release, June 4, 2009, DWR Responds to New Biological Opinion to Protect Salmon).

On April 10, 2008, the Pacific Fishery Management Council adopted a closure of commercial and sport Chinook fisheries off California and most of Oregon and allowed only a limited fishery for hatchery coho salmon in response to the collapse of Sacramento River fall Chinook and poor status of coho salmon from Oregon and Washington (http://www.pcouncil.org/newsreleases/PFMC_FINAL_PressRel.pdf). On May 1, 2008, Secretary of Commerce Carlos M. Gutierrez declared a commercial fishery failure for the West Coast salmon fishery and the National Oceanic and Atmosphere Administration's (NOAA's) Fisheries Service issued regulations to close or severely limit recreational and commercial salmon fishing in the area (http://www.nmfs.noaa.gov/mediacenter/docs/disaster_declaration_2008_FINAL.pdf). Many potential causes of decline have been indicated but the reason for the collapse of the Sacramento fall Chinook stock is not readily apparent (http://www.pcouncil.org/newsreleases/PFMC_FINAL_PressRel.pdf). Potential causes have been suggested and include ocean temperature changes and a resulting lack of upwelling; and a combination of human-caused and natural factors including both marine conditions and freshwater factors such as in-stream water withdrawals, habitat alterations, dam operations, construction, and pollution (http://www.pcouncil.org/newsreleases/PFMC_FINAL_PressRel.pdf; http://swr.nmfs.noaa.gov/news/030308.salmon_decline.final.pdf).

*In addition, on April 18, 2007, an Alameda County Superior Court in *Watershed Enforcers v. California Dept. of Water Resources*, Case No. RG06292124, granted the petition for writ of mandate and issued an order to cease and desist from further operation of the Harvey O. Banks Delta Pumping Plant until and unless DWR obtains authorization from the California Department of Fish and Game in compliance with CESA with regard to their incidental take of various species, including the delta smelt, winter-run Chinook salmon and spring-run Chinook salmon. The order was stayed for 60 days to provide DWR with time to comply with the CESA's incidental take authorizing requirements. This court decision has been appealed and the appellate process has been stayed by stipulation of the parties and approval of the Appellate Court with status report from the parties in October, November and December 2008 (personal communication, M. Morrow, DWR 2008). In the meantime, DWR is working with the California Department of Fish and Game to obtain a consistency statement or other permit in response to the Superior Court's order (personal communication, M. Morrow, DWR 2008).*

Since the 2007 SWP Delivery Reliability Report was issued, two BOs were released by the USFWS⁴⁰ and NMFS⁴¹ for the protection of species listed under the federal Endangered Species Act (refer to Footnotes 38 and 39 in this section for additional detail). These BOs restrict negative flows on watercourses leading to the SWP and CVP export facilities in the Delta, resulting in restrictions on SWP pumping. This has led to reduced water supplies and increased uncertainty regarding the ability of the SWP to meet its contractual deliveries to CLWA and other SWP contractors. Multiple entities have challenged the scientific basis of these restrictions, however, and some water agencies are developing other means of protecting biological resources in the Delta while providing water supply benefits.

Among the projects that are being developed, but have not yet received approvals and/or permits are the BDCP, the purpose of which is to develop a conservation plan that resolves the conflict between fishery protection under state and federal ESAs and water operations of the SWP, CVP, and Mirant Power facilities in the legal Delta; improvements to the North Bay Aqueduct, which are intended to benefit protected species and improve water quality; the Los Vaqueros Reservoir Expansion Project, which could provide water supplies for environmental water management in the Delta to support fish protection, habitat management and other environmental water needs; and installation of operable gates in key channels in the Delta in order to control flows and thereby provide reduced entrainment of delta smelt and other sensitive aquatic species at the SWP and CVP export pumping facilities. Given the factors described above, however, the SWP supply reliability is uncertain, and is expected to remain below the contractual maximum described in the Table A Amount and somewhat less than or equal to the amount most recently provided by DWR (2007).

DWR has not yet issued a new SWP Delivery Reliability Report based on the new BOs, and other formal estimates of delivery reductions that might occur as a result of the BOs have not been published. Therefore, the information from the 2007 report is considered the best information currently available. It is presented below with the caveat that SWP deliveries are likely to be less in the future than shown here.

The 2007 SWP Delivery Reliability Report includes the information presented in Table 4.I-1 on page 4.I-17 and Table 4.I-2 on page 4.I-17, which provide average and dry period estimated deliveries for current conditions (2007) and future conditions (2027), and compares those figures to those in the 2005 SWP Delivery Reliability Report.

⁴⁰ U.S. Fish and Wildlife Service, *Biological Opinion on the Proposed Coordinated Operations of the Central Valley Project and State Water Project*, December 2008.

⁴¹ National Marine Fisheries Service, Southwest Region, *Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project*, June 2009.

Table 4.I-1

Average and Dry Period SWP Table A Deliveries from the Delta under Current Conditions

Study of Current Conditions	SWP Table A Delivery from the Delta (in percent of maximum Table A) ^a					
	Long-term Average ^b	Single dry-year (1977)	2-year drought (1976-1977)	4-year drought (1931-1934)	6-year drought (1987-1992)	6-year drought (1929-1934)
2005 SWP Reliability Report, Study 2005	68%	4%	41%	32%	42%	37%
Update with 2007 Studies ^c	63%	6%	34%	35%	35%	34%

^a Maximum Table A Amount is 4,133 thousand acre feet/year.

^b 1922-1994 for 2005 SWP Delivery Reliability Report; 1922-2003 for Update with 2007 studies.

^c Values reflect averaging annual deliveries from the two scenarios of Old and Middle River flow targets described in Table 6-3 of the 2007 SWP Delivery Reliability Report.

Source: California Department of Water Resources, 2008 and State Water Project Delivery Reliability Report, August 2007, Table 6-5.

Table 4.I-2

Average and Dry Period SWP Table A Deliveries from the Delta under Future Conditions

Study of Future Conditions	SWP Table A Delivery from the Delta (in percent of maximum Table A) ^a					
	Long-term Average ^b	Single dry-year (1977)	2-year drought (1976-1977)	4-year drought (1931-1934)	6-year drought (1987-1992)	6-year drought (1929-1934)
2005 SWP Reliability Report, Study 2025	77%	5%	40%	33%	42%	38%
Update with 2027 Studies ^c	66-69%	7%	26-27%	32-37%	33-35%	33-36%

^a Maximum Table A Amount is 4,133 thousand acre feet/year.

^b 1922-1994 for 2005 SWP Delivery Reliability Report; 1922-2003 for Update with 2007 studies.

^c Range in values reflects four modified scenarios of climate change: annual Table A deliveries were first interpolated between full 2050 level and no climate change scenarios, then averaged over the two scenarios of Old and Middle River flow targets.

Source: California Department of Water Resources, 2008 and State Water Project Delivery Reliability Report, August 2007, Table 6-5.

As shown, under the updated Future Conditions (2027), average SWP delivery amounts may decrease from 8 to 11 percent of maximum Table A amounts as compared to earlier estimates in the 2005 SWP Delivery Reliability Report. This decrease in reliability results in an estimated average delivery of 66 percent to 69 percent (versus 77 percent as identified in the 2005 SWP Delivery Reliability Report).

Applying the 66 percent figure (most conservative of the 66-69 percent range) to CLWA's Table A Amount of 95,200 af, results in approximately 62,800 af expected under average Future Conditions (2027) according to the 2007 SWP Delivery Reliability Report. This

is compared to the 77 percent, or 73,300 af, included in the water supply planning in the 2005 UWMP in 2030 in an average year as discussed above.

Delta-Related Planning Activities

Delta Vision

In 2006, by Executive Order S-17-06, the Governor initiated a comprehensive Delta Vision process and appointed a Blue Ribbon Task Force to recommend future actions to achieve a sustainable Delta. In December 2007, the Delta Vision Blue Ribbon Task Force submitted the first of two required reports. "Our Vision for the California Delta," included twelve linked recommendations and several proposed near-term actions to protect the Delta ecosystem and the State's water supply. Among the twelve Integrated and Linked Recommendations is the recommendation that the goals of conservation, efficiency and sustainable use must drive California water policies.⁴² In addition, the recommendations include that a revitalized Delta ecosystem will require reduced diversions, or changes in patterns and timing of those diversions, upstream, within the Delta and exported from the Delta at critical times.

The near-term actions included in the report focus on preparing for disasters in or around the Delta, protecting its ecosystem and water supply system from urban encroachment, and starting work on short-term improvements to both the ecosystem and the water supply system.⁴³

The second and final required report, a Strategic Plan to implement the Delta Vision, is to be completed by the Blue Ribbon Task Force by October of 2008.

Bay Delta Conservation Plan

The purpose of the BDCP is to develop a conservation plan that resolves the conflict between fishery protection under the state and federal Endangered Species acts and water operations of the SWP, CVP, and Mirant Power facilities in the legal Delta.⁴⁴ The goal of the BDCP is to satisfy both the conservation and water supply goals of the Planning Agreement signed in October 2006.⁴⁵

⁴² http://deltavision.ca.gov/BlueRibbonTaskForce/FinalVision/Vision_2_Page_Summary.pdf.

⁴³ The complete report is accessible at http://deltavision.ca.gov/BlueRibbonTaskForce/FinalVision/Delta_Vision_Final.pdf.

⁴⁴ California Department of Water Resources, 2008 and State Water Project Delivery Reliability Report, August 2007.

⁴⁵ *Ibid.*

Among other things, the plan will provide for conservation and management of at-risk fish species impacted by the covered activities; preserve, restore, and conserve aquatic, riparian and associated terrestrial habitats; and provide clear expectations and regulatory assurances for Delta water operations and facilities (CVP, SWP, and Mirant Corporation). The steering committee for the BDCP has been actively working since April 2007 to set the scope and focus of this planning effort. The committee initially developed ten options. These options were narrowed to four options for conveyance and opportunities that provide for habitat restoration and enhancement and include: Option 1, Existing Through-Delta Conveyance; Option 2, Improved Through Delta Conveyance; Option 3, Dual Conveyance; and Option 4, Peripheral Aqueduct.⁴⁶

More detail on the Delta planning activities is provided in Appendix I-1, Water Resources Technical Report. In addition, Subsection 2.b (3), Summary of Existing and Planned Supplies and Banking Programs and Projected Demand, provides more detail related to CLWA's supplies and demands as presented in the 2005 UWMP and the updated information based primarily upon the information provided in the 2007 SWP Delivery Reliability Report presented in Tables 4.I-1 and 4.I-2.

CLWA Supplemental Water Project (41,000 Acre-foot Table A Transfer)

As discussed in Appendix I-1, Water Resources Technical Report, the principal component of the CLWA Supplemental Water Project is the execution of an agreement for the transfer of 41,000 af of SWP Table A Amount and the associated conveyance and delivery terms from KCWA to CLWA. In 1999, CLWA entered into such a contract with KCWA and its member unit, the Wheeler Ridge-Maricopa Water Storage District (WRMWSO). DWR concurred with this arrangement and modified CLWA's Water Supply Contract to conform to the agreement.

This transfer of contract rights to the SWP from KCWA to CLWA was completed in accordance with the "Monterey Amendments." These amendments to the Water Supply Contracts for the SWP are based on a statement of principles that were incorporated into an omnibus revision of the long-term contracts between DWR and most of the contractors.

Prior to the enactment of the Monterey Amendments and in compliance with an agreement among the SWP contractors and DWR, the Central Coast Water Agency (CCWA), one of the SWP contractors, acted as the lead agency for the preparation of a program EIR, which was used to support the Monterey Amendments (the "Monterey Agreement Program EIR"). Each of the other affected SWP contractors and DWR later adopted the Monterey

⁴⁶ *Ibid.*

Agreement Program EIR. These actions were challenged in court by the Planning and Conservation League, Citizens Planning Association, and Plumas County. In the absence of a restraint from the courts, DWR modified the Water Supply Contracts and implemented the various components of the Monterey Agreement. At this point, the omnibus revision of the long-term contracts became known as the Monterey Amendments.

CLWA later prepared and certified a Supplemental Water Project EIR to evaluate the agreement with KCWA, including the 41,000 af transfer. As a project contained within the Monterey Agreement Program EIR, the Supplemental Water Project EIR was tiered off of the Monterey Agreement Program EIR. After CLWA's certification of the Supplemental Water Project EIR, the Monterey Agreement Program EIR was decertified by the Court of Appeal in *Planning and Conservation League v. Dept. of Water Resources* (2000) 83 Cal.App.4th 892 (*PCL*). The Court of Appeal in *PCL* held that DWR should have been the lead agency for the Monterey Agreement Program EIR, instead of CCWA, and required DWR to prepare and certify its own EIR for the Monterey Agreement. The Court also held that the Monterey Agreement Program EIR was insufficient because it failed to analyze the impact of implementing a provision in the existing (pre-Monterey Amendments) Water Supply Contracts concerning the allocation of water among the contractors in the event of a permanent water shortage (Article 18(b))⁴⁷ as part of the no-project alternative. The Court in *PCL* did not invalidate the Monterey Agreement or enjoin the resulting implementing transfer contracts. Instead, the Court directed the trial court to consider whether the Monterey Agreement should remain in place pending DWR's preparation of a new EIR under Public Resources Section 21168.9 and to retain jurisdiction pending certification of the new EIR.

Because it was tiered from a now decertified Monterey Agreement Program EIR, the Court of Appeal decertified CLWA's Supplemental Water Project EIR in *Friends of the Santa Clara River v. Castaic Lake Water Agency* (2002) 95 Cal.App.4th 1373 (*Friends*). The Court expressly found that all other contentions concerning the legal adequacy of the Supplemental

⁴⁷ Article 18 is a provision in the water supply contracts that addresses how water will be allocated amongst the contractors in the event of water supply shortages. Article 18(b), *Permanent Shortage; Reduction of Entitlements* was deleted with the Monterey Amendments. Article 18(b) provided that, in the event that DWR was unable to construct sufficient additional conservation facilities to prevent a reduction in the minimum SWP yield, or if for any other reason there was a reduction in the minimum SWP yield, which threatened a permanent shortage in the supply of SWP water to be made available to the contractors, the annual entitlements and the maximum annual entitlements of all contractors, except to the extent such entitlements may reflect established rights under the area of origin statutes, would be reduced by amendment of Table A of the contracts, proportionately by DWR to the extent necessary so that the sum of the revised maximum annual entitlements of all contractors would then equal such reduced minimum SWP yield.

Water Project EIR were without merit. “If the PCL/tiering problem had not arisen, we would have affirmed the judgment.”⁴⁸

Similarly, the Court of Appeal in *Friends* did not enjoin the Supplemental Water Project or its 41,000 af transfer. It instead ordered the trial court to consider whether the contract authorizing the 41,000 af transfer should remain in place pending CLWA’s preparation of a new EIR that is not tiered from the now decertified Monterey Agreement Program EIR under Public Resources Code Section 21168. Accordingly, the Court did not issue any ruling affecting CLWA’s ability to continue to use and rely on the 41,000 af, leaving it to the trial court to determine whether to enjoin CLWA’s use of the water pending its completion of a new EIR.⁴⁹

In September 2002, on remand to the Los Angeles County Superior Court, the *Friends* petitioners applied under Public Resources Section 21168.9 to enjoin CLWA from continuing to use and rely on water from the 41,000 af transfer. The trial court rejected that request. In December 2003, the Court of Appeal affirmed the trial court’s ruling and refused to enjoin CLWA from continuing to use and rely on water from the 41,000 af transfer pending completion of a new EIR. The *Friends* petitioners were permitted to renew their application based upon evidence of the actual use of such additional water for purposes it considers improper.

Meanwhile, before the trial court in *Friends* acted on remand, the parties to the *PCL* litigation entered into a settlement agreement, which was later approved by the Sacramento County Superior Court. The settlement agreement provides that the SWP will continue to be administered and operated in accord with both the Monterey Amendments and the terms of the settlement agreement. The settlement agreement did not invalidate or vacate the Monterey Amendments or any water transfer effected under them, including the CLWA-KCWA transfer. The settlement agreement recognized the pending litigation on the 41,000 af transfer and the parties to the settlement agreement agreed that the litigation should remain in the Los Angeles County Superior Court. The water transfer was effected and permanent under the settlement agreement.

The Supplemental Water Project EIR having been decertified, CLWA prepared and circulated a new Draft Supplemental Water Project EIR, which did not tier off the Monterey Agreement Program EIR. CLWA held two separate public hearings concerning the new Draft Supplemental Water Project EIR, and received and responded to public comments. CLWA certified the new Supplemental Water Project EIR on December 22, 2004, and lodged the certified EIR with the Los Angeles Superior Court as part of its return to the trial court’s writ of

⁴⁸ *Friends, supra, at 1387.*

⁴⁹ *Friends, supra, at 1388.*

mandate in *Friends*. Thereafter, the *Friends* petitioners voluntarily dismissed the *Friends* action in February 2005.

Two legal challenges to CLWA's new Supplemental Water Project EIR were filed in January 2005 in the Ventura County Superior Court (*Planning and Conservation League v. CLWA and California Water Impact Network v. CLWA*). These challenges were consolidated and transferred to the Los Angeles Superior Court (*California Water Impact Network v. CLWA*, Case No. BS 098724) (*CWIN*). The Los Angeles County Superior Court issued its statement of decision on May 22, 2007 (a copy of the decision is provided in Attachment A of Appendix I-1, Water Resources Technical Report). In July 2007, Petitioners filed a Partial Notice of Appeal and CLWA subsequently filed a Notice of Cross Appeal.

In *CWIN*, the trial court upheld the validity and finality of the 41,000 afy transfer. The statement of decision states: "Under contract and validation law, the Kern water transfer contract, entered into in 1999, is valid, has been approved by DWR, and [CLWA] has paid Wheeler Ridge for it. Neither the parties nor DWR can terminate the Kern transfer contract. Nothing in CEQA permits a public agency to void a contract."⁵⁰

The court found that DWR's new Monterey Agreement Program EIR may affect the Kern water transfer. "DWR conceivably could conclude that these transfers have significant environmental impacts. As a consequence, DWR might have to impose feasible mitigation measures, adopt alternatives, or make a finding of infeasibility and adopt a statement of overriding considerations." (*Id.*) But DWR cannot invalidate the 41,000 af transfer. "Though the court cannot conclude that the Kern water transfer would have occurred without the Monterey Amendments, it can conclude that the transfer will remain in effect even if the Monterey Amendments are not approved or otherwise are mitigated under CEQA. The Court already has indicated that the Kern water transfer is final."⁵¹

In discussing the impact of the *PCL* decision, the court indicated that nothing in *PCL* requires CLWA to wait for DWR's Monterey Agreement Program EIR. "Under lead agency law, [CLWA] may act as lead agency and prepare an EIR for the Kern water transfer. The Kern water transfer is a project separate in time from the Monterey Amendments, now Monterey Plus."⁵²

⁵⁰ *CWIN, supra, at 13.*

⁵¹ *CWIN, supra, at 19.*

⁵² *CWIN, supra, at 16.*

The court held that the new Supplemental Water Project EIR was properly prepared, except for one defect – it failed to show the analytic route as to how and why three possible water delivery scenarios are relevant and would occur.

The court identified that the new Supplemental Water Project EIR considered the impacts of the project based on three water delivery scenarios: pre-Monterey Amendments without Article 18 cutbacks; pre-Monterey Amendments with Article 18 cutbacks; and post-Monterey Amendments. The court criticized the EIR for assuming the three possible water delivery scenarios without any discussion of why or how they would occur. The court identified that the new Supplemental Water Project EIR stated only: “Since the Monterey Amendments change the way in which SWP water is allocated among contractors, the 2004 EIR provides three separate analyses of the project’s impacts to water supply.” The court found the new Supplemental Water Project EIR deficient because it did not explain that the three (3) water delivery scenarios are possible outcomes of challenges to the Monterey Amendments, and did not explain how the challenges could cause these allocations to occur. This one defect in the new Supplemental Water Project EIR does not relate to the environmental conclusions reached in the EIR.

The petition for writ of mandate in *CWIN* was therefore granted in part and requires CLWA to set aside its approval of the new Supplemental Water Project EIR and comply with CEQA addressing the analytic route of the three water allocations. However, the decision clearly states that: “[CLWA] is not directed to set aside the Kern water transfer.” (*CWIN, supra*, at 30). Therefore, the judgment was entered in favor of the Petitioners solely on the issue identified.

Despite the litigation uncertainties surrounding the 41,000 af transfer since its inception, the transfer was completed in 1999 and the water has been continuously delivered to CLWA. CLWA has paid approximately \$47 million for the additional Table A Amount based on the transfer. The monies have been delivered. The sales price was financed by tax-exempt bonds. DWR recognized the transfer as permanent under the Monterey Agreement by entering into Amendment No. 18 to CLWA’s agreement, which increases its Table A Amount by 41,000 af. The water supplies have consistently been allocated to CLWA based on that entitlement ever since.

A future adverse judgment related to the 41,000 af transfer, or to the Monterey Agreement, or imposed mitigation measures affecting the 41,000 af transfer could affect CLWA SCWD’s ability to use water from the 41,000 af transfer and adversely affect CLWA SCWD’s water supplies over the long term (creating potential uncertainty relative to this water supply). However, it is not reasonable to believe that pending litigation or a future court decision is likely to unwind executed and completed agreements with respect to the permanent transfer of SWP water amounts, including the 41,000 af transfer.

The Court of Appeal in *Santa Clarita Organization for Planning the Environment (SCOPE) v. County of Los Angeles* (2007) 157 Cal.App.4th 149 (*West Creek*) found the County's analysis of water supply adequate in its recertified EIR for Newhall Land and Farming's West Creek project, which relied on the 41,000 afy transfer. The court further held that it can be confidently determined that the 41,000 afy transfer will be available such that no analysis of possible alternative replacement sources of water is needed under the California Supreme Court's analysis in *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412 (*Vineyard*).⁵³

A summary of legal decisions, relevant environmental documentation, and other circumstances that support the appropriateness of relying upon the 41,000 af transfer for planning purposes, including the project, is provided below:

1. The Monterey Agreement and resulting implementing transfer amendments remain in full force and effect, and no court has questioned the validity of the Monterey Agreement or the resulting implementing contracts.
2. The 41,000 af transfer was completed in 1999 and DWR has allocated and annually delivered water in accordance with the completed transfer. A price was set, the money was paid (financed by tax-exempt bonds), DWR amended CLWA's contract to include the additional entitlement, and the water has been continuously allocated and annually delivered to CLWA since 2000.
3. The Court of Appeal in *Friends* refused to enjoin the reasonable use of water from the CLWA Supplemental Water Project, including the 41,000 af transfer.
4. The existing SWP Water Supply Contract (including the 41,000 af transfer amendment) remains in full force and effect, and no court has ever questioned the validity of the contract or enjoined use of this portion of CLWA's Table A Amount.

⁵³ *In Vineyard, the California Supreme Court considered the sufficiency of the water supply analysis contained in an EIR prepared for a development project. The EIR's water supply analysis identified near-term supplies sufficient to serve the first phase of the project, and potential long-term water supplies for the later phases. Project opponents alleged various deficiencies in the analysis of water supplies and claimed that the EIR failed to demonstrate with sufficient certainty that water would be available for the project.*

The Court concluded that a water supply analysis need not establish certainty or provide guarantees of available long-term supply; however, the Court determined that the EIR failed to adequately analyze long-term water supply and the environmental effects of potential sources for long-term provision of water. The Court emphasized that certainty is not required for long-term supplies, but nevertheless required the EIR to include some discussion of possible replacement water sources when it is not possible to confidently determine that anticipated future water sources will be available, and to disclose the significant foreseeable environmental effects of those sources, as well as mitigation measures to minimize adverse impacts.

5. Nothing in the Monterey Amendments settlement agreement precludes reliance on the 41,000 af transfer.
6. The Monterey Amendments settlement agreement expressly authorizes the operation of the SWP in accordance with the Monterey Amendments, which authorize the 41,000 af transfer.
7. Nothing in the Monterey Amendments settlement agreement precluded CLWA from preparing and certifying its new Supplemental Water Project EIR for the 41,000 af transfer, as instructed by the Court of Appeal in *Friends*.
8. DWR is preparing a new Monterey Agreement Program EIR, which will analyze all of the water transfers that were facilitated by the Monterey Amendments;⁵⁴ this does not preclude CLWA from preparing and certifying its own EIR for the 41,000 af transfer, as instructed by *Friends*. In *CWIN*, the Superior Court held that CLWA does not need to wait for DWR's new Monterey Agreement Program EIR, CLWA can prepare its own environmental analysis, and the 41,000 af water transfer is "a project separate in time from the Monterey Amendments."
9. The 1999 CLWA Supplemental Water Project EIR for the 41,000 af transfer was decertified solely because it tiered from a later-decertified Monterey Agreement Program EIR. CLWA certified the new Supplemental Water Project EIR, including the 41,000 af Table A Amount transfer, without tiering from the Monterey Agreement EIR. CLWA's new 2004 Supplemental Water Project EIR corrected the sole defect identified by the Court of Appeal (i.e., tiering off the Monterey Agreement Program EIR).
10. The Superior Court in *CWIN* held that CLWA may act as the lead agency for the Kern water transfer and that the new Supplemental Water Project EIR was properly prepared except for one defect (described above). As also stated above, the sole defect did not relate to the environmental conclusions reached in the environmental document. The decision clearly states that: "[CLWA] is not directed to set aside the Kern water transfer."
11. In connection with its preparation of a new Monterey Agreement Program EIR, DWR may impose mitigation measures for the 41,000 af transfer or may adopt alternatives to the 41,000 af transfer, which may impact the Kern water transfer. But, the Superior Court in *CWIN* held that DWR cannot invalidate the Kern water transfer. Moreover, close cooperation between DWR and CLWA on the preparation of the

⁵⁴ DWR released the Draft EIR for the Monterey Amendment to the SWP Contracts, including the Kern Water Bank Transfer and Associated Actions as Part of a Settlement Agreement (Monterey Plus) in October of 2007.

- new Supplemental Water Project EIR reduced, but does not eliminate, the prospect that DWR will impose additional alternatives or mitigation measures in its Monterey Agreement Program EIR.
12. The Los Angeles County Superior Court decision in *CWIN* upheld the validity and finality of the 41,000 afy transfer.
 13. The Court of Appeal in an unpublished decision upheld the City of Santa Clarita's EIR for Newhall Land and Farming's Riverpark project and found that the City properly relied on the 41,000 af water transfer for planning purposes and that substantial evidence supports reliance on the 41,000 af water transfer. (*Sierra Club, et al. v. City of Santa Clarita, et al.*, Jan. 29, 2008, Case No. B194771) "We conclude that the facts stated in the EIR, including the executed agreements effecting the transfer, the implementation of those agreements and delivery of water for several years, and the absence of any court order vacating the approval of those agreements, constitute substantial evidence supporting the EIR's conclusion [that the 41,000 af would continue to be available despite the pending Monterey Agreement environmental review and litigation challenges]." The opinion is provided at Attachment B of Appendix I-1, Water Resources Technical Report.
 14. The Los Angeles County Superior Court issued a statement of decision in *Santa Clarita Oak Conservancy, et al. v. City of Santa Clarita*, Aug. 15, 2007, Case No. BS 084677 (*Gate-King*), which upheld the City's Return to a Writ of Mandate and Final Additional Analysis to the Gate-King project EIR (additional background information on this case is provided in the Water Resources Technical Report [Appendix I-1]). The court found that the City was not legally precluded from relying on the 41,000 af transfer for planning purposes pending completion of the litigation surrounding the Monterey Agreement and DWR's new Monterey Agreement Program EIR. The court found also that the City analyzed adequately the uncertainties surrounding the 41,000 af transfer and provided a reasoned analysis based on substantial evidence as to why it was appropriate to rely on that transfer. Lastly, the court found that the Final Additional Analysis was not required to identify supplies to replace the 41,000 af in light of the California Supreme Court's decision in *Vineyard*. "Here, it was not impossible to confidently determine that the 41,000 afy would continue to be available based on the record before the City." On May 13, 2009, the Second District Court of Appeal issued an unpublished opinion affirming the judgment and also affirming the judgment of the Los Angeles County Superior Court on a related case, *California Water Impact Network v. Newhall County Water District*, Case No. BS098727 (holding that NCWD's reliance on the City's recertified EIR, Final Additional Analysis, and CEQA Findings was adequate to support its adoption of a resolution to annex the Gate-King site into NCWD's service area).

15. In *West Creek*, SCOPE challenged the water supply analysis in the County’s recertified EIR for the West Creek project, a proposed mixed residential and commercial development in the Santa Clarita Valley. Specifically, SCOPE opposed the City’s reliance on the 41,000 af water transfer. The court considered whether the California Supreme Court’s decision in *Vineyard* compelled the City to consider replacement water sources for the 41,000 af water transfer because the current source of water could be uncertain in the future. The court concluded that the record contained “substantial evidence demonstrating a reasonable likelihood that water from the Kern-Castaic transfer will be available for the project’s near- and long-term needs,” and analysis of potential replacement sources is not required. “Suffice it to say, however the Monterey Agreement litigation is eventually decided, the Kern-Castaic transfer will likely not be affected. Per principle four [of *Vineyard*] we can confidently determine that the water will be available.”

(ii) CLWA and Ventura County Flexible Storage Account

Flexible storage is storage available to SWP contractors that share in repayment of the costs of terminal reservoirs (Castaic and Perris lakes). These contractors may withdraw water from their share of flexible storage, in addition to any other SWP supplies available to the contractor. The contractor must replace any water it withdraws from flexible storage within five years.

CLWA may withdraw up to 4,684 af of water from Castaic Lake as flexible storage.⁵⁵ CLWA manages this storage by keeping the account full in normal and wet years and then withdrawing that stored amount (or a portion of it) to deliver during dry periods. The account is refilled during the next year that adequate SWP supplies are available to CLWA to do so.

In addition, CLWA has negotiated with Ventura County water agencies to obtain the use of their Flexible Storage Account. As part of this agreement, CLWA has access to an additional 1,376 af of storage in Castaic Lake on a year-to-year basis for ten years, beginning in 2006.⁵⁶

⁵⁵ *Castaic Lake Water Agency, 2005 Urban Water Management Plan, Prepared for the Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, November 2005.*

⁵⁶ *Castaic Lake Water Agency, 2005 Urban Water Management Plan, Prepared for the Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, November 2005.*

**(iii) Water Acquisition from the Buena Vista Water Storage District and
Rosedale-Rio Bravo Water Storage District Water Banking and
Recovery Program**

CLWA has a water acquisition agreement with the Buena Vista Water Storage District (BVWSD) and the Rosedale-Rio Bravo Water Storage District (RRBWS), referred to as the BVWSD/RRBWS Water Acquisition Project. The Final EIR was certified and the project was approved on October 25, 2006.

In November 2006, a complaint and petition for writ of mandate seeking to set aside CLWA's certification of its EIR for the BVWSD/RRBWS Water Acquisition Project was filed by California Water Impact Network in the Los Angeles County Superior Court (LASC Case No. BS106546). The complaint/petition was later amended to add Friends of the Santa Clara River (Friends) as a plaintiff/petitioner. In November 2007, the trial court filed its Statement of Decision finding that in certifying the EIR and approving the project, CLWA proceeded in a manner required by law, and that its actions were supported by substantial evidence. Judgment was entered in favor of CLWA in December 2007. Petitioners filed a notice of appeal of the Judgment on January 31, 2008. On April 20, 2009, the Second District Court of Appeal issued an unpublished opinion affirming the Judgment denying the mandate petition (Case No. B205622).

Through the BVWSD/RRBWS Water Acquisition Project, CLWA has rights to purchase 11,000 af annually from BVWSD/RRBWS during the term of CLWA's SWP Contract (2035), with an option to extend to a later date. The purchased water associated with the BVWSD/RRBWS Water Acquisition Project originates from local and other supplies available to BVWSD and RRBWS that are recharged and banked in their groundwater basins.⁵⁷ These supplies include Kern River wet year water and other acquired waters that may become available.⁵⁸ Should delivery of the entire amount of water not be required in a given year, CLWA would have the option to store the water in any groundwater storage or banking program to which it has access. CLWA is entitled to 22,000 af of water that was stored in the Rosedale Rio-Bravo Water Banking and Exchange Program on CLWA's behalf (discussed below).⁵⁹

The BVWSD/RRBWS Water Acquisition Project was an action by CLWA to augment its water supply to meet the water demands of its service area, and its service area as it may be

⁵⁷ *Castaic Lake Water Agency, Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program, Final Environmental Impact Report, State Clearinghouse No. 2006021003, October 2006.*

⁵⁸ *CLWA (Castaic Lake Water Agency), Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program, Final Environmental Impact Report, State Clearinghouse No. 2006021003, October 2006.*

⁵⁹ *Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2006, May 2007.*

extended through annexation, through the purchase, or transfer, of water from the BVWSD/RRBWSD Program.⁶⁰ Due to uncertainty surrounding the ability of the SWP to maintain current pumping levels in the Delta, as a result of litigation concerning the impact of SWP operations on endangered species (refer to the discussion above), CLWA advised in mid- and late-2007 that it would be deferring temporarily consideration of requests to annex property into its service area. Instead, in the near-term, CLWA is reserving the 11,000 afy, which is not affected by the pending litigation and actions in the Delta, for current and future demand within the existing CLWA service area, including the proposed project addressed in this EIR, which is already within CLWA's service area and is unaffected by CLWA's temporary policy on annexations. This deferral also applies to other developers who may approach CLWA in the near future regarding proposed annexations to CLWA's service area. The deferral does not affect water service to Santa Clarita Valley retail purveyor customers in CLWA's wholesale service area.

Under certain hydrologic and operational conditions, an additional 9,000 af could be purchased from year to year when water may be available.⁶¹ This additional water would only be available periodically, and while it would increase the water supply reliability for the CLWA service area, it would not support new development.

(iv) Nickel Water

One thousand six hundred and seven afy of Nickel Water has been secured by the Newhall Ranch Specific Plan project applicant under contract with Nickel Family LLC in Kern County.⁶² This water supply is described in more detail below.

(d) Banking Programs

(i) Semitropic Groundwater Banking Projects

In 2002 and 2004, CLWA entered into agreements with the Semitropic Water Storage District (Semitropic) to store a portion of CLWA's available Table A Amount under Semitropic's groundwater banking program. In 2002, CLWA stored an available portion of its Table A Amount (24,000 af), and in 2004, CLWA stored 32,522 af of available 2003 Table A

⁶⁰ *Castaic Lake Water Agency, Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program, Final Environmental Impact Report, State Clearinghouse No. 2006021003, October 2006.*

⁶¹ *Castaic Lake Water Agency, Castaic Lake Water Agency Water Acquisition from the Buena Vista Water Storage District and Rosedale-Rio Bravo Water Storage District Water Banking and Recovery Program, Final Environmental Impact Report, State Clearinghouse No. 2006021003, October 2006.*

⁶² *Ford, Jeff, Water Resources Planner, Castaic Lake Water Agency, 2008.*

Amount. Under the terms of both storage agreements, water can be stored for up to 10 years and 90 percent of the amount stored by CLWA, or 50,870 af, is recoverable through 2013 to meet demands in the CLWA service area. Water not recovered by CLWA after 2013 will be forfeited. CLWA anticipates using the stored water for a dry-year supply.⁶³

The Negative Declaration prepared by CLWA for the 2002 Groundwater Banking Project was challenged in *California Water Network v. Castaic Lake Water Agency* (Ventura County Superior Court Case Number CIV 215327), which held in favor of CLWA. The decision was appealed. All issues regarding the 2002 banking program with Semitropic were conclusively resolved in favor of CLWA in June 2006. No legal challenges were filed to CLWA's approval of the second Groundwater Banking Project or its related Negative Declaration.

Implementation of groundwater banking agreements with Semitropic does not change the long-term, year-by-year water supply available for use in the Santa Clarita Valley. However, implementation of these agreements does improve the reliability of supplies for use within the CLWA service area because water stored in Semitropic could be used to augment dry-year supplies sometime in the future.

(ii) Rosedale-Rio Bravo Water Storage District Groundwater Storage, Banking, Exchange, Extraction and Conjunctive Use Program

In an effort to enhance water supply reliability over the long-term, CLWA has entered into a water banking agreement with the RRBWSD. The EIR evaluating the potential environmental effects of this agreement was certified and the agreement was approved by CLWA in fall 2005.

Under the RRBWSD Groundwater Storage, Banking, Exchange, Extraction and Conjunctive Use Program (RRBWSD Storage and Recovery Program), CLWA may store up to 20,000 afy of its total SWP Table A Amount for later withdrawal and delivery to the CLWA service area in a future year or years when demand in the CLWA service area is greater than supply (i.e., in drier years).⁶⁴ Additional yearly storage capacity may be provided from time to time as determined by RRBWSD, however, the maximum amount of stored water that CLWA will have in the RRBWSD Storage and Recovery Program at any time is 100,000 af. Over the life of the project (through 2035), CLWA will be able to store a total of 200,000 af in the

⁶³ *Castaic Lake Water Agency, 2005 Urban Water Management Plan, Prepared for the Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, November 2005.*

⁶⁴ *Castaic Lake Water Agency, Castaic Lake Water Agency Rosedale-Rio Bravo Water Storage District Water Banking and Exchange Program Final Environmental Impact Report, State Clearinghouse No. 2005061157, October 2005.*

RRBWSD Storage and Recovery Program.⁶⁵ Under the RRBWSD Storage and Recovery Program, CLWA banked 20,000 af in 2005 and 20,000 af in 2006.⁶⁶ The banked excess 2005 and 2006 SWP Table A water, augmented by water acquired through the Buena Vista/Rosedale-Rio Bravo Water Acquisition Agreement (discussed above) represent a total of 57,600 af of recoverable water for drought water supply from the Rosedale-Rio Bravo Banking and Exchange Program.⁶⁷ An additional 8,200 af was banked in the Rosedale-Rio Bravo Banking and Exchange Program bringing the recoverable total to approximately 64,900 af.^{68,69}

CLWA will be able to request the withdrawal of 20,000 afy plus any additional and available extraction capacity as determined by RRBWSD.

This is a long-term banking and exchange project that will extend through 2035. The RRBWSD Storage and Recovery Program is assisting in improving the reliability of CLWA's existing single or multiple dry-year supplies. More detail is provided in Appendix I-1, Water Resources Technical Report.

(iii) Newhall Land- Semitropic Water Storage District Banking

The Newhall Ranch Specific Plan project applicant has entered into an agreement to reserve and purchase water storage capacity of up to 55,000 af in the Semitropic Water Storage District Groundwater Banking Project.⁷⁰ This water supply is described in more detail below.

⁶⁵ *Castaic Lake Water Agency, Castaic Lake Water Agency Rosedale-Rio Bravo Water Storage District Water Banking and Exchange Program Final Environmental Impact Report, State Clearinghouse No. 2005061157, October 2005.*

⁶⁶ *Ford, Jeff, Water Resources Planner, Castaic Lake Water Agency, 2007.*

⁶⁷ *Santa Clarita Valley Water Purveyors, Santa Clarita Valley Water Report 2006, May 2007.*

⁶⁸ *The recoverable amounts account for contractual losses of 11 percent as appropriate.*

⁶⁹ *Ford, Jeff, Water Resources Planner, Castaic Lake Water Agency, 2007.*

⁷⁰ *Los Angeles County, Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant, March 2003. Retrieved from: http://planning.co.la.ca.us/doc/offDocs/drp_Newhall_Ranch.pdf.*

(3) Summary of Existing and Planned Supplies and Banking Programs and Projected Demand

(a) 2005 UWMP Existing and Planned Supplies and Banking Programs, and Projected Average/Normal and Dry Year Supplies and Demands

The 2005 UWMP⁷¹ provides the existing and anticipated water supplies and banking programs for use within the CLWA service area. In addition, the 2005 UWMP provides a summary of the projected supplies for certain hydrologic years, i.e., average/normal year and dry years, and also provides projected demands. Tables excerpted from the 2005 UWMP summarizing this information are provided in Appendix I-1, Water Resources Technical Report.

CLWA's demands vary from year to year depending on local hydrologic and meteorologic conditions, with demands generally increasing in years of below-average local precipitation and decreasing in years of above-average local precipitation. CLWA's 2010 average year demand (without conservation) is estimated to be 100,050 af and 138,300 af by 2030 (without conservation).⁷²

In 2001, CLWA signed the Memorandum of Understanding Regarding Urban Water Conservation in California. By signing the Memorandum of Understanding, CLWA became a member of the California Urban Water Conservation Council (CUWCC) and pledged to implement all cost-effective BMPs for water conservation. CLWA has estimated that conservation measures within the service area can reduce total water demands by about

⁷¹ *In February 2006, the California Water Impact Network and Friends of the Santa Clara River ("petitioners") filed a lawsuit challenging the adequacy of the 2005 UWMP on multiple grounds, California Water Impact Network v. Castaic Lake Water Agency (Los Angeles County Superior Court). Petitioners' main arguments were that the 2005 UWMP overstated the reliability of both groundwater and surface water supplies, failed to provide an adequate discussion of perchlorate contamination, failed to adequately address the reliability of the 1999 SWP Table A permanent transfer of 41,000 afy from KCWA and its member unit Wheeler Ridge-Maricopa Water Storage District to CLWA, relied on a flawed model for predicting SWP deliveries, failed to address the effect of global warming and regulatory water quality controls on water deliveries from the SWP, and failed to identify the impact of private wells on the Santa Clarita River watershed. On August 3, 2007, the trial court issued a Statement of Decision in favor of CLWA and its retail agencies on all issues raised by Petitioners and finding the 2005 UWMP legally adequate. On August 22, 2007, Judgment was entered in favor of CLWA and the purveyors. On October 19, 2007, the Petitioners appealed this Judgment to the Second District Court of Appeal. That appeal is pending. In the meantime, the 2005 UWMP must be assumed legally adequate, unless and until it is set aside by a court of competent jurisdiction. (Wat. Code § 10651; Barthelemy v. Chino Basin Water Dist. (1995) 38 Cal. App.4th 1607, 1609 [agency actions are presumed to comply with applicable law, until proof is presented to the contrary].) That has not occurred.*

⁷² *Castaic Lake Water Agency, 2005 Urban Water Management Plan, Prepared for the Castaic Lake Water Agency, CLWA Santa Clarita Water Division, Newhall County Water District, Valencia Water Company. November 2005.*

10 percent of the urban portion of total demand, bringing the projected average year 2010 demand to 91,450 afy and the 2030 demand to 125,400 afy.

**(b) 2007 State Water Project Delivery Reliability Report Applied to CLWA
SWP Supplies**

New information, based primarily upon the 2007 SWP Delivery Reliability Report, has been provided by CLWA, which updates the information provided in the 2005 UWMP (and provided in Appendix I-1, Water Resources Technical Report). This new information is presented in tables Table 4.I-3 through Table 4.I-6, on pages 4.I-34 through 4.I-37 is also included in the WSA completed for the project (refer to Appendix I-2). Table 4.I-3 provides an update of the summary of current and planned water supplies and banking programs through the year 2030 and is not intended to be an operational plan for how supplies would be used in a particular year, but rather identifies the complete range of water supplies available under a range of hydrologic conditions. Tables 4.I-4 through 4.I-6 provide updated tables from those in the 2005 UWMP for supply and demand for average, single-dry and multi-dry years. It should be noted that the SWP Table A amounts shown in the tables are rounded.

In addition, CLWA has included in the updated tables certain updated information regarding other sources of supply. The updated tables reflect moving the 11,000 af of Buena Vista-Rosedale water (BVWSD/RRBWS) from “Planned Supplies” to “Existing Supplies” (due to the passage of time), adding 1,607 af of Nickel Water (discussed below) to “Existing Supplies”, moving the 20,000 af of Rosedale-Rio Bravo banked water from “Planned Banking Programs” to “Existing Banking Programs” (also due to the passage of time), adding up to 5,400 af of recycled water for Newhall Ranch (discussed below) to “Planned Supplies”, and adding the Semitropic Water Bank – Newhall Land water (also discussed below). Updates to the footnotes in the tables were also made, as needed, to reflect current information.

The updated tables incorporate the information in the 2007 SWP Delivery Reliability Report, although has noted previously, this report does not include restrictions on deliveries resulting from the USFWS and NMFS BOs issued in 2008 and 2009, respectively. The 2007 report, however, provides the most current guidance from DWR and as such constitutes the best available information. As shown in Table 4.I-4, applying the 66 percent figure (most conservative of the 66-69 percent range shown in Table 4.I-2 above) to CLWA’s Table A Amount of 95,200 af, results in approximately 62,800 af expected under average Future Conditions (2027) according to the 2007 SWP Delivery Reliability Report. This is compared to 77 percent, or 73,300 af, included in the water supply planning in the 2005 UWMP in the year 2030 in an average year. Similarly, with regard to dry year supplies, Tables 4.I-5 and 4.I-6 reflect the update of 7 percent of CLWA’s Table A Amount for the single-dry year and 32 percent for the multi-dry year, respectively, as compared to the information presented in the 2005 UWMP, for the year 2030.

Table 4.I-3

Summary of Current and Planned Water Supplies and Banking Programs^(a)

Water Supply Sources	Supply (af)					
	2007	2010	2015	2020	2025	2030
Existing Supplies ^(a)						
Wholesale (Imported)	64,680	78,667	79,667	79,287	80,287	80,287
SWP Table A Supply ^(b)	60,000	60,000	61,000	62,000	63,000	63,000
Buena Vista-Rosedale	0	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Land	0	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) ^(c)	4,680	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County) ^{(c)(d)}	0	1,380	1,380	0	0	0
Local Supplies						
Groundwater	40,000	46,000	46,000	46,000	46,000	46,000
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000	35,000
Saugus Formation	5,000	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	106,380	126,367	127,367	126,987	127,987	127,987
Existing Banking Programs ^(e)						
Semitropic Water Bank ^(e)	50,870	50,870	0	0	0	0
Rosedale-Rio Bravo ^(f)	20,000	20,000	20,000	20,000	20,000	20,000
Semitropic Water Bank – Newhall Land ^(g)	0	18,828	18,828	18,828	18,828	18,828
Total Existing Banking Programs	70,870	89,698	38,828	38,828	38,828	38,828
Planned Supplies ^(a)						
Local Supplies						
Groundwater	0	10,000	10,000	20,000	20,000	20,000
Restored wells (Saugus Formation)	0	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	0	10,000	10,000	10,000
Recycled Water - CLWA ^(h)	0	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	0	1,500	2,500	3,500	5,400
Total Planned Supplies	0	10,000	13,100	28,800	34,500	41,100
Planned Banking Programs ^(e)						
Additional Planned Banking	0	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	0	20,000	20,000	20,000	20,000

^a The values shown under "Existing Supplies" and "Planned Supplies" are supplies projected to be available in average/normal years. The values shown under "Existing Banking Programs" and "Planned Banking Programs" are either total amounts currently in storage, or the maximum capacity of program withdrawals.

^b SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available, based on Tables 6-5 and 6-14 of DWR's "State Water Project Delivery Reliability Report 2007". Year 2030 figure is calculated by multiplying by DWR's 2027 percentage of 66%.

^c Supplies shown are total amounts that can be withdrawn, and would typically be used only during dry years.

^d Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

^e Supplies shown are the total amount currently in storage, and would typically be used only during dry years. Once the current storage amount is withdrawn, this supply would no longer be available and in any event, is not available after 2013.

^f CLWA has 64,900 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

^g Supplies shown are the total amount currently in storage. As of December 31, 2007, there is 18,828 af of water stored in the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan. The stored water can be extracted from the bank in dry years in amounts up to 4,950 af. Newhall Ranch is located within the CLWA service area.

^h Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

Source: Ford, Jeff, Water Resources Planner. Castaic Lake Water Agency, 2008.

Table 4.I-4

Projected Average/Normal Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	73,007	73,707	74,407	75,107	75,407
SWP Table A Supply ^(a)	60,400	61,100	61,800	62,500	62,800
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Land	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) ^(b)	0	0	0	0	0
Flexible Storage Account (Ventura County) ^(b)	0	0	0	0	0
Local Supplies					
Groundwater	46,000	46,000	46,000	46,000	46,000
Alluvial Aquifer	35,000	35,000	35,000	35,000	35,000
Saugus Formation	11,000	11,000	11,000	11,000	11,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	120,707	121,407	122,107	122,807	123,107
Existing Banking Programs					
Semitropic Water Bank ^(b)	0	0	0	0	0
Rosedale-Rio Bravo ^(b)	0	0	0	0	0
Semitropic Water Bank – Newhall Land ^(b)	0	0	0	0	0
Total Existing Banking Programs	0	0	0	0	0
Planned Supplies					
Local Supplies					
Groundwater	0	0	0	0	0
Restored wells (Saugus Formation) ^(b)	0	0	0	0	0
New Wells (Saugus Formation) ^(b)	0	0	0	0	0
Recycled Water - CLWA ^(c)	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	0	3,100	8,800	14,500	21,100
Planned Banking Programs					
Additional Planned Banking ^(b)	0	0	0	0	0
Total Planned Banking Programs	0	0	0	0	0
Total Existing and Planned Supplies and Banking	120,707	124,507	130,907	137,307	144,207
Total Estimated Demand (w/o conservation) ^(d)	100,050	109,400	117,150	128,400	138,300
Conservation ^(e)	(8,600)	(9,700)	(10,700)	(11,900)	(12,900)
Total Adjusted Demand	91,450	99,700	106,450	116,500	125,400

^a SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available on Tables 6-5 and 6-14 of DWR's "State Water Project Delivery Reliability Report 2007". Year 2030 figure is calculated by multiplying by DWR's 2027 percentage of 66%.

^b Not needed during average/normal years.

^c Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

^d Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

^e Assumes 10 percent reduction on urban portion of total demand resulting from conservation best management practices, as discussed in CLWA's 2005 UWMP, Chapter 7.

Source: Ford, Jeff, Water Resources Planner. Castaic Lake Water Agency, 2008.

Table 4.I-5
Projected Single-Dry Year Supplies and Demands

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	24,567	24,767	23,587	23,887	23,987
SWP Table A Supply ^(a)	5,900	6,100	6,300	6,600	6,700
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Land	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA)	4,680	4,680	4,680	4,680	4,680
Flexible Storage Account (Ventura County) ^(b)	1,380	1,380	0	0	0
Local Supplies					
Groundwater	47,500	47,500	47,500	47,500	47,500
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	73,767	73,967	72,787	73,087	73,187
Existing Banking Programs					
Semitropic Water Bank ^(c)	17,000	0	0	0	0
Rosedale-Rio Bravo ^(d)	20,000	20,000	20,000	20,000	20,000
Semitropic Water Bank – Newhall Land ^(e)	4,950	4,950	4,950	4,950	4,950
Total Existing Banking Programs	41,950	24,950	24,950	24,950	24,950
Planned Supplies					
Local Supplies					
Groundwater	10,000	10,000	20,000	20,000	20,000
Restored wells (Saugus Formation)	10,000	10,000	10,000	10,000	10,000
New Wells (Saugus Formation)	0	0	10,000	10,000	10,000
Recycled Water - CLWA ^(f)	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	10,000	13,100	28,800	34,500	41,100
Planned Banking Programs					
Additional Planned Banking ^(g)	0	20,000	20,000	20,000	20,000
Total Planned Banking Programs	0	20,000	20,000	20,000	20,000
Total Existing and Planned Supplies and Banking	125,717	132,017	146,537	152,537	159,237
Total Estimated Demand (w/o conservation) ^{(h) (i)}	110,100	120,300	128,900	141,200	152,100
Conservation ^(j)	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	100,600	109,600	117,200	128,100	137,900

^a SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of single dry year deliveries projected to be available on Tables 6-5 and 6-14 of DWR's "State Water Project Delivery Reliability Report 2007". Year 2030 figure is calculated by multiplying by DWR's 2027 percentage of 7%.

^b Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

^c The total amount of water currently in storage is 50,870 af, available through 2013. Withdrawals of up to this amount are potentially available in a dry year, but given possible competition for withdrawal capacity with other Semitropic banking partners in extremely dry years, it is assumed here that about one third of the total amount stored could be withdrawn.

^d CLWA has 64,900 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

^e Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall Land.

^f Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

^g Assumes additional planned banking supplies available by 2014.

^h Assumes increase in total demand of 10 percent during dry years.

ⁱ Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

^j Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices ([urban portion of total normal year demand x 1.10] * 0.10), as discussed in CLWA's 2005 UWMP, Chapter 7.

Source: Ford, Jeff, Water Resources Planner. Castaic Lake Water Agency, 2008.

Table 4.I-6

Projected Multiple-Dry Year Supplies And Demands^(a)

Water Supply Sources	Supply (af)				
	2010	2015	2020	2025	2030
Existing Supplies					
Wholesale (Imported)	47,017	46,317	45,277	44,477	44,277
SWP Table A Supply ^(b)	32,900	32,200	31,500	30,700	30,500
Buena Vista-Rosedale	11,000	11,000	11,000	11,000	11,000
Nickel Water - Newhall Land	1,607	1,607	1,607	1,607	1,607
Flexible Storage Account (CLWA) ^(c)	1,170	1,170	1,170	1,170	1,170
Flexible Storage Account (Ventura County) ^(c)	340	340	0	0	0
Local Supplies					
Groundwater	47,500	47,500	47,500	47,500	47,500
Alluvial Aquifer	32,500	32,500	32,500	32,500	32,500
Saugus Formation ^(d)	15,000	15,000	15,000	15,000	15,000
Recycled Water	1,700	1,700	1,700	1,700	1,700
Total Existing Supplies	96,217	95,517	94,477	93,677	93,477
Existing Banking Programs					
Semitropic Water Bank ^(c)	12,700	0	0	0	0
Rosedale-Rio Bravo ^{(e)(f)}	5,000	15,000	15,000	15,000	15,000
Semitropic Water Bank – Newhall Land ^(g)	4,950	4,950	4,950	4,950	4,950
Total Existing Banking Programs	22,650	19,950	19,950	19,950	19,950
Planned Supplies					
Local Supplies					
Groundwater	6,500	6,500	6,500	6,500	6,500
Restored wells (Saugus Formation) ^(d)	6,500	6,500	5,000	5,000	5,000
New Wells (Saugus Formation) ^(d)	0	0	1,500	1,500	1,500
Recycled Water ^(h)	0	1,600	6,300	11,000	15,700
Recycled Water - Newhall Ranch	0	1,500	2,500	3,500	5,400
Total Planned Supplies	6,500	9,600	15,300	21,000	27,600
Planned Banking Programs					
Additional Planned Banking ^{(f)(i)}	0	5,000	15,000	15,000	15,000
Total Planned Banking Programs	0	5,000	15,000	15,000	15,000
Total Existing and Planned Supplies and Banking	125,367	130,067	144,727	149,627	156,027
Total Estimated Demand (w/o conservation)^{(j)(k)}	110,100	120,300	128,900	141,200	152,100
Conservation^(l)	(9,500)	(10,700)	(11,700)	(13,100)	(14,200)
Total Adjusted Demand	100,600	109,600	117,200	128,100	137,900

^a Supplies shown are annual averages over four consecutive dry years (unless otherwise noted).

^b SWP supplies are calculated by multiplying CLWA's Table A Amount of 95,200 af by percentages of average deliveries projected to be available during the worst case four-year drought of 1931-1934 as provided in Tables 6-5 and 6-14 of DWR's "State Water Project Delivery Reliability Report 2007." Year 2030 figure is calculated by multiplying by DWR's 2027 percentage of 32%.

^c Based on total amount of storage available divided by 4 (4-year dry period). Initial term of the Ventura County entities' flexible storage account is ten years (from 2006 to 2015).

^d Total Saugus pumping is the average annual amount that would be pumped under the groundwater operating plan, as summarized in Table 3-6 of the 2005 UWMP $([11,000+15,000+25,000+35,000]/4)$.

^e CLWA has 64,900 af of recoverable water as of 12/31/07 in the Rosedale-Rio Bravo Water Banking and Recovery Program.

^f Average dry year period supplies could be up to 20,000 af for each program depending on storage amounts at the beginning of the dry period.

^g Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall Land.

^h Recycled water supplies based on projections provided in CLWA's 2005 UWMP Chapter 4, Recycled Water.

ⁱ Assumes additional planned banking supplies available by 2014.

^j Assumes increase in total demand of 10 percent during dry years.

^k Demands are for uses within the existing CLWA service area. Demands for any annexations to the CLWA service area are not included.

^l Assumes 10 percent reduction on urban portion of total normal year demand resulting from conservation best management practices $([urban\ portion\ of\ total\ normal\ year\ demand \times 1.10] * 0.10)$, as discussed in CLWA's 2005 UWMP, Chapter 7.

Source: Ford, Jeff, Water Resources Planner. Castaic Lake Water Agency, 2008.

In addition, CLWA has included 1,607 afy of Nickel Water, the Semitropic Water Bank – Newhall Land water, and up to an additional 5,400 afy supply of recycled water from the Newhall Ranch Water Reclamation Plant as shown in the updated tables. These sources of supply were not included in the 2005 UWMP.⁷³

The 1,607 afy of Nickel Water has been secured by the Newhall Ranch Specific Plan project applicant under contract with Nickel Family LLC in Kern County.⁷⁴ The water is not a part of the SWP supplies and is 100 percent reliable on a year-to-year basis and not subject to dry year conditions.⁷⁵ Once all of the required contracts between the owners of the water or any agency that would transport, treat or deliver the water to the Santa Clarita Valley have been executed, this water would be delivered through the Kern County Water Agency to the SWP and, from there, DWR would use SWP facilities to deliver the water to CLWA whose filtration plants would treat the water and whose distribution system would deliver the water to the CLWA service area.⁷⁶

Regarding the recycled water from the Newhall Ranch Water Reclamation Plant, wastewater generated from development within the Newhall Ranch Specific Plan area will be treated by the proposed Newhall Ranch Water Reclamation Plant, which will use reverse osmosis/membrane technology to treat the effluent.⁷⁷ The recycled water will be reused within the Specific Plan area for non-potable uses and the estimated available recycled water amount is approximately 5,400 afy at the time of full project build-out.⁷⁸

As discussed above and also reflected in the updated tables, the Newhall Ranch Specific Plan project applicant has entered into an agreement to reserve and purchase water storage capacity of up to 55,000 af in the Semitropic Water Storage District Groundwater Banking Project.⁷⁹ Sources of water that could be stored include, but are not limited to, the Nickel Water.

⁷³ Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

⁷⁴ Los Angeles County, *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant, March 2003.* Retrieved from: http://planning.co.la.ca.us/doc/offDocs/drp_Newhall_Ranch.pdf.

⁷⁵ Los Angeles County, *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant, March 2003.* Retrieved from: http://planning.co.la.ca.us/doc/offDocs/drp_Newhall_Ranch.pdf.

⁷⁶ Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

⁷⁷ Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

⁷⁸ Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

⁷⁹ Los Angeles County, *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant, March 2003.* Retrieved from: http://planning.co.la.ca.us/doc/offDocs/drp_Newhall_Ranch.pdf.

The stored water could be extracted in dry years in amounts up to 4,950 afy.⁸⁰ As of December 31, 2007, there is 18,828 af of water stored in the Semitropic Groundwater Storage Bank by The Newhall Land and Farming Company for the Newhall Ranch Specific Plan. Newhall Ranch is located within the CLWA service area. Delivery of stored water from the Newhall Land Semitropic Groundwater Bank requires further agreements between CLWA and Newhall Land.

3. IMPACT ANALYSIS

The following discussion identifies anticipated impacts associated with the implementation of the proposed project based on the thresholds of significance below. As described above, imported water supplies from the Delta may or may not be affected by the recent action related to the longfin smelt and the recent court decision related to the salmon and steelhead BO described above. Given the lack of conclusion related to these actions and resultant SWP and CVP operations as described above, the information presented in this section and the analysis included here incorporates the best available information as provided by DWR and CLWA, given it is not possible or required to speculate as to potential water supply impacts specifically related to these actions.⁸¹

a. Thresholds of Significance

The proposed project would have a significant impact with respect to water supply if it would:

- Have insufficient water supplies available to serve the project from existing and planned entitlements such that new or expanded entitlements would be needed;
- Have insufficient water supply infrastructure available to serve the project such that new or expanded infrastructure would be required; or
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing

⁸⁰ Los Angeles County, *Additional CEQA Findings Regarding the Newhall Ranch Final Additional Analysis to the Partially Certified Final EIR for the Newhall Ranch Specific Plan and Water Reclamation Plant, March 2003*. Retrieved from: http://planning.co.la.ca.us/doc/offDocs/drp_Newhall_Ranch.pdf.

⁸¹ *CEQA Guidelines Sec. 15144, 15145*.

nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

b. Methodology

The analysis of potential impacts to water resources was based on the increase in demand resulting from the proposed project relative to the capacity of the existing water distribution system and water supply and the ability to provide the required domestic water for the project. The project's potential impacts on groundwater recharge were based on the anticipated impervious surfaces associated with the project, the effect of those surfaces on groundwater recharge, and the increased water application resulting from the proposed development.

c. Impact Analysis

(1) Water Supply

The proposed project would use a portion of the water supplies available to CLWA SCWD. The proposed project's projected water demand is 1,831 afy as shown in Table 4.I-7 on page 4.I-41. Ongoing evaluation of water supplies in CLWA's service area was completed and eventually culminated in the preparation and adoption of the 2005 UWMP in November 2005. The analysis provided in the 2005 UWMP takes into account the available water supplies and water demands for CLWA's service area to assess the region's ability to satisfy demands through the year 2030. The analysis was based on a number of independent studies and sources and those conclusions were used in the 2005 UWMP. It was concluded that sufficient water supplies would continue to be available (including groundwater pumping that would not result in long-term depletion of groundwater resources) to meet projected demand, which includes the proposed project. The proposed project is identified as a pending project in Los Angeles County⁸² and as part of the analysis in the 2005 UWMP, existing land use data and new housing construction information were compiled from each of the retail water purveyors and projections prepared by "One Valley One Vision," a joint planning effort by the City of Santa Clarita and Los Angeles County Department of Regional Planning. This information was compared to historical trends for new water service connections and customer water usage.

It is the stated goal (as stated in the 2005 UWMP) of CLWA and the retail water purveyors to deliver a reliable and high quality water supply for their customers, even during dry periods. As stated in the 2005 UWMP, based on conservative water supply and demand

⁸² *City of Santa Clarita and County of Los Angeles. 2005/2004. Santa Clarita Valley Subdivision Activity Map. Retrieved on October 19, 2006 from: http://www.santa-clarita.com/cityhall/admin/technology/gis/maps_av_pics/growth.pdf. Last Updated by City March 2005, by County June 2004.*

Table 4.I-7

Land Use Categories	Water Use Estimate		Estimated Water Use (afy)
	Water Use Factor ^a (afy)	Size of Proposed Project (rounded)	
Single-Family Residential	0.82 per unit	1,260	1,041
Parks	3 per acre	18	54
Elementary School	3 per acre	11	33
Manufactured Slopes	3 per acre	211 ^b	633
Road Parkways	3 per acre	26	78
Total			1,831

^a Factors provided by CLWA SCWD.

^b Acreage includes off-site landscaped slope areas of 7.92 acres (VTM 46018) and 1.96 acres (BLM property).

assumptions over the next 25 years in combination with conservation of non-essential demand during certain dry years, the 2005 UWMP successfully achieves this goal.

As discussed, the litigation challenges concerning the 41,000 af transfer have given rise to claims that there is uncertainty regarding the availability and reliability of this supply. However, for the reasons outlined in this section, these litigation challenges are not likely to affect the short-term or long-term availability or reliability of this supply as projected in the 2005 UWMP.

There is uncertainty regarding the availability of imported water supplies from the Delta as discussed in the 2007 SWP Delivery Reliability Report and as a result of the new BOs issued by USFWS and NMFS and legal challenges to these BOs (refer to the discussion above). DWR's 2007 SWP Delivery Reliability Report contains the most recent published information regarding the reliability of the SWP water supplies, however, and it is considered the best information currently available. It is therefore used as the basis for this analysis.

DWR, as the owner and operator of the SWP and the agency with a statewide perspective and most relevant technical expertise, provided updated SWP delivery reliability information for the next 20 years, which has been properly incorporated into CLWA's water supply planning as described herein. In addition, CLWA and the Local Purveyors have a diversified portfolio consisting of not only imported SWP water but also of groundwater from two local aquifers, recycled water and the recently acquired additional supply of imported water (i.e., the 11,000 afy of water from the BVWSD/RRBWS Water Acquisition Project), which, as described above, originates from local and other supplies available to BVWSD and RRBWS that are recharged and banked in their groundwater basins including Kern River wet year water and other acquired

waters that may become available. Further, CLWA's 2005 UWMP includes reliability planning as well as water shortage contingency planning.

As noted above, there is some uncertainty regarding SWP water supplies, and there is a possibility that the next reliability report published by DWR (the date of which is not yet known), may contain different reliability projections than included in the 2007 report. Based upon the most up-to-date, published water supply information available, however, including the updated SWP delivery information described in this section, as stated in the WSA completed for the project, it appears that, while the operating restrictions related to delta smelt would reduce diversions from the Delta, there are sufficient water supplies available for pending and future residential and commercial developments within the CLWA service area for the foreseeable future through 2030 as set forth in the 2005 UWMP. Based on the 2005 UWMP, with the additional information related to the 2007 SWP Delivery Reliability Report, which is the best available information published by DWR, it is concluded that sufficient water supplies would be available to serve the proposed project in average and dry years through 2030.⁸³

For the reasons mentioned above, impacts to water supply are considered less than significant. However, the reduction in SWP supply and Countywide drought conditions reinforces the need to conserve water to meet the goals in the 2005 UWMP and also comply with water conservation requirements of Los Angeles County (i.e., Board Resolution Declaring a Countywide Water Supply and Conservation Alert [August 5, 2008]; Water Conservation Requirements for the Unincorporated Los Angeles County Area [Los Angeles County Code, Title 11, Chapter 11.38, Part 4, readopted October 7, 2008]; Water Efficient Landscaping Requirements [Los Angeles County Code, Title 26, Chapter 71], and the Drought-Tolerant Landscaping and Green Building Standards ordinances).⁸⁴ Therefore, mitigation measures are provided below to ensure the Skyline Ranch project would be consistent with all applicable water conservation plans, programs, and ordinances.

⁸³ Refer to Appendix I-2, *Water Supply Assessment of this Draft EIR*.

⁸⁴ *CLWA and the Local Purveyors have developed a long-term program related to conservation, i.e., the Santa Clarita Valley Water Use Efficiency Strategic Plan. The purpose of the plan is to prepare a comprehensive long-term conservation plan for the Santa Clarita Valley by adopting objectives, policies and programs designed to promote proven and cost effective conservation practices.*

The project was determined by the Los County Department of Regional Planning Department (LACDRP) to be exempt from the LID Standards Ordinance, because a completed application for a Vesting Tentative Map was filed prior to January 1, 2009. A copy of the correspondence received from LACDRP and related County policy that was the basis for this determination is provided in Appendix C-4, LID Standards Ordinance Exemption Determination.

(2) Water Supply Infrastructure

Water lines would be placed during construction, as part of overall grading and excavation activities. Impacts associated with infrastructure improvements are addressed in Sections 4.C, Biological Resources; 4.G, Noise; and 4.H, Air Quality.

The project would connect to the existing 8-inch and 10-inch pipelines described above in Sierra Highway and tie in to the CLWA SCWD system (see Figure 4.I-2, Conceptual Water Plan). The resulting 16-inch pipeline would travel west on-site. In addition, a new 16-inch pipeline would connect the existing CLWA SCWD Deane water tank to the on-site infrastructure via Sierra Highway as shown in Figure 4.I-2. Potable water would be conveyed to on-site uses by way of a proposed network of 6- to 16-inch pipes. In order to provide sufficient amounts of water and adequate water pressure to the project, a series of on-site water booster/pump stations and water tanks are proposed. The project would have two pressure zones, an 1,842 zone and a 2,117 zone, as shown on the Conceptual Water Plan, and the on-site infrastructure would include a proposed two million gallon water tank on one of two adjacent pads in the northwestern portion of the developed area, and two proposed one-million gallon tanks in the northeastern portion of the development (see Figure 4.I-2).

The water supply infrastructure described above would provide sufficient capacity to serve the proposed project.⁸⁵ Additionally, the proposed water storage tanks would provide sufficient amounts of water to the project and would be located at an elevation sufficient to provide adequate water pressure to the project, and the proposed new water supply infrastructure associated with the proposed project would supply adequate domestic and fire flow storage.⁸⁶ As such, the facilities included as part of the proposed project would essentially add to existing infrastructure and no impacts related to additional infrastructure (other than those identified in this EIR in other sections associated with the proposed project) are anticipated. Impacts related to water supply infrastructure would be less than significant.

(3) Groundwater Recharge

The overall increase in impervious surfaces associated with the developed area of the proposed project would not result in a significant reduction in groundwater recharge. Based on the average annual precipitation of 17.95 inches per year (1.5 feet) in the Santa Clarita Valley and the estimated 189-acre increase in impervious surface area resulting from the proposed

⁸⁵ Bill Manetta, General Manager, Santa Clarita Water Division, Castaic Lake Water Agency, personal communication, 2006.

⁸⁶ Bill Manetta, General Manager, Santa Clarita Water Division, Castaic Lake Water Agency, personal communication, 2006.

project, increased runoff from impervious surfaces would be estimated at 284 afy.⁸⁷ Most surface runoff enters the Santa Clara River and recharges the Alluvial Aquifer. In addition, the land uses associated with the proposed project would result in increases in applied water for irrigation of landscaped areas compared to existing conditions. Given that the increase in impervious surface area is not substantial, the increase in irrigation, and the fact that runoff will contribute recharge, impacts to groundwater recharge would be less than significant.

4. MITIGATION MEASURES

Impacts of the proposed project related to water supply, infrastructure, and groundwater recharge would be less than significant. The project would be required to pay connection fees to CLWA SCWD based on a per lot production fee⁸⁸ which would further reduce impacts to water supply.

The following mitigation measures would further reduce less-than-significant impacts to water supply.

- 4.I-1** *All appliances such as showerheads, lavatory faucets and sink faucets shall comply with efficiency standards set forth in Title 20, California Administrative Code Section 1604(f). Title 24 of the California Administrative Code Section 1606(b) prohibits the installation of fixtures unless the manufacturer has certified to the California Energy Conservation compliance with the flow rate standards.*
- 4.I-2** *Low flush toilets shall be installed as specified in California State Health and Safety Code Section 17921.3 and the County Green Building Ordinance.*
- 4.I-3** *All common area irrigation areas shall be capable of being operated by a computerized irrigation system which includes an onsite weather station/ET gage capable of reading current weather data and making automatic*

⁸⁷ This total includes: 270 acres (residential lots), associated common area roads (116 acres) and off-site roads (3.30 acres and 1.37 acres) for a total of approximately 391 acres with a 42 percent impervious factor applied; the school site (lot area is approximately 11 acres with an 82 percent impervious factor applied); and on-site debris basin lots (7.3 acres), on-site water tank lots (3.6 acres), and off-site basin lots (1.77 acres and 4.10 acres) with a 91 percent impervious factor applied. Impervious factors taken from the 2006 Los Angeles County Department of Public Works Hydrology Manual. Note that the impervious surface area associated with the current tract map has decreased from the totals indicated above. Therefore, the total increase in impervious area associated with the proposed project represents a worst-case analysis.

⁸⁸ Dennis Rolfe, Engineering Services Supervisor, Santa Clarita Water Division, Castaic Lake Water Agency, personal communication, 2005.

adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. All common area irrigation controllers shall also include a rain sensing automatic shutoff.

4.I-4 *Common area landscaping shall emphasize drought-tolerant vegetation. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed with drought-tolerant vegetation shall be gauged to receive irrigation using the minimal requirements.*

4.I-5 *Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in such.*

Please also see Greenhouse Gas Reduction Measure GCC-4 in Section 4.S, Global Climate Change.

5. CUMULATIVE IMPACTS

a. Water Supply

As discussed above, the water management agency and purveyors in the Santa Clarita Valley have acquired water supplies and prepared water plans considering regional land use plans, including the relevant general plans and the One Valley One Vision process. As the planned growth in the Santa Clarita Valley continues to occur, the demand on water resources will increase. However, the proposed project and other reasonably foreseeable projects were identified as being able to be served by the existing and future water supplies recognized as adequate in the analysis completed for the 2005 UWMP which evaluated anticipated cumulative water demand against existing and planned supply and determined a sufficient water supply (including groundwater pumping that would not result in long-term depletion of groundwater resources) is available to serve anticipated demand, including the proposed project.

As discussed, the litigation challenges concerning the 41,000 af transfer have given rise to claims that there is uncertainty regarding the availability and reliability of this supply. However, for the reasons outlined in this section, these litigation challenges are not likely to affect the short-term or long-term availability or reliability of this supply as projected in the 2005 UWMP.

As also discussed, there is uncertainty regarding imported water supplies from the Delta as discussed in the 2007 SWP Delivery Reliability Report (refer to the discussion above). However, DWR, as the owner and operator of the SWP and the agency with a statewide perspective and most relevant technical expertise, has provided updated SWP delivery reliability information for the next 20 years which has been properly incorporated into CLWA's water supply planning. In addition, as discussed, CLWA and the Local Purveyors have a diversified portfolio including groundwater from two local aquifers, imported SWP water, recycled water and the recently acquired additional supply of imported water (i.e., the 11,000 afy of water from the BVWSD/RRBWS Water Acquisition Project), which, as described above, originates from local and other supplies available to BVWSD and RRBWS that are recharged and banked in their groundwater basins including Kern River wet year water and other acquired waters that may become available. Further, CLWA's 2005 UWMP includes reliability planning as well as water shortage contingency planning.

Based upon the updated water supply information from CLWA, incorporating updated SWP delivery information as described in this section, as stated in the WSA completed for the project, CLWA has determined that, while the court-ordered operating rules related to delta smelt (or a BO premised on those operating rules) are in effect, there are sufficient water supplies available for pending and future residential and commercial developments within the CLWA service area for the foreseeable future through 2030 as set forth in the 2005 UWMP. CLWA has concluded that CEQA Lead Agencies may rely on the 2005 UWMP, with the additional information related to the 2007 SWP Delivery Reliability Report, for the analysis of water supply impacts in CEQA documents, and in making a determination as to the adequacy of water supply for land use projects. Moreover, the WSA completed for the proposed project (refer to Appendix I-2) concludes that sufficient water supplies would be available to meet demand in average and dry years through 2030.

For the reasons mentioned above, cumulative impacts to water supply are considered less than significant. However, the reduction in SWP supply reinforces the need to conserve water to meet the goals in the 2005 UWMP and comply with the Los Angeles County resolution and ordinances presented previously. Therefore, though not required, mitigation measures are recommended and provided below to ensure consistency with the conservation objective.

b. Water Supply Infrastructure

Cumulative impacts to water supply infrastructure would be less than significant and the connection fees would further mitigate these impacts.

c. Groundwater Recharge

Future development could, like the proposed project, increase the amount of impervious surface (roads, buildings, other paved areas). This could alter surface flows, and increase the amount and rate of stormwater runoff through storm sewers or other engineered drainages. However, most surface runoff enters the Santa Clara River and recharges the Alluvial Aquifer. Therefore, groundwater recharge would not be substantially impacted. In addition, land uses such as those associated with the proposed project would result in increases in applied water for irrigation of landscaped areas compared to existing conditions. Cumulative impacts to groundwater recharge would be less than significant.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of the above mitigation measures would further reduce less-than-significant impacts to water supply.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

J. WASTEWATER DISPOSAL

1. INTRODUCTION

This section addresses the potential impacts of the proposed project on local and regional wastewater facilities and infrastructure. The project's compliance with adopted wastewater ordinances is also addressed. The analysis estimates and compares the demand for service to the capacity of existing and proposed wastewater collection, conveyance, and treatment facilities. This section is based on information provided in a Sewer Area Study Report prepared by Sikand Engineering Associates, July 17, 2008. This report is included in Appendix J, of this Draft EIR.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Master Connection Fee Ordinance and Master Service Charge Ordinance of Santa Clarita Valley Sanitation District

New development projects in the Santa Clarita Valley area are required to pay fees for direct and indirect connections to and services provided by the Santa Clarita Valley Sanitation District (SCVSD or District) sewerage system. These connection fees would be assessed pursuant to the District's Master Connection Fee Ordinance and Master Service Charge Ordinance. The fee is charged for the privilege on connecting (directly or indirectly) to the District's Sewerage System, increasing the strength and/or quantity of wastewater attributable to a particular parcel or operation already connected, or charges for facilities furnished by or available from the District. These connection fees and service charges are required to support the incremental expansion of the system as new projects are developed. The connection fees provide additional conveyance, treatment, and disposal (capital facilities) as well as operational and maintenance costs. Payment of a connection fee and service charge is required before a permit to connect to the District's system is issued.

(2) Master Annexation Fee Ordinance

If a parcel is located outside of, but contiguous to the SCVSD jurisdictional boundaries then annexation approval and payment of fees is required, pursuant to the Master Annexation Fee Ordinance, prior to connection and service. This process is initiated by a Request for

Annexation form and payment of an Annexation Processing Fee for administrative services for the annexation of land to the District and for the collection and transfer of fees imposed by the Local Agency Formation Commission (LAFCO) and the State Board of Equalization (SBE). Annexation requests are presented monthly for approval before the Board of Directors of the SCVSD.¹

b. Environmental Setting

The 2,173-acre project site is located within the Santa Clarita Valley area of unincorporated Los Angeles County. The site is largely undeveloped open space, and does not include any habitable structures. Approximately 622 acres in the southern portion of the site is proposed for residential development. Due to the site's undeveloped condition, it supports no wastewater infrastructure and the site is located outside of the SCVSD service area boundary. However, areas adjacent to the site within the City of Santa Clarita (the City), and unincorporated Los Angeles County, are developed and support wastewater infrastructure. Existing wastewater infrastructure in the vicinity which could serve the site includes a City-owned sewer line in Sierra Highway. This sewer flows southwest and varies from 18 to 21 to 27 inches in size at various slopes and locations. This sewer has an existing flow capacity of 9.58 cubic feet per second (cfs) and is currently operating at approximately 75 percent of capacity. This sewer conveys flows southwest, eventually joining an 18-inch SCVSD trunk sewer in Soledad Canyon Road. The capacity of this SCVSD trunk sewer is 6.4 million gallons a day (mgd), and conveyed a peak flow of 3.6 mgd (or approximately 56 percent of capacity) when last measured in August 2008.^{2,3} Wastewater is then conveyed west for processing at the serving treatment plants described below.

Wastewater treatment for the project area is provided by the Sanitation Districts of Los Angeles County (County Sanitation Districts or CSD). Located southwest of the project site are two wastewater treatment facilities: the Saugus Wastewater Treatment Plant (SWTP) located at 26200 Springbrook Avenue in Saugus, and the Valencia Wastewater Treatment Plant (VWTP) located at 28185 The Old Road in Valencia. Both facilities are interconnected through a joint powers agreement that created the Santa Clarita Valley Joint Sewerage System (SCVJSS). Together the SCVJSS would serve the project site by providing primary, secondary, and tertiary treatment of wastewater. Initial wastewater treatment would occur at the SWTP. From the SWTP, primary sludge, waste sludge, and other floatables would be sent to the VWTP for further

¹ Donna Kitt, *County Sanitation Districts of Los Angeles County*, telephone conversation, July 11, 2008.

² *Written Correspondence, James F. Stahl, County Sanitation Districts of Los Angeles County, November 9, 2004 (See Appendix A in this Draft EIR); telephone conversation with Ruth I. Frazen, Engineering Technician, Planning and Property Management Section, County Sanitation Districts of Los Angeles County, August 30, 2005 and October 22, 2007; and written correspondence, James F. Stahl, Op. Cit., November 27, 2006.*

³ *Ruth I. Frazen, Op. Cit., telephone conversation, May 20, 2009.*

processing. The capacity and current treatment levels for these wastewater treatment plants are described below.

The SCVJSS has a combined treatment capacity of 28.1 mgd. The SCVJSS currently processes an average flow of 21 mgd,⁴ leaving an available capacity of approximately 7 mgd. This remaining capacity and approved expansion of an additional 6 mgd by 2015 is expected to meet the forecasted demand of 34.1 mgd pursuant to the SCAG's Regional Growth Management Plan, Santa Clarita Valley Joint Sewerage System Facilities Plan, and current development patterns.⁵

3. PROJECT IMPACTS

a. Thresholds of Significance

The following thresholds of significance are derived from the County of Los Angeles' *Initial Study Checklist*. A project would normally have a significant wastewater impact if:

- It would create capacity problems in the sewer lines serving the project site; or
- If served by a community sewage system, the project would create capacity problems at the serving treatment plant(s).

b. Methodology

The analysis of potential wastewater collection and treatment impacts is based on a comparison of the increase in wastewater generation resulting from the proposed project relative to existing sewage collection and treatment system capacity. The analyses and capacity calculations for the sewer collection system are based on both the City of Santa Clarita's Sewage Flow Coefficients Table and the County's Zoning Coefficients. These calculations for the project are included in the Sewer Area Study Report attached as Appendix J to this Draft EIR. Generation rates are based on the County Sanitation Districts Loading Rates by Land Use included in Appendix A of this Draft EIR.⁶ The adequacy of wastewater treatment capacity is based on current and future capacity information provided by the CSD.

⁴ Ruth I. Frazen, *op. cit.*, correspondence dated May 27, 2008.

⁵ *Op. cit.*, James F. Stahl and Ruth I. Frazen. Updated per telephone conversation with Ruth I. Frazen, February 5, 2007 and October 22, 2007.

⁶ *Op. cit.*, James F. Stahl, November 9, 2004.

c. Impact Analysis

Once developed, the project site would contain 1,260 single-family residential units, 12 acres of public park space, six acres of private parks, 201 acres of common maintained open space areas, and an 11-acre elementary school site to be developed by the Sulphur Springs Elementary School District. The single-family homes would include a mix of product types ranging from three to six bedrooms. The public park would include active and passive recreation areas with playfields and restroom facilities. The elementary school to be developed by Sulphur Springs Elementary School District is expected to serve approximately 750 students. Annexation to the SCVSD jurisdiction and connection to the sewerage system would be required to provide sewer service and wastewater treatment to the project site. As shown on Figure 4.J-1, Proposed Sewer Lines, on page 4.J-5, the proposed sewer system for the project would consist of 8-, 10-, and 12-inch sewer lines located on site. These sewer lines would collect wastewater generated within the development with flows directed southeast into the 21-inch Sierra Highway Sewer.

Based on estimates provided by the CSD, the project is estimated to generate 346,200 gallons of wastewater per day (gpd).⁷ Based on the Sewer Area Study Report, flows from the site would equate to 1.41 cubic feet per second (cfs) of wastewater flowing into the Sierra Highway Sewer. The existing capacity of this sewer is 9.58 cfs. Based on the Sewer Area Study Report, this sewer and other downstream sewers have adequate existing capacity to absorb the proposed project's estimated wastewater flows.

Regarding potential effects on wastewater treatment system capacity, the SCVJSS has an available capacity of approximately 7 mgd and an approved expansion of 6 mgd, which is sufficient to meet forecast demand beyond 2017. Since the project would generate an estimated 346,200 gpd of wastewater (representing approximately 5 percent of available capacity) there is adequate capacity available to serve the proposed project. Additionally, potential impacts related to burdens on the SCVSDs' trunk sewer in Soledad Canyon Road or SCVJSS would be addressed through payment by the applicant of an annexation fee (based on the site acreage) pursuant to the Master Annexation Fee Ordinance and a connection fee (based on the number of dwelling units) pursuant to the Master Connection Fee Ordinance and Master Service Charge Ordinance. Because most of the project area is outside the jurisdiction of the SCVSD, the project would also require annexation before sewerage service can be provided. Based on the above, the project would not have a significant impact on wastewater treatment facilities.

⁷ James F. Stahl, *Op. cit.*, November 27, 2006 and telephone conversation with Ruth I. Frazen, February 5, 2007. Estimates are based on generation rates of 260 gpd per single-family residential (1,260 units), 20 gpd per student (750 students), and 200 gpd per acre of park (18 acres).

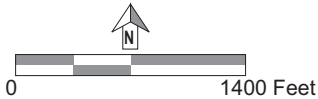
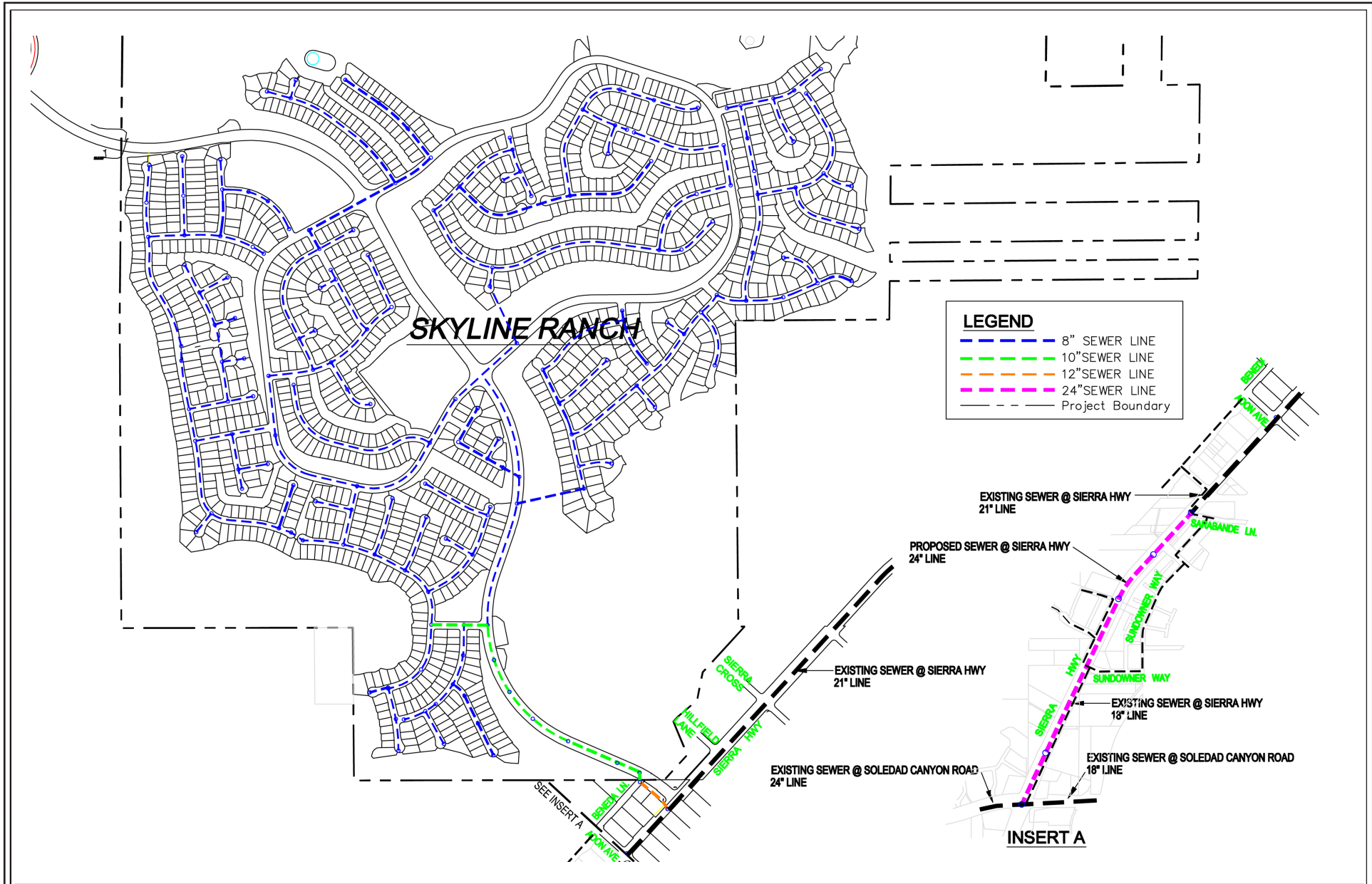


Figure 4.J-1
Proposed Sewer Lines

Source: Sikand Engineering, 2009

4. MITIGATION MEASURES

None required; impacts are less than significant.

5. CUMULATIVE PROJECT IMPACTS

As identified in Chapter 3.0, Cumulative Impact Analysis Methodology, of this Draft EIR, 48 other projects within the Santa Clarita Valley are related to the proposed project by virtue of proximity and timing for purposes of the cumulative impact assessment. As shown on Table 4.J-1, Skyline Ranch Wastewater Generation for Related Projects, on page 4.J-7, these related projects are conservatively forecast to generate 5,360,285 gpd of wastewater. When combined with the proposed project, 5,706,485 gpd of wastewater would be cumulatively generated. This cumulative total represents approximately 81.5 percent of the unutilized 7 mgd capacity at SCVJSS, indicating that the County Sanitation Districts' wastewater treatment capacity is adequate to accommodate the cumulative demand associated with related projects and the Skyline Ranch project. However, those related projects located outside the SCVSD jurisdictional boundaries would require annexation approval from Board of Directors prior to connection to the District's system.

Although area sewer lines have existing capacity to absorb wastewater generated by the project, future conditions for development of this area of northern Los Angeles County are anticipated to change. As the City and County areas of Mint Canyon are developed out to their ultimate land uses, portions of the existing City-owned line within Sierra Highway would need to be upgraded to a 24-inch sewer line. The project would include the construction of a new 24-inch sewer line to supplement the existing 21-inch line in Sierra Highway. As shown on Figure 4.J-1, the additional line would extend approximately 3,000 feet in Sierra Highway from the SCVSD trunk sewer in Soledad Canyon Road to Sarabande Lane within the City of Santa Clarita. This relief sewer would be designed to accommodate future development within the Mint Canyon area. If it becomes apparent in the future that additional sewer capacity is needed to accommodate cumulative development, it is expected that new projects would be required to construct and/or pay a fair share toward the relief sewer within Sierra Highway. With project-by-project review of annexation requests (when required), sewer capacity, and implementation of requirements for new sewer lines, cumulative impacts on sewer conveyance systems would be mitigated to a less than significant level.

Table 4.J-1
Skyline Ranch
Wastewater Generation for Related Projects

No.	Proposed Use	Size	Description/Location	Generation Rate (gpd)^a	Generation (gpd)
1.	Single-Family	1,298 DU	TR 46018 (S&S)	260	337,480
	Condominium units	1,202 DU	Los Angeles County	195	234,390
	Commercial	150 TSF		325/1,000 SF	48,750
2.	Single-Family	11 DU	TR 52763 (S&S) Los Angeles County	260	2,860
3.	Single-Family	498 DU	TR 31803 Los Angeles County	260	129,480
4.	Single-Family	63 DU	CP 99226/TR 52990 Los Angeles County	260	16,380
5.	Multi-Family	110 DU	TT 46353 Los Angeles County	156	17,160
6.	Single-Family	74 DU	TR 54372 Los Angeles County	260	19,240
7.	Single-Family	75 DU	TR 52790 Los Angeles County	260	19,500
8.	Single-Family	492 DU	TR 060259 (Park Place) Los Angeles County	260	127,920
	Park	34 acres		200/acre	6,800
9.	Single-Family	91 DU	TT 43589/98-046 Los Angeles County	260	23,660
10.	Single-Family	95 DU	TR 52829 Los Angeles County	260	24,700
11.	Single-Family Elementary School	480 DU 1,000 students	TT 47760/(Copper Hill @ Haskell) Los Angeles County	260 20/student.	124,800 20,000
12.	Single-Family	44 DU	TR 060999	260	11,440
13.	Single-Family	75 DU	TR 47573/03-386 Los Angeles County	260	19,500
14.	Single-Family	62 DU	TR 52193 Los Angeles County	260	16,120
15.	Single-Family	126 DU	TR 52194 Los Angeles County	260	32,760
16.	Single-Family	26 DU	TR 52785 Los Angeles County	260	6,760
17.	Single-Family	141 DU	TR 52192 Los Angeles County	260	36,660
18.	Single-Family	10 DU	TR 45123 Los Angeles County	260	2,600
19.	Single-Family	31 DU	TR 066202 Los Angeles County	260	8,060
20.	Multi-Family	752 DU	TR 52938/45023 (Fair Oaks Ranch) Los Angeles County	156	117,312
21.	Single-Family	71 DU	TR 52833 (Canyon Park) Los Angeles County	260	18,460
22.	Multi-Family	171 DU	TR 063483 Los Angeles County	156	26,676

Table 4.J-1 (Continued)

**Skyline Ranch
Wastewater Generation for Related Projects**

No.	Proposed Use	Size	Description/Location	Generation Rate (gpd) ^a	Generation (gpd)
23.	Single-Family	1,248 DU	West Creek/West Hills/TR 52455	260	324,480
	Multi-Family	1,297 DI	Los Angeles County	156	163,422
	Commercial	180 TSF		325/1,000 SF	58,500
24.	Single-Family	714 DU	Tesoro Phase 2/TR 051644 Los Angeles County	260	185,640
25.	Retail	34 TSF	02-232 (Rodgers Development) City of Santa Clarita	325/1,000 SF	11,050
26.	Single-Family	365 DU	TR 49621 (Wes Thompson) City of Santa Clarita	260	94,900
27.	Single-Family	63	TR 52355 City of Santa Clarita	260	16,380
28.	Single-Family	24 DU	Sand Canyon Gateway/TR53074 City of Santa Clarita	260	6,240
29.	Church	14 TSF	Mattson Project	50/1,000 SF	700
	Daycare	2 TSF	City of Santa Clarita	200/1,000 SF	400
30.	Multi-Family	300 DU	TR 62252 City of Santa Clarita	156	46,800
31.	Multi-Family	68 DU	TR 60536 City of Santa Clarita	156	10,608
32.	Single-Family	174 DU	02-063 (Montezuma) City of Santa Clarita	260	45,240
33.	Single-Family	432 DU	VTTM 53425 (Riverpark)	260	112,320
	Multi-Family	657 DU		156	102,492
	Retail Commercial	16 TSF		325/1,000 SF	5,200
34.	Single-Family	312 DU	TR 060258 (The Keystone)	260	81,120
	Multi-Family	187 DU		156	29,172
	Middle School	1,200 Students		20/student	24,000
	YMCA	30 TSF		600/1,000 SF	18,000
35.	Single-Family	622 DU	TR 51599	260	161,720
	Multi-Family	834 DU		156	130,104
	Commercial	1,456 TSF		325/1,000 SF	473,200
	Open Space				
36.	Community College	8,000 Students	Canyon Country Education Center City of Santa Clarita	20/student	160,000
37.	Multi-Family	407 DU	TT 062322 (Soledad Village)	156	63,492
	Commercial Retail	8 TSF	City of Santa Clarita	325/1,000 SF	2,600
38.	Single-Family	75 DU	Vista Canyon Ranch	260	19,500
	Condominiums	825 DU	City of Santa Clarita	195	160,875
	Multi-Family	300 DU		156	46,800
	Commercial Retail	150 TSF		325/1,000 SF	48,750
	Commercial Office	250 TSF		200/1,000 SF	50,000
	Medical Office	150 TSF		300/1,000 SF	45,000
	Hotel	200 Rooms		125/Room	25,000
	Park	12 Acres		200/Acre	2,400

Table 4.J-1 (Continued)

**Skyline Ranch
Wastewater Generation for Related Projects**

No.	Proposed Use	Size	Description/Location	Generation Rate (gpd) ^a	Generation (gpd)
39.	Multi-Family	180 DU	MC 04-358	156	28,080
	Commercial Retail	10 TSF	City of Santa Clarita		
40.	Single-Family	167 DU	TR 61811	260	43,420
			City of Santa Clarita		
41.	Multi-Family	111 DU	TR 53419	156	17,316
			City of Santa Clarita		
42.	Single-Family	148 DU	TR 48892	260	38,480
			City of Santa Clarita		
43.	Single-Family	498 DU	TR 52414 (Golden Valley Ranch)	260	129,480
	Commercial	619 TSF	City of Santa Clarita	325/1,000 SF	201,175
44.	Commercial Retail	490 TSF	Town Center Mall Expansion	325/1,000 SF	159,250
45.	Hospital	127 TSF	Henry Mayo Newhall Memorial	500/Bed	60,000
	Medical Office	(120 beds) ^b	Hospital Master Plan	300/1,000 SF	60,000
		200 TSF			
46.	College	600 Students	The Masters College Master Plan	20/Student	12,000
	Multi-Family	54 DU		156	8,424
47.	Single-Family	75 DU	Downtown Newhall Specific Plan	260	19,500
	Multi-Family	650 DU		156	101,400
	Commercial Retail	245 TSF		325/1,000 SF	79,625
	Commercial Office	55 TSF		200/1,000 SF	11,000
48.	Single-Family	13 DU	North Newhall Specific Plan	260	3,380
	Multi-Family	641 DU		156	99,996
	Commercial Retail	17 TSF		325/1,000 SF	5,525
	Commercial Office	150 TSF		200/1,000 SF	30,000
	Industrial Park	345 TSF		113/1,000 SF ^c	38,985
	Elementary School	1,320 Students		20/Student	26,400
	Hotel	90 Rooms		125/Room	11,250
	Total				5,360,285

DU – Dwelling Units

SF – Square Feet

TSF – Thousand Square Feet

^a County Sanitation Districts of Los Angeles County, *Loading Rates by Land Use*, 2004.

^b Henry Mayo Newhall Memorial Hospital Master Plan Final Program EIR, City of Santa Clarita, May 2007.

^c Represents an average between manufacturing and dry manufacturing rates.

Source: PCR Services Corporation, 2008.

Should new SCVSD infrastructure or facility upgrades be required in the future as a result of additional forecasted growth, this would be accomplished through the payment of connection, service, and annexation fees to cover fair share costs to develop new infrastructure as

determined to be necessary by the SCVSD including the 6 mdg expansion of the SCVJSS. Additionally, fees paid would help fund future expansion of wastewater treatment facilities. Thus, no adverse cumulative wastewater impacts would result directly due to forecast growth and the related projects identified in conjunction with the Skyline Ranch Project.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Project-related impacts to wastewater disposal have been determined to be less than significant, and, as such, no mitigation measures are required. However, as discussed above, there could be a cumulatively significant impact on the City's sewer line capacity. Payment of fair share fees as required by the City and/or construction of a relief sewer would reduce cumulative impacts on sewer conveyance systems to less-than-significant levels.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

K. SOLID WASTE DISPOSAL

1. INTRODUCTION

Construction and operation of the project would generate additional need for solid waste services and disposal in the County. This section describes regulations and existing conditions relating to solid waste generation and disposal, and analyzes the project's potential effects on solid waste services and facilities.

2. EXISTING CONDITIONS

a. Regulatory Framework

In the past few decades, strong public opposition has made the siting of new landfills increasingly difficult. The State, recognizing the need to address declining landfill capacity, enacted three key legislations relating to solid waste. In September 1989, the State Assembly passed the California Integrated Waste Management Act (AB 939:Sher). This legislation mandates that all cities and counties in the State divert 25 percent of their solid waste from landfills by 1995 and 50 percent by 2000 through source reduction, recycling, and reuse programs. In accordance with AB 939, all cities and counties must prepare and submit an annual report to the California Integrated Waste Management Board (CIWMB) which summarizes the jurisdictions' progress in achieving the diversion rates. In addition to setting diversion goals, AB 939 also requires that all cities develop a comprehensive solid waste management program with hierarchical policies for: (1) source reduction; (2) recycling and composting; (3) and transformation/land disposal.

Pursuant to AB 939, Los Angeles County prepared and adopted in 1993 a Source Reduction and Recycling Element (SRRE), which addresses the first two components of solid waste management, namely source reduction and recycling. The Los Angeles Countywide Siting Element, adopted in 1997, addresses the third component of solid waste management disposal. The Siting Element serves as a planning tool to address solid waste disposal capacity in the County for a 15-year planning period.¹ Annual reports are provided by the Los Angeles County

¹ *The Los Angeles County Department of Public Works is currently revising the Countywide Siting Element, a process that is estimated to be completed in 2011.*

Department of Public Works (LADPW) to assess disposal capacity and disposal needs over the next 15 years. The 2007 Annual Report evaluates disposal needs and capacity through 2022.²

The California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires individual development projects to provide adequate storage area for the collection and removal of recyclable materials. The size of these storage areas are to be determined by the appropriate jurisdiction's ordinance. If no such ordinance exists within the jurisdiction, the CIWMB-adopted ordinance shall take effect. Los Angeles County does not have an adopted ordinance related to this legislation. As such, development projects in unincorporated County are subject to CIWMB's ordinance.

Senate Bill 1374 (Kuehl) passed in 2002 requires that jurisdictions include in their annual AB 939 report a summary of the progress made in diverting construction and demolition (C&D) waste. The legislation also requires that the CIWMB complete five items with regard to the diversion of C&D waste, which are: (1) adopt a model ordinance for diverting 50 to 75 percent of all C&D debris from landfills; (2) consult with representatives of the League of California Cities, the California State Association of Counties, private and public waste services and building construction materials industry and construction management personnel during the development of the model ordinance; (3) compile a report on programs, other than the model ordinance, that local governments and general contractors can implement to increase the diversion of C&D debris; (4) post a report on the agency's website for general contractors on methods by which contractors can increase diversion of C&D waste materials; and (5) post on the agency's website a report for local governments with suggestions on programs, in addition to the model ordinance, to increase diversion of C&D waste materials.

In support of the above requirement, LADPW adopted the Construction and Demolition Debris Recycling and Reuse Ordinance on January 4, 2005. The Ordinance adds Chapter 20.87 to Title 20 of the Los Angeles County Code to increase the recycling and reuse of C&D debris in the unincorporated areas of the County and assist the County in meeting the diversion goals of AB 939.³ The Ordinance requires that a project in the unincorporated areas of the County recycle or reuse 50 percent of C&D debris and submit a Recycling and Reuse Plan (RRP) to the LADPW for approval.⁴

² *Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report, May 2009, accessed May 2009. Available: <http://dpw.lacounty.gov/swims/default.asp>*

³ *Construction and Demolition Debris Recycling and Reuse Ordinance, Los Angeles County Department of Public Works, January 4, 2005, <http://municipalcodes.lexisnexis.com/codes/lacounty/>, accessed February 5, 2007.*

⁴ *County of Los Angeles Department of Public Works, <http://ladpw.org/epd/CD/>, accessed February 5, 2007.*

However, on November 18, 2008, the County adopted a Green Building Program, including a Green Building Ordinance that would require all new residential projects of five or more units to recycle and/or salvage for reuse a minimum of 65 percent of non-hazardous construction and demolition debris by weight. Per the Green Building Ordinance, where a conflict exists between the provision and such other ordinance, statute, regulation, or requirement, the stricter provision shall apply to the extent permitted by law. As the Green Building Ordinance is a stricter provision, the Green Building Ordinance would apply to all development projects within the unincorporated areas of the County constructed after January 1, 2009⁵. The Green Building Program and related ordinances are further discussed in Section 4.S, Global Climate Change.

b. Environmental Setting

(1) Regional Facilities

Solid waste management for the County is comprised of source reduction, composting, transformation, and household hazardous waste/electronic waste (e-waste) collection programs, and involves the collection, transport, and disposal of solid waste by over 100 private waste haulers and city governments.⁶ The majority of solid waste generated is disposed at landfills within the County. A small percentage of solid waste is delivered to transformation facilities, to out-of-County disposal sites, or to facilities that transport the waste by rail to sites outside of the County.

Landfills within Los Angeles County are classified either as Class III landfills or Unclassified (inert) landfills. Class III landfills accept all types of non-hazardous solid waste, and unclassified landfills accept only inert waste, including soil, concrete, asphalt, and other construction and demolition debris (as defined by California Code of Regulations, Title 23, Section 2524). There are eleven Class III landfills and three permitted unclassified landfills in the County.

Based on data provided in the Siting Element, residents and businesses in the County disposed of approximately 16.1 million tons of waste in 1990. As a result of the recession between 1990 and 1995 and aggressive waste diversion programs, the amount of waste disposed

⁵ *Some exemptions do apply. For more information, please see http://planning.lacounty.gov/assets/upl/data/ord_green-building-final-ordinances.pdf.*

⁶ *Los Angeles County Countywide Integrated Waste Management Plan Five-Year Review Report, June 2004 and <http://dpw.lacounty.gov/epd/hhw/index.cfm>, accessed June 22, 2008.*

for the County decreased to 12 million tons in 1995.⁷ In 2008, the County disposed of approximately 8.855 million tons of solid waste. This amount includes approximately 8.004 million tons disposed at in-County Class III landfills, and approximately 0.174 million tons disposed at Unclassified Landfills.^{8,9} The majority of solid waste in the County (approximately 81 percent) was disposed at the Puente Hill Landfill, Sunshine Canyon City/County Landfill, and Chiquita Canyon Landfill.

As shown in Table 4.K-1, Solid Waste Disposal for Los Angeles County, on page 4.K-5, as of January 1, 2009, the remaining disposal capacity in the County is approximately 151.12 million tons at Class III landfills and approximately 50.876 million tons at Unclassified landfills. On December 31, 2008, operations in the Sunshine Canyon County Landfill and the Sunshine Canyon City Landfill were combined into one to what is known as the Sunshine Canyon City/County Landfill. The Sunshine Canyon City/County Landfill Expansion in the City of Los Angeles portion of the landfill also began operation, with an additional capacity of approximately 67.7 million tons. The total expansion capacity for the County and City portions combined is 78.97 million tons. The Antelope Valley Landfill “bridge expansion” will provide an additional 8.96 million tons of capacity. However, the expected operational date is still to be determined.¹⁰

Despite these successes with increasing disposal capacity at existing facilities, there has been no progress in the siting and permitting of new in-County landfill facilities. Without new in-County landfill facilities, all proposed landfill expansion projects, greater utilization of out-of-County facilities, increased waste diversion efforts, development of alternative technologies, and development of in-County infrastructure (e.g., transfer stations/material recovery facilities), would be needed to meet the County’s solid waste disposal needs throughout 2022.¹¹ Waste diversion programs, therefore, are necessary and important in extending the lifespan of existing disposal facilities.

⁷ *Los Angeles Countywide Siting Element Executive Summary*, accessed February 1, 2007, http://ladpw.org/swims/Upload/LACCSitingElement_ExecutiveSummary_061997.pdf.

⁸ *Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report*, May 2009, accessed May 2009, <http://dpw.lacounty.gov/swims/default.asp>.

⁹ *Numbers do not include disposal at transformation facilities and out-of-County landfills.*

¹⁰ *Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report*, May 2009, accessed May 2009, <http://dpw.lacounty.gov/swims/default.asp> and telephone communication with Nicole Stetson, Antelope Valley Landfill, Waste Management Inc., May 18, 2009.

¹¹ *Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report*, May 2009, accessed May 2009, <http://dpw.lacounty.gov/swims/default.asp>.

Table 4.K-1

Solid Waste Disposal for Los Angeles County

Landfill	Location	2008 Disposal In-County and Out-of-County (million tons) ^a	2009 Remaining Capacity (million tons) ^b	Permit Expiration Date
<i>Class III</i>				
Puente Hills	Unincorporated	3.15	21.62 ^c	October 2013
Sunshine Canyon County ^d	Unincorporated	1.177		2040
Sunshine Canyon City ^d	Los Angeles	0.68	78.97 ^d	2040
Chiquita Canyon ^e	Unincorporated	1.505	8.01	November 2019
Bradley ^f	Los Angeles	0.0	0.00	<i>expired^f</i>
Scholl Canyon ^g	Glendale	0.338	5.66	2024
Calabasas ^h	Unincorporated	0.369	7.80	January 2028
Lancaster	Unincorporated	0.356	13.06	August 2012
Antelope Valley ⁱ	Palmdale	0.305	8.39	2028
Savage Canyon (Whittier)	Whittier	0.08	4.18	January 2025
Burbank ^j	Burbank	0.041	2.96	January 2053
Pebbly Beach	Unincorporated	0.003	0.06	July 2028
San Clemente ^k	Unincorporated	0.00	0.02	January 2032
Class III Total		8.004	151.12	
<i>Unclassified</i>				
Azusa Land Reclamation	Azusa	0.174	42.82	January 2025
Peck Road Gravel Pit	Monrovia	0.00	7.8	2017
Brand Park ^l	Glendale	0.00	0.25	January 2036
Unclassified Total		0.174	50.876	
TOTAL		8.855	202.00	

^a Out-of-County solid waste refers to solid waste generated outside of Los Angeles County that is disposed of within the County. In-County solid waste refers to solid waste that is generated within Los Angeles County and that is disposed of within the County.

^b Data based on six-day work week, as of 1/1/09 unless otherwise indicated.

^c Disposal operations will continue until October 31, 2013, at which time the facility will stop accepting waste.

^d On December 31, 2008, operations in the Sunshine Canyon County Landfill and the Sunshine Canyon City Landfill were combined into one to what is known as the Sunshine Canyon City/ County Landfill. The remaining capacity provided herein is inclusive of the 67.7 million tons of additional capacity operational as of December, 2008.

^e Proposed expansion of approximately 32 million tons. New CUP application pending. No change to weekly disposal capacity.

^f Please note the Bradley Landfill was included in the 2007 Countywide Integrated Waste Management Annual Report, but closed in April 2007.

^g Limited to Scholl Canyon Watershed as defined by City Ordinance #4782.

^h Limited to the Calabasas Watershed as identified by Los Angeles County Ordinance #91-0003.

ⁱ Remaining permitted capacity does not include "bridge area" expansion that would provide an additional 8.96 million tons of capacity. This expansion is currently awaiting approval. No information is currently available regarding the date for when this expansion might be approved.

^j Limited to the City of Burbank use.

^k Owned and operated by the U. S. Navy.

^l Limited to City of Glendale Department of Public Works use.

Sources: Los Angeles County Department of Public Works, Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report; California Integrated Waste Management Board.

(2) Local Facilities

The Los Angeles County Sanitation Districts provide solid waste collection, disposal, and resource recovery services to the project site and unincorporated areas of the County. These

services are generally contracted out to private waste haulers and within the majority of unincorporated Los Angeles County each resident directly arranges for services with the hauler through an open-market system. Disposal destination for solid waste depends largely on the private haulers, who maintain disposal agreements with landfill operators. However, solid waste at the project site would likely be disposed at Sunshine Canyon City/County Landfill, Chiquita Canyon Landfill, and the Antelope Valley Landfill, the three nearest landfills to the project site. In 2008, these landfills disposed of 3.67 million tons of solid waste and have a remaining capacity of 95.37 million tons.

LADPW is responsible for the implementation of programs to divert waste from landfills. Household hazardous waste/e-waste drop-off events are held three to four times a month throughout the County and at least once per year in the Santa Clarita Valley. In addition, the County conducts education/outreach programs on source reduction and recycling. Other waste diversion programs include buy back centers, home composting demonstrations, curbside recycling, business materials exchange program, and establishing materials recovery operations/facilities. These are implemented through a Waste Plan Conformance Agreement with the landfill operators. The Sunshine Canyon City/County, Chiquita Canyon, and Puente Hills landfills currently have Waste Plan Conformance Agreements.¹²

The LADPW is in the process of replacing the current open-market system with a franchise system. The franchise system will allow the County to enter into agreements with waste haulers to provide waste collection services to residents within unincorporated Los Angeles County. This system will provide a more uniform service to residents and assist the County with implementing waste diversion programs. A portion of the franchise fee paid by waste haulers will be used to implement needed programs within the area such as additional household hazardous waste and e-waste collection events and recycling incentive programs. Existing franchise areas include Avocado Heights, Bassett/Valinda/South San Jose Hills, Citrus, East Charter Oak/Foothill/Ramona/Spadra, East Pasadena/East San Gabriel/East Arcadia/Royal Oaks, La Crescenta, North East Bay and Mountain, North West Bay and Mountain, Rowland Heights, Santa Clarita Valley, South San Gabriel, South Whittier, and West Whittier.

The project site is located within the Santa Clarita Valley Franchise Area. Waste and recyclable collection services are provided by Burrtec Waste Industries who provides each single family residence with one container for trash, one for recyclable materials, and one for green wastes. Recyclable materials are processed at the Sun Valley Paper Stock transfer station/material recovery facility, located in Sun Valley.¹³ In addition to waste collection, other

¹² *Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report, May 2009, accessed May 2009, <http://dpw.lacounty.gov/swims/default.asp>.*

¹³ *Telephone communication with Ron Fallejo, LA County Department of Public Works, May 18, 2009.*

services under the franchise system include: four special clean up events within the service area per year, two curbside collections per year of bulk items and e-waste, and school recycling programs.¹⁴

3. PROJECT IMPACTS

a. Thresholds of Significance

For the purpose of this analysis, impacts on solid waste facilities are considered significant if:

- The project would not be served by County landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- The project would not comply with federal, state, or local statutes and regulations regarding the management of solid waste;

In addition, the project would have a cumulative significant impact if:

- The project would result in a greater than one percent increase in the forecasted cumulative Countywide solid waste stream through 2022.¹⁵

b. Methodology

Solid waste generation associated with construction of the project was estimated using factors derived from the CIWMB based on project-type (i.e., residential, commercial, etc.). This estimated C & D solid waste generation was then compared with the available capacity at Unclassified landfills in the County. Solid waste generated from operation of the project was also estimated using CIWMB factors for the County.¹⁶ This number was then compared with the most recent disposal rates and remaining Class III landfill capacity. In addition, solid waste generated from operation of the project was compared with the forecasted cumulative Countywide increase in solid waste generation through 2022.

¹⁴ <http://ladpw.org/epd/Franchise/SantaClaritaValley.cfm>.

¹⁵ County's 2007 Countywide Integrated Waste Management Plan projects cumulative increase in solid waste disposal need through 2022.

¹⁶ CIWMB, "Residential Waste Disposal Rates," <http://www.ciwmb.ca.gov/wastechar/DispRate.htm>, accessed January 1, 2007.

c. Impact Analysis

(1) Construction

Grading for the project would involve the cut and fill of approximately 20.8 million cubic yards of soil. Approximately 68,000 cubic yards of excavated soil would be used as base material for concrete and asphalt. No export of soil would be necessary. During building activities for the project, construction debris such as wood, metal, concrete, and other materials would be generated. There are no specific estimates as to how much of this debris would be generated by the project. However, the CIWMB conservatively estimates that residential construction projects generate approximately four pounds of construction debris (mostly wood and drywall) per square foot.¹⁷ Based on this factor, with an approximate average square footage for the proposed residential units of 3,550 square feet (the proposed homes would be both one and two stories and would range in size from 2,400 square feet to 4,700 square feet), construction of the proposed project would generate up to approximately 8,946 tons of debris. However, the project is subject to the County's Green Building Ordinance. Pursuant to the County's Green Building Ordinance, 65 percent of the project's construction debris (i.e., 5,815 tons) would be recycled or reused. Thus, the project would necessitate the disposal of 3,131 tons of debris at Unclassified landfills.¹⁸

The amount of construction waste to be disposed by the project represents approximately 1.80 percent of the approximately 0.174 million tons of total waste disposed of at the County's Unclassified landfills during 2008.¹⁹ Construction waste would most likely be disposed of at Peck Road Gravel Pit, as this is the closest landfill that can accept construction waste from the project site.²⁰ The project's disposal need of 3,131 tons of debris would constitute approximately 0.04 percent of this landfill's 7.8 million tons of remaining capacity. Therefore, construction-related impacts on solid waste facilities would be less than significant.

¹⁷ CIWMB, "Job Site Source Generation," October 1998.

¹⁸ *Per the Green Building Ordinance, where a conflict exists between a provision in Part 20 and such other ordinance, statute, regulation, or requirement, the stricter provision shall apply to the extent permitted by state law. The County's Construction Debris Recycling and Reuse Ordinance is less stringent than the Green Building Ordinance, and requires 50 percent of a project's construction debris be recycled or reused. The Green Building Ordinance requires 65 percent of non-hazardous construction and demolition debris be recycled or reused. Therefore, the Green Building Ordinance is applied to the project. Under the proposed Green Building Ordinance, construction debris requiring recycling or reuse would be 5,815 tons or 65 percent of the overall amount of construction waste generated.*

¹⁹ *Under the Green Building Ordinance, construction debris to be disposed of would be reduced to 3,131 tons or approximately 1.80 percent of the total amount of solid waste disposed of in the County's Unclassified landfills in 2008.*

²⁰ *While the Brand Park Landfill is the closest to the site, this landfill is restricted to City of Glendale use.*

(2) Operation

At full buildout, the project would generate solid waste typical of residential uses (i.e., food, yard/garden debris, organic materials, and paper). Disposal rates are affected by a number of factors including level of awareness on solid waste issues and convenience of recycling facilities/services. The project would provide recycling containers and appropriate storage areas for residential and public use to decrease the project's solid waste disposal need. For the purpose of this analysis, the CIWMB disposal factor of 0.41 ton/capita/year for Los Angeles County is utilized.²¹ Thus, based on an estimate of 4,158 residents associated with the project, the project is expected to generate a maximum waste disposal need of 1,704.78 tons per year. This number represents an increase of less than one percent of the total waste disposed of at in-County landfills during 2008.

As discussed above, solid waste at the project site would likely be disposed at Sunshine Canyon Landfill, Chiquita Canyon Landfill, and the Antelope Valley Landfill, the three nearest landfills to the project site. The project's 1,704.78 tons of waste would comprise approximately 0.002 percent of the 95.37 million tons of remaining capacity at these landfills, and would represent an increase of less than 0.05 percent of the approximate 3.667 million tons of solid waste disposed in 2008 at these facilities. Based on this information, it is expected that existing landfills would have sufficient capacity to accommodate the project's solid waste disposal need. Therefore, the project would not cause a landfill capacity shortage to occur, and operation of the project would not have a significant impact on solid waste disposal capacity.

As described previously, under a franchise agreement with LADPW, Burrtec Waste Industries provides curbside recycling to project residents, including one receptacle for recyclable materials and one for green wastes. In addition to providing recycling containers for each single-family unit, the project site would include conveniently located public storage areas that would be adequate for the collection and loading of recyclables in accordance with the California Solid Waste Reuse and Recycling Access Act of 1991. Household hazardous material wastes and e-wastes generated by the project would be collected by Burrtec Waste Industries at special clean up events held four times a year throughout the Santa Clarita Valley. Other household hazardous waste and e-waste collection events are held throughout Los Angeles County three to four times a year as posted on the LADPW's website (http://ladpw.org/general/enotify/Calendar_Template/Calendar.aspx). Burrtec also provides once a year pick up of bulky and e-waste items.²² Therefore, under the provisions of the franchise agreement

²¹ CIWMB, "Residential Waste Disposal Rates," <http://www.ciwmb.ca.gov/wastechar/DispRate.htm>, accessed January 1, 2007.

²² <http://dpw.lacounty.gov/epd/Franchise/PDF/SCServiceFeatures.pdf>.

administered by LADPW no significant impacts related to compliance with Federal, State, or local regulations would occur.

4. MITIGATION MEASURES

As the project would not result in any significant impacts to solid waste, no mitigation measures would be required.

5. CUMULATIVE PROJECT IMPACTS

a. Construction

The proposed project would generate approximately 8,946 tons of construction debris; after accounting for recycling and reuse, approximately 3,131 tons (or 35 percent) would be disposed of at Unclassified landfills. Related projects in the area, as identified in Table 3-1 in Section 3.0, would also generate C&D waste which would require disposal at Unclassified landfills. As with the proposed project, these projects would be required to recycle or reuse 65 percent of their debris, pursuant to the Green Building Ordinance.

As presented in Table 4.K-1, Unclassified landfills have a total remaining capacity of 50.876 million tons. Assuming the County's 2008 in- and out-of-County disposal rate of approximately 0.174 million tons, there is disposal capacity for approximately 292 years. However, although the project itself is not expected to have a significant impact on solid waste disposal, it is accepted that the uncertainties regarding future landfill capacity could result in a worst case scenario where shortages in landfill capacity could result. Thus, it is conservatively concluded that the project together with projected growth in the County could result in a cumulatively significant impact on solid waste disposal associated with construction debris.

b. Operation

The significance threshold for cumulative impacts to solid waste facilities requires a comparison of the project's solid waste needs relative to projected growth in the County through 2022. The County estimates that there will be a cumulative solid waste disposal need of approximately 200 million tons through 2022.²³ Based on the project's estimated 1,704.78 tons

²³ *County of Los Angeles Department of Public Works, Los Angeles County Countywide Integrated Waste Management Plan 2007 Annual Report- Appendix E-2 Table 5. For the period beginning January 2007 through end of year 202; assumes an annual diversion rate of 50 percent.*

of solid waste generated per year, the project's contribution to cumulative disposal needs would be approximately 18,752.58 tons by 2022.²⁴ Thus, the project's disposal need would represent approximately 0.01 percent of the County's aggregate waste disposal through 2022, which is well below the 1 percent significance threshold for cumulative impacts to solid waste facilities.

As discussed above, the County has stated that without the successful permitting of proposed expansion at in-County facilities, the utilization of out-of-County facilities, increased waste diversion efforts, development of alternative technologies, and development of transfer stations/material recovery facilities, solid waste disposal needs through 2022 might not be met. It is expected that state, County and local solid waste planning authorities will continue efforts for siting new landfills, expanding landfills, extending permits for existing facilities, utilize of out-of-County facilities, and develop alternative technologies in order to avoid a landfill capacity shortfall resulting from cumulative development. Policies to promote these efforts would be identified in the next Countywide Siting Element, which is scheduled to be completed in 2011. Therefore, although the project itself is not expected to have a significant impact on solid waste disposal, it is accepted that the uncertainties regarding future landfill capacity could result in a worst case scenario where shortages in landfill capacity could result. Thus, it is conservatively concluded that the project together with projected growth in the County could result in a cumulatively significant impact on solid waste disposal. If such shortages in landfill capacity occur, it is expected that changes in regulations and increases in mitigation requirements and new technologies would occur to address the impact; however, even with such efforts, impacts may remain cumulatively significant and unavoidable.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

As indicated above, project impacts would be less than significant, and no mitigation measures are required. However, cumulative impacts are conservatively identified as significant and unavoidable due to uncertainties regarding future landfill capacity and alternative technologies.

²⁴ For an 11-year period beginning January 1, 2011, through end of year 2022.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

L. LAW ENFORCEMENT SERVICES

1. INTRODUCTION

This section describes regulations and existing conditions that relate to law enforcement services in the County and analyzes the project's potential impacts on these services. This section is largely based on information provided by the Los Angeles County Sheriff's Department and the California Highway Patrol.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) California Penal Code

The California Penal Code establishes the policing authority, rules of conduct, and policies for the Los Angeles County Sheriff's Department (Sheriff's Department), California Highway Patrol (CHP), and other law enforcement agencies within the State of California. Pursuant to the Penal Code, the recruitment and training of officers must adhere to the standards of the California Commission on Peace Officers Standards and Training. All municipal sworn officers are state peace officers with authorized police powers.

(2) California Vehicle Code

The California Vehicle Code authorizes the CHP with police powers which include, but are not limited to, traffic law enforcement, investigation for traffic accidents, and protective services for State-elected officials and court members. The Code also allows CHP to adopt rules and regulations necessary to carry out the duties of the department.

(3) Los Angeles County Code

Under Chapter 22.74 of the Los Angeles County Code, developers of new residential, commercial, office, and industrial development projects within the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County are required to pay a Law Enforcement Facilities Fees to mitigate impacts on law enforcement facilities, including new or expanded

sheriff stations and patrol vehicles. Fees collected are deposited in a special law enforcement capital facilities fund for the fee zone corresponding with the Santa Clarita, Newhall, and Gorman areas in which a project is located. The project site is located within Zone 1, Santa Clarita.¹ Fees are to be used exclusively for the purpose of land acquisition, engineering, construction, installation, purchasing, or any other direct cost of providing law enforcement facilities to the development. The fee is calculated for the type of development proposed and is adjusted annually. The mitigation fee applied to a project is the rate in effect at the time building permits are issued. Currently, the fee within Zone 1 is \$467.00 per single-family dwelling unit; \$337.00 per multi-family dwelling unit; \$69.00 per 1,000 square-foot commercial unit or \$0.07 per square-foot of commercial space; and \$87.00 per 1,000-square foot office unit.² Fees are adjusted annually on July 1st per review by the County sheriff, in consultation with the County auditor-controller.

(4) County Emergency/Evacuation Plan

After the 1991 Oakland fire, the State of California passed Senate Bill 1841 to establish the Standardized Emergency Management System (SEMS), which sets forth procedures for managing response to multi-agency and multi-jurisdictional emergencies in California. The legislation mandated that by December 1, 1996, each local jurisdiction, in order to be eligible for any funding of response-related costs under disaster assistance programs, shall implement the Standardized Emergency Management System and prepare an up-to-date emergency management plan (which includes an emergency evacuation plan).

The County has prepared the Operational Area Emergency Response Plan, which serves as the emergency management plan for the entire County. The Plan, revised on February 17, 1998, sets forth procedures and measures for coordination with County agencies in the event of a disaster. The County also adopted an Operational Area Strategic Plan for Emergency Management (January 29, 2002) to review and update current emergency management practices.

b. Environmental Setting

The project site is located within the jurisdiction of the Sheriff's Department and CHP. Primary law enforcement protection services to the project site and other unincorporated areas of the Santa Clarita Valley are provided by the Sheriff's Department, while traffic regulation enforcement and traffic incident response are provided by CHP.

¹ *Santa Clarita – North Los Angeles County Law Enforcement Fee Study, October 29, 2007, Figure 1.*

² *Ibid, Table 3.7, Santa Clarita- Law Enforcement Facilities Impact Fee, page 15.*

(1) Sheriff's Department

The Sheriff's Department service area totals approximately 3,157 square miles and covers the unincorporated areas of the County and 40 contracted cities. Currently, there are approximately 8,553 sworn officers in the Sheriff's Department serving a population of 2.8 million. The Department operates several divisions including Homeland Security, Court Services, Correctional Services, Administrative Services, and Patrol Division. The Patrol Division is divided into three regions: Field Operations Region I, II, and III. The project site is served by Field Operations Region I.

The project site is served by the Sheriff's Department Santa Clarita Valley Station, located at 23740 Magic Mountain Parkway in the City of Valencia. As shown in Figure 4.L-1, Law Enforcement Services Facilities, on page 4.L-4, this station is approximately 5 miles from the site. The service area for this station covers approximately 650 square miles encompassing the City of Santa Clarita and the unincorporated County area between the Los Angeles City limits to the south, the Kern County line to the north and all of the area between the Ventura County line to the west and the township of Aqua Dulce to the east. The station houses Patrol Deputies, a Detective Bureau, a Traffic Investigation Unit, a Cobra Unit, a Search and Rescue team, an Air Support team, and other personnel. In 2008, there were a total of 242 budgeted personnel housed at the station, including approximately 165 deputies, sergeants, and support staff.^{3,4} The station was originally designed to accommodate 90 officers and, thus, is exceeding its capacity.⁵ Planned capital improvements include the expansion of this station by approximately 24,900 square feet and 40 additional patrol vehicles.⁶

Based on the station's service area population of 241,416,⁷ the current officer to population ratio is 1 deputy per 1,463 residents. The Santa Clarita Valley Sheriff's Station has indicated that their ideal officer to population ratio is 1 deputy per 1,000 residents.⁸ Therefore, the station's current officer to population ratio is less than ideal, although this service

³ *One Vision One Valley Plan, Draft Safety Element, Los Angeles County & City of Santa Clarita, October 2008, available online at: <http://www.santa-clarita.com/vgp/pdf/Safety10-28-08.pdf>; accessed May 27, 2009;*

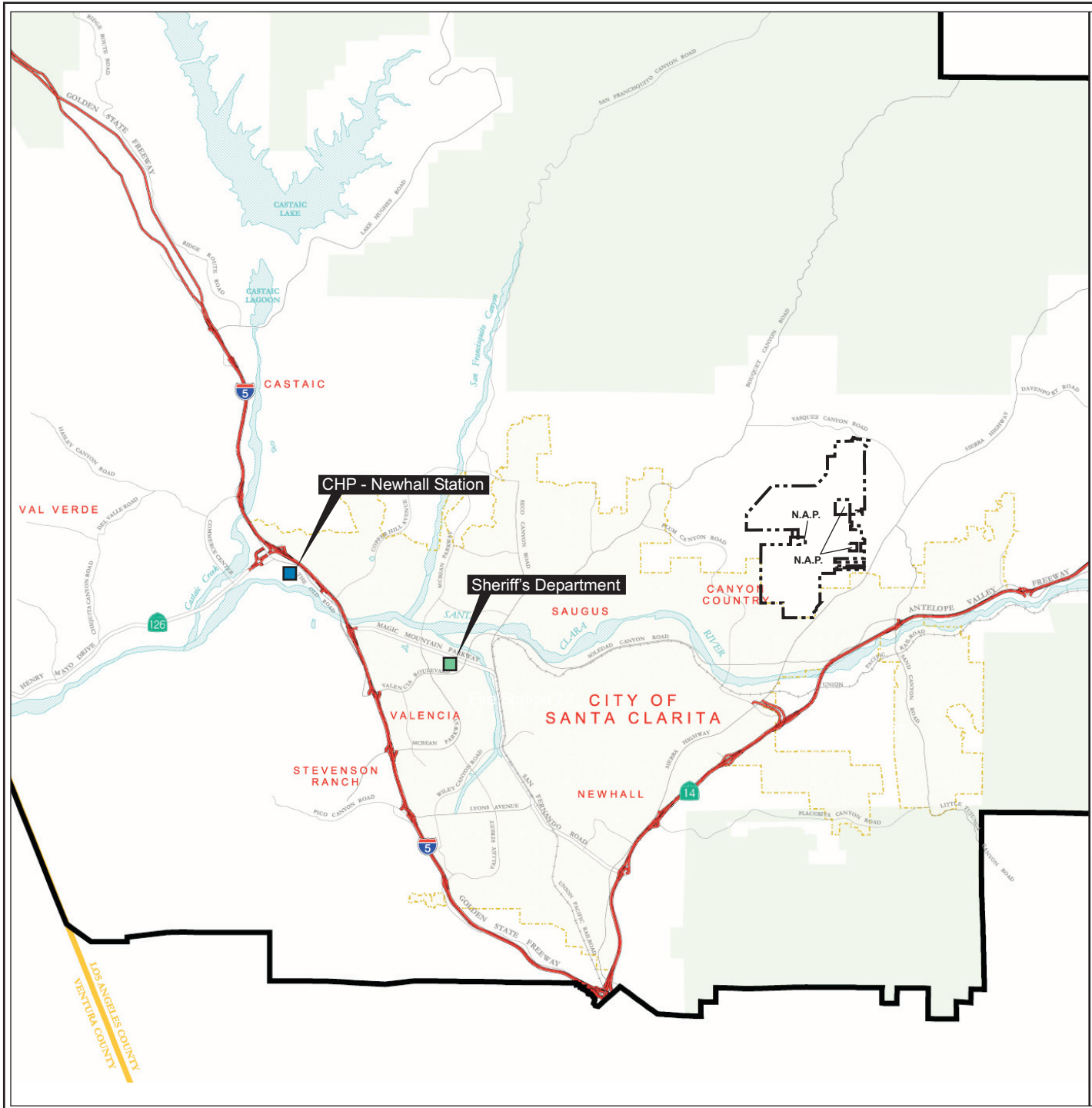
⁴ *Henry Mayo Newhall Memorial Hospital Master Plan Draft Environmental Impact Report, Section 5.12 Sheriff Services, September 2008.*

⁵ *Santa Clarita Valley Area General Plan, Technical Background Report, February 2004.*

⁶ *Santa Clarita – North Los Angeles County Law Enforcement Fee Study, October 29, 2007, Table 3.4.*

⁷ *County of Los Angeles Sheriff's Department, 2008 Crime and Arrests Statistics. Available at: <http://www.lasd.org/sites/vir9600/index.html>, accessed May 19, 2009.*

⁸ *Written correspondence, Patti Minutello, Captain, Santa Clarita Valley Station, Los Angeles County Sheriff's Department, November 3, 2004.*



LEGEND

- Sheriff's Department - Santa Clarita Valley Station
23740 Magic Mountain Parkway
Valencia, California
- CHP - Newhall Station
28648 The Old Road
Valencia, California
- Project Boundary

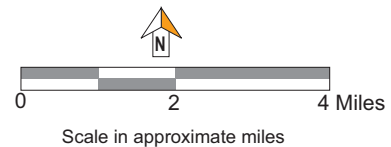


Figure 4.L-1
Law Enforcement Services Facilities



Source: Santa Clarita Valley General Plan Technical Background Report

level is being met within the Valley.⁹ According to the Sheriff's Department, budget constraints have limited the station's capability to increase personnel. Additionally, the station's staff has expressed concern that future growth of its service area could overextend existing personnel and supporting facilities (i.e., patrol cars, equipment, and station). However, the Law Enforcement Facilities Fee will provide a mechanism for new development to fund the facilities needed to accommodate future growth.

In 2003, the Santa Clarita Valley Sheriff's Station received 51,758 service calls. These calls are handled according to a tiered system of priority. Calls may be classified as emergent, priority, or routine (non-emergent). Emergent calls receive an automatic code three response (e.g., assaults, accidents, shootings). Priority calls receive immediate response but do not receive an automatic code three response (e.g., domestic disturbance). Routine calls are non-priority and do not require an immediate response from patrolling officers.

The Sheriff's Department has established response time targets of 10 minutes or less for emergent calls, 20 minutes or less for priority calls, and 60 minutes or less for routine calls.¹⁰ Response time can vary greatly because the nearest responding patrol car may be located anywhere within the station's patrol area, and not necessarily responding from the station itself. As the site is undeveloped, meaningful data for current response times for the project site are not available.

Law enforcement incidents are classified into three categories: Part I Crimes, Part II Crimes, and Non-Criminal Incidents. Part I Crimes include the most serious criminal offenses such as homicides, rapes, robberies, assaults, burglaries, arson, and auto thefts. Part II Crimes are less serious offenses such as fraud, drunk driving, disorderly conduct, gambling, and other misdemeanors. Other incidents such as automobile accidents, missing persons, suicides, and non-criminal juvenile acts are categorized as Non-Criminal Incidents. In 2008, the Santa Clarita Valley Police Station handled a total of 21,796 incidents consisting of 5,023 Part I Crimes, 7,749 Part II Crimes, and 9,024 Non-criminal Incidents.¹¹

As with other public services, funding for the Sheriff's Department is derived from various types of tax revenue deposited in the County General Fund. The amount of funding allocated to the Sheriff's Department is determined by the County Board of Supervisors during the budgeting process. The Law Enforcement Facilities Fee also provides additional revenue for

⁹ *One Vision One Valley Plan, Draft Safety Element, Los Angeles County & City of Santa Clarita, October 2008, available online at: <http://www.santa-clarita.com/vgp/pdf/Safety10-28-08.pdf>; accessed May 27, 2009.*

¹⁰ *Impact Sciences, Inc., Riverpark Draft EIR, February 2004.*

¹¹ *County of Los Angeles Sheriff's Department, 2008 Crime and Arrests Statistics. Available at: <http://www.lasd.org/sites/yir9600/index.html>, accessed May 19, 2009.*

law enforcement facilities in the unincorporated Santa Clarita, Newhall, and Gorman areas of north Los Angeles County.

(2) California Highway Patrol

CHP is primarily responsible for traffic patrol and traffic incident response for all roadways at the project site and all unincorporated areas. CHP operations for the project site are based out of the Newhall Ranch Station, located at 28648 The Old Road in Valencia, approximately 8 miles from the project site. Figure 4.L-1 shows the location of the station. This station has a service area of approximately 700 square miles, which extends from the Ventura County line, east to Aqua Dulce, north to SR-138 and south to SR-118.

Currently, the CHP Newhall station has a staff of 1 captain, 2 lieutenants, 7 sergeants, 85 officers, 9 non-uniforms, and 15 senior volunteers. From May 1, 2008 through April 30, 2009, the Newhall Station issued 11,045 citations and made 680 arrests within the proximity of the project site. In addition, CHP investigated 560 traffic collisions, which is an increase of 15.2 percent since 2001.¹²

Funding for CHP is derived primarily from the State Motor Vehicle Account, which derives its revenue from motor vehicle registration fees, driver license fees, and other driving-related fees. Other sources of funding for the CHP include the State Highway Account, Federal Trust Fund, and reimbursements. The CHP does not receive or base its deployment on the revenues that may be generated within its service area. In general, the proportion of funding that a CHP service area will receive is determined by CHP Headquarters in Sacramento based on the service area's need.

3. PROJECT IMPACTS

a. Thresholds of Significance

For the purpose of this analysis, impacts on law enforcement protection services would be considered significant if:

- The project would expose residents to substantial public safety risks;
- The project would result in inadequate law enforcement protection services within the project service area;

¹² Written correspondence, Captain M. Odle, Commander Newhall Area, CHP, May 19, 2009.

- The project would result in inadequate emergency access;
- The project would interfere with adopted emergency response plans or emergency evacuation plans;
- The project would result in adequate emergency response times for the site; or
- The project would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts.

b. Methodology

The determination of significance for the project's potential impacts on law enforcement protection services was based on a comparison of existing law enforcement services and the expected demand for and adequacy of services at project buildout. The analysis of law enforcement services considered the following factors: availability and funding of resources (e.g., facilities, staffing, and equipment), scheduled improvements to facilities and services, response times, service calls, emergency access, and officer-to-population ratios.

c. Impact Analysis

(1) Sheriff's Department

The project does not propose any uses which would expose residents to an unusually high level of public safety risks associated with law enforcement services (i.e., earthquakes, fires, etc.). Residents would be exposed to the same level of public safety risks as existing area residents. Public safety risks for the project would be typical of those existing for residential uses (i.e., break-ins, car thefts, and domestic disturbances). Therefore, impacts relating to the exposure of public safety risks would be less than significant.

As stated above, the station currently has an officer to population ratio of 1 deputy per 1,463 residents, which exceeds the station's ideal ratio of 1 deputy per 1,000 residents. As discussed in Section 4.R, Population, Housing and Employment, of this EIR, project implementation would result in a population of approximately 4,158 residents. Therefore, without additional increases in staffing, the project would further decrease the officer to population ratio. The Sheriff's Department has indicated that the project would require four new

deputies to be consistent with the station's ideal officer to population ratio of 1 deputy per 1,000 residents.¹³

Project residents would increase emergency calls and the demand for other law enforcement services in the Santa Clarita Valley Sheriff's Station service area. The Sheriff's Department has indicated that project demand for law enforcement services would overextend existing personnel and support facilities (i.e., patrol vehicles, equipment, and station). As described above, the project would be subject to the payment of developer fees under Chapter 22.74 of the Los Angeles County Code. Under the current provisions of the Law Enforcement Facilities Fee, a payment of \$593,090 would be assessed at the time building permits are issued. The payment of fees would fully fund the project's share of capital improvements and reduce the project's impacts on law enforcement infrastructure to a less-than-significant level.

Once residential units are occupied, the project would generate annually-recurring revenue in the form of taxes and other miscellaneous charges (e.g., sales tax, property tax, utility users tax, library fees, etc.). Project-generated revenue would be deposited in the County's General Fund, a portion of which is used to address costs associated with other demands for Sheriff's services (i.e., new deputies). The allocation of such revenue to a specific municipal service is determined through the County's budgeting process by the County Board of Supervisors. While general fund revenues have historically supported adequate levels of law enforcement services in the area, if sufficient funding for Sheriff's services is not maintained by the County, a potentially significant and unavoidable impact could occur. To address this potential impact and help reduce demand for law enforcement services associated with the project, mitigation measures focused on crime prevention are proposed below for incorporation into the project.

Emergency access to the project site would be provided via the off-site extension of White Canyon Road, which would connect from Plum Canyon on the west (through Tract Map No. 46018) to the southeast and through the project site as Skyline Ranch Road, ultimately connecting to Sierra Highway at its existing intersection north of Adon Avenue. Internal access within the project site would be provided via the project's internal residential streets. All on-site roadways and emergency access provisions would be subject to review and approval by the Los Angeles County Department of Public Works, the Los Angeles County Fire Department, and the Sheriff's Department. Therefore, no impacts to emergency access and/or emergency evacuation plans would occur.

¹³ *Written correspondence, Patti Minutello, Captain, Santa Clarita Valley Station, Los Angeles County Sheriff's Department, November 3, 2004.*

The Sheriff's Department anticipates that response times for the project site would be approximately 5 to 8 minutes for emergent calls, 8 to 11 minutes for priority calls, and 25 to 35 minutes for routine calls. As discussed above, the Sheriff's Department has response time goals of 10 minutes, 20 minutes, and 60 minutes or less for emergent calls, priority calls, and routine calls, respectively. Therefore, the project's response times for law enforcement protection services would be adequate, and impacts related to response times would be less than significant.

The project does not propose the construction of new or physically altered facilities to meet the increased demand for law enforcement services, and no such facilities are currently proposed in the area. Therefore, no impacts related to the construction of such facilities would occur.

(2) California Highway Patrol

As indicated by the CHP, the project would result in an increase in the residential population and, therefore, would increase demand for CHP services. This increased demand for CHP services would further extend existing resources for traffic control and incident response if additional staffing and upgrades are not adequately funded in the future. While project residents would generate revenue to the state's Motor Vehicle Account, the primary source of funding for the CHP, if such funds are not allocated toward additional CHP staffing and facilities in the area, the project's impacts on CHP services would be significant and unavoidable.

4. MITIGATION MEASURES

a. Sheriff's Department

4.L-1(a) *Prior to issuance of building permits, the project shall incorporate Crime Prevention Through Environmental Design (CPTED) features into the project, in coordination with and to the satisfaction of the Sheriff's Department. Such features should include, but are not limited to the following:*

- *Lighting in parking lots and low-level security lighting;*
- *Provision that doors and windows are visible from the street and between buildings;*
- *Lighting of building address numbers to ensure visibility from the street for emergency response agencies; and*
- *Landscaping that would minimize opportunities for hiding.*

4.L-1(b) *Prior to issuance of building permits, the applicant shall provide the Sheriff's Department with plans indicating the project's street circulation system and building addresses to facilitate emergency response.*

5. CUMULATIVE PROJECT IMPACTS

The cumulative project impacts on law enforcement services are analyzed within the geographical context of the Santa Clarita Valley. This project in conjunction with other related projects in the area would contribute to population growth and would generate an increased demand for Sheriff's Department and CHP services. As discussed above, the payment of the Law Enforcement Facilities Fees as specified in Chapter 22.74 of the Los Angeles County Code for new residential, commercial, and office development in the Santa Clarita area would fully mitigate impacts on law enforcement facilities. Regarding impacts on staffing, based on SCAG's 2020 population projections, the Sheriff's Department Santa Clarita Valley station area would need an additional 363 personnel to accommodate the forecasted population growth.¹⁴ The Sheriff's Department has indicated that for the proposed project, four new deputies would be required to maintain ideal staffing ratios for the Sheriff's Department. As with this project, it is anticipated that most sizeable new development projects (either planned, committed, or proposed) in the area would be subject to discretionary review on a per-project basis, including evaluations of the adequacy of law enforcement services. The need for additional law enforcement personnel associated with cumulative growth would be addressed through such reviews and through the County's budgeting process overseen by the County Board of Supervisors. While project-by-project mitigation and general fund revenues have historically supported adequate levels of law enforcement services in the area, if sufficient funding for Sheriff's services is not maintained by the County, project and cumulative demand for law enforcement services would overextend existing personnel. If this occurred, the project's contribution to impacts on the Sheriff's Department staffing would be cumulatively considerable and a significant and unavoidable cumulative impact could occur. Beyond feasible project-by-project mitigation and allocation of general fund revenues, no other mitigation measures have been identified that would address this potential cumulative impact on Department personnel. As discussed above, CHP services are funded primarily from the state's motor vehicle registration fees through the State Motor Vehicle Fund. It is anticipated that future population growth will also lead to an increase in the motor vehicle funds, which would then be available for use by CHP. The future demand for Newhall CHP services would be determined by CHP Headquarters, which would provide appropriate funding as feasible. However, should the CHP be unable to allocate sufficient funds to the Newhall CHP station, the project's impacts would be cumulatively considerable and a significant and unavoidable cumulative impact on CHP services could occur.

¹⁴ *Santa Clarita Valley General Plan Technical Background Report, February 2004.*

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Even with implementation of the mitigation measures proposed by the project, if sufficient County and State funds are not allocated to support increases in law enforcement services in the area, project-related and cumulative impacts would remain significant and unavoidable.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

M. FIRE SERVICES AND HAZARDS

1. INTRODUCTION

This section describes applicable regulations and existing conditions relating to the provision of fire protection services and analyzes the project's potential impacts on these services. This section is largely based on consultation with and information provided by the Los Angeles County Fire Department (LACoFD).

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Safety Element

The Safety Element of the Los Angeles County General Plan (amended 1990) assesses threats to public safety, including wildland and urban fires, and outlines goals to reduce such threats. Specifically, the Element's goal with regard to fire hazards is to:

- Reduce threats to public safety and protect property from wildland urban fire hazards.

There are five policies listed in the Safety Element that relate to this goal: (1) Maintain and strengthen the review of projects and development proposals; (2) Continue to coordinate fire fighting efforts with State, Federal, and local agencies in fire hazard areas; (3) Continue efforts to reduce all fire hazards; (4) Expand and improve vegetation management efforts in wildland fire hazard areas; and (5) Promote improved watershed management practices to reduce the risk of damaging runoff and debris movement.¹

(2) Los Angeles County Fire Code and Building Code

The Los Angeles County Fire Code (Title 32) and County Building Code (Title 26) establish requirements and regulations for the design, construction, and provision of fire

¹ *Safety Element of the Los Angeles County General Plan, December 6, 1990.*

protection facilities and equipment related to new development within the LACoFD jurisdiction. Basic requirements for new development projects include the provision of multiple ingress/egress access points, fire suppression systems, fire flow standards, and minimum street widths.

Additional specific requirements are also applicable to projects, such as the proposed project, located in LACoFD-designated Very High Fire Hazard Severity Zone (VHFHSZ) (formerly Fire Zone 4). These designations are determined by the County Forester based on the area's topography, amount and type of vegetative cover, weather conditions, water availability, and access from fire facilities. Projects located in a VHFHSZ are required to submit for review and approval a Fuel Modification Plan, a landscape plan, and an irrigation plan to the Forestry Division of the LACoFD. A Fuel Modification Plan requires that a project establish a fuel modification zone, where existing vegetation is managed and/or replaced to reduce the risk of fire ignition. Basic requirements of a fuel modification zone may include, but is not limited to, the following:²

- Full or partial clearing of vegetation away from combustible structures;
- Planting of native, fire-resistant plant species;
- Removal/thinning of undesirable plant species;
- Removal of dead and dying vegetation;
- Irrigation by automatic or manual sprinkler systems;
- Spacing of vegetation.

Additional site specific requirements, including the minimum width of a fuel modification zone, for a Fuel Modification Plan are determined by the LACoFD at the time of project plan review.

(3) Developer Fee Program

The Los Angeles County Fire Department Developer Fee Program requires developers of new subdivision to pay fees, or an in-kind consideration in lieu of developer fees, to fund the construction of fire stations and the provision of certain equipment. The developer fee is a set amount per square foot of building space. The current fee, which is set at \$0.9550 per square

² *Fuel Modification Plan Guidelines, County of Los Angeles Fire Department, Fire Prevention Bureau, Forestry Division. January 1998.*

foot, is adjusted annually by the County in order to maintain adequate levels of service and collected at the time the building permits are issued.³

b. Environmental Setting

(1) Fire Protection Services/Facilities

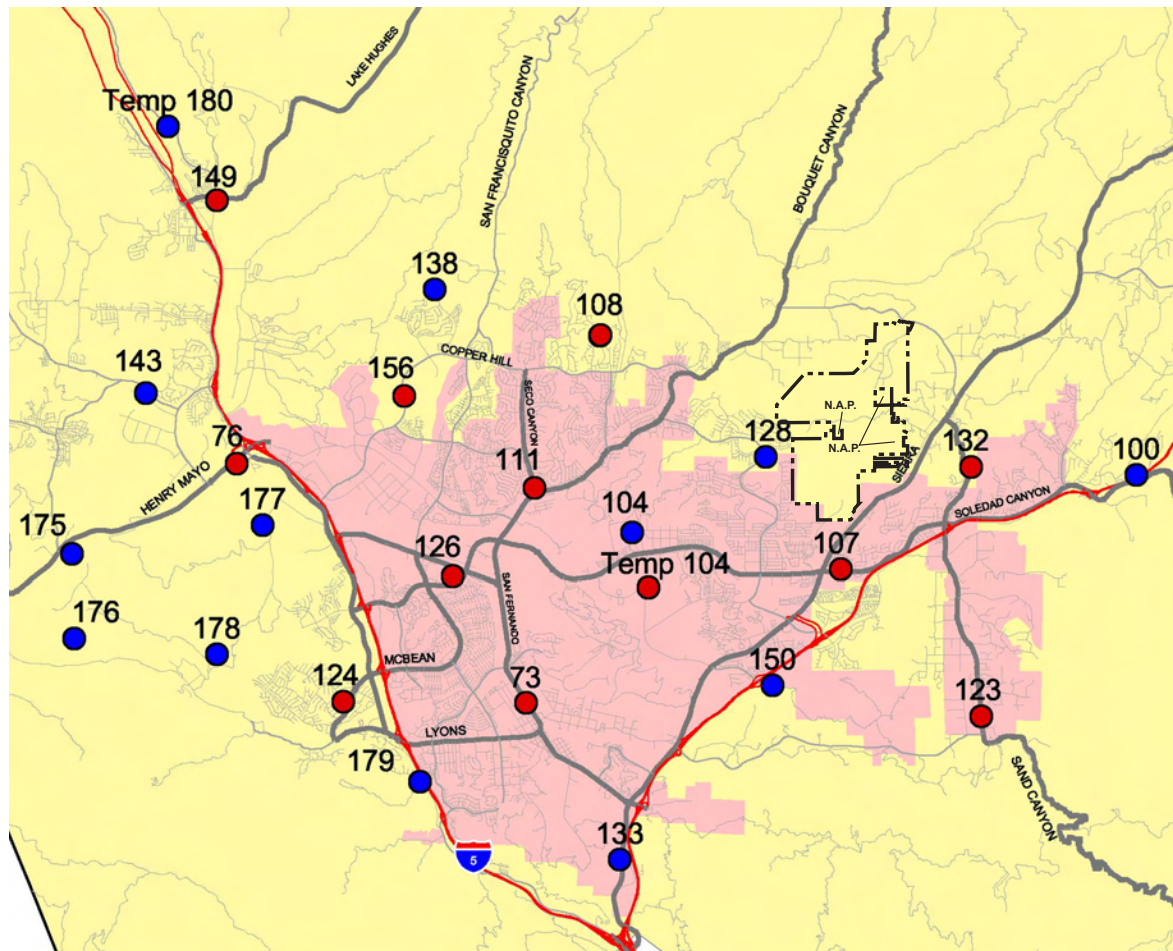
The Los Angeles County Fire Department (LACoFD) provides fire protection services to the unincorporated areas of the County and 58 cities, as part of the Consolidated Fire Protection District. In addition to fire protection services, the LACoFD also provides special operations services including fire prevention, hazardous materials, emergency medical services, lifeguards, forestry, urban search and rescue, and terrorism response. As of 2007, LACoFD had a staff of approximately 4,767 persons, which include captains, firefighters, firefighter paramedics, administrative personnel, and others. The LACoFD's service area covers 2,305 square miles and approximately 1,215,921 households. With 21 battalions, 163 fire stations, and 263 engine companies (22 in training) in 9 geographical divisions, the LACoFD serves over 4.1 million residents.⁴

The project site is located within Battalion 6 of the LACoFD's District, which includes the unincorporated areas of the Santa Clarita Valley and the City of Santa Clarita. As shown in Figure 4.M-1, Existing and Proposed Fire Stations in the Project Vicinity, on page 4.M-4, within the project vicinity, there are 12 existing and 13 proposed fire stations. The LACoFD is not divided into distinct service areas. The closest available units are dispatched as needed to an emergency incident anywhere within its territory.

The closest fire station to the project site is Fire Station 107, located at 18239 West Soledad Canyon, Canyon Country, approximately 1 mile south of the site. This station currently provides the primary response for the project site during emergency incidents. Fire Station 107 is staffed with a 3-person engine company and 2 firefighter paramedics. The second closest fire station is Fire Station 104, temporarily located at 26201 Golden Valley Road in the City of Santa Clarita, approximately 2.5 miles southwest of the site. This station currently houses a 4 person quint (a combination engine/ladder truck apparatus). The permanent location for Fire Station 104 will be at 26901 Golden

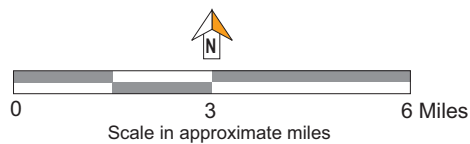
³ March 10, 2009, *City of Santa Clarita Agenda Report, "Update of Consolidated Fire Protection District of Los Angeles County Facilities Impact Fee" 2009 Developer Fee rates.*

⁴ 2007 *Statistical Summary, Los Angeles County Fire Department* available online at: <http://www.fire.lacounty.gov/PDFs/StatSummary.pdf> accessed May 18, 2009; Updated information provided via email correspondence by Lorraine Buck, Supervising Planning Analyst, Los Angeles County Fire Department, May 27, 2009



- Existing Fire Stations
- Planned Fire Stations

"Planned Fire Stations" are subject to change based upon factors such as future funding, development patterns, and actual road network.



Source: LACoFD, Planning Division, May 27, 2009

Figure 4.M-1
Existing and Proposed
Fire Stations in the Project Vicinity

Valley Road (at the intersection of Soledad Canyon Road), but a timeframe has not been established. Additionally, the LACoFD has indicated that Fire Station 128 to be located at 28450 Whites Canyon Road, is planned to be operational by the end of 2010.⁵ Once constructed and operational, this new station would be located approximately 0.75 mile from the site, and is expected to replace Fire Station 107 as the primary responder for the project site.

The LACoFD strives to maintain a minimum first-due response distance for a new project based on the project's density. Since the critical factor for fire containment is structure separation, the project's relevant density is the density within the developed area, after subtracting open space. The actual density for the proposed project is considered low-urban/suburban. Therefore, according to the LACoFD, the minimum response distance for the project is three miles from the closest fire station.⁶

In 2008, Fire Station 107 responded to a total of 2,926 incidents. Of these, 58 were fire-related incidents, 2,362 emergency medical incidents, and 506 miscellaneous incidents (e.g., false alarms, hazardous conditions, unspecified, etc.). Fire Station 104, from its temporary location, responded to a total of 412 incidents in 2008. Of these total incidents, 14 were fire-related incidents, 2878 were emergency medical incidents, and 120 miscellaneous incidents.⁷ The LACoFD has indicated that their first-due response time targets in low-urban/suburban areas is 6 minutes for basic life support incidents requiring the dispatch of an engine company and 10 minutes for advanced life support incident requiring the dispatch of paramedic units.⁸

Funding for LACoFD staffing is provided primarily through property taxes. Also, a special voter-approved tax passed in 1997 and the LACoFD Developer Fee Program, described above, contributes financial resources for land acquisition, facility improvements, and partial funding of equipment. The LACoFD has indicated that additional manpower, equipment, and facilities are needed in the project area.⁹ However, limited tax revenues have restricted the LACoFD's ability to meet new growth needs. While general plans have been developed for

⁵ Telephone communication with Debbi Aguirre, Planning Division, Los Angeles County Fire Department, January 14, 2005 and Danny Kolker, Planning Division, Los Angeles County Fire Department, April 9, 2007. Updated information provided by Lorraine Buck, Supervising Planning Analyst, Los Angeles County Fire Department, via email correspondence May 27, 2009.

⁶ Telephone communication, Danny Kolker, Los Angeles County Fire Department, January 14, 2005.

⁷ Telephone communication with Debbi Aguirre, Planning Division, Los Angeles County Fire Department, January 14, 2005 and Danny Kolker, Planning Division, Los Angeles County Fire Department, April 9, 2007. Updated information provided by Lorraine Buck, Supervising Planning Analyst, Los Angeles County Fire Department, via email correspondence May 27, 2009.

⁸ Op.Cit., Danny Kolker, January 14, 2005.

⁹ Written correspondence, David Leineger, Forestry Division, Los Angeles County Fire Department, October 8, 2004 and telephone communication with Danny Kolker, Op. Cit., April 9, 2007.

upgrading fire protection in the project's fire service area, the LACoFD has stated that it will not be able to implement land use plans to accommodate new growth without specific provisions to provide for necessary manpower, equipment and facilities.

(2) Wildfire Hazards

Large scale wildland fires are typically responded to by the Air Operations Division of the LACoFD, which operates fire suppression camps. The fire camps plan a supportive role in wildland fire prevention and suppression. They are not staffed with firefighters and do not respond to incidents in developed areas. Within Los Angeles County, there are 10 fire suppression camps operated by LACoFD. These fire suppression camps are staffed by a 31-person crew, consisting of County jail inmates and paid fire suppression aides. Fire suppression teams receive specialized training in wildland fire suppression, which includes establishing firebreaks. Water-dropping helicopters, bulldozers, and other equipment are utilized as necessary to assist in firefighting efforts. Wildfire prevention measures include prescribed burns, brush thinning/clearing, and creation of fuel modification zones or defensible space. As previously noted, a fuel modification zone is an area surrounding a building where vegetation is managed in accordance with a Fuel Modification plan to reduce the risk of wildfire ignition.

The project site is located in the Santa Clarita Valley, an area which is highly susceptible to wildfires. The LACoFD designates the project site as a VHFHSZ based on the site's weather conditions, topography, and vegetation.¹⁰

(a) Weather Conditions

Wildfire potential is greatly influenced by the prevailing weather that accompanies the change in seasons. The fire season for the region is typically from the late summer to fall months, when temperature is high and vegetation moisture level is low. In addition, the Santa Ana winds blowing in hot, desert air can further dry out vegetation and exacerbate fire hazard levels.

(b) Vegetation

The project site and vicinity are particularly prone to wildfires due to the highly flammable vegetation cover, specifically chaparral and coastal sagebrush. These vegetation types are well adapted to periodic fires, having the ability to recover quickly after a burn. Areas

¹⁰ *Santa Clarita Valley General Plan, Technical Background Report, February 2004.*

where new developments are adjacent to these vegetation communities, known as the wildland-urban interface, face the greatest wildfire risk due to the increased potential for ignition.

The frequency of wildfires for an area depends largely on the age of vegetation. During the initial years of renewed vegetation, the chance of a wildfire will be less as younger vegetation will have higher moisture content and are less combustible. As the vegetation ages, dead and dying brush accumulate, building up fuel and creating high risk conditions for large-scale wildfires. Generally, wildfires occurrence is cyclical, with small fires occurring on an annual basis and large-scale fires occurring every 10 years.

(c) Topography

Topography is a critical factor during fire fighting efforts since slope conditions can affect both fire spread and accessibility. The steeper the slope, the faster a wildfire will travel. Fires will usually travel uphill (in the direction of the ambient wind) and create updraft conditions that can accelerate the spread of fire. In addition, uphill fires can preheat fuel further up the hill due to the rising smoke and flames. Steep slopes can also impede access for fire fighting crews and delay fire suppression efforts.

The project site is located in an area characterized by rolling hills with the majority of slopes averaging less than 25 percent. However, due to the presence of slopes in excess of 25 percent, the County designates areas of the site as being within a County Hillside Management zone.

3. PROJECT IMPACTS

a. Thresholds of Significance

For the purpose of this analysis, impacts with regard to fire services and hazards are considered significant if:

- The project's fire service demand will not be adequately served by existing and proposed facilities and improvements;
- The project would not provide adequate emergency access to the project site;
- The project would result in inadequate response times for project residents;

- The project would expose the general public to uses which pose substantial risks of fire hazard;
- The project is located in a high fire hazard area; or
- The project would not comply with applicable codes and regulations regarding fire protection (i.e., road access, fire suppression systems, fire flow requirements).

b. Methodology

The analysis for the project's potential impacts on fire protection services was evaluated based on the LACoFD's ability to provide fire protection service to the project site. In addition, the analysis considered whether the project would conform with applicable fire protection requirements and standards such as those relating to the Developer Fee Program, road access, emergency response times, fire protection systems, and fire flows. Mitigation measures provided in the analysis are based on information provided by the LACoFD in their correspondence letters, dated October 8, 2004 and December 21, 2004, the Conditions of Approval dated October 15, 2008, and via email communication with the LACoFD Planning Division on May 27, 2009.

The analysis for the project's potential impacts relating to wildfire hazards is based on the project's fire zone designation and compliance with Fuel Modification Plan requirements.

c. Impact Analysis

(1) Fire Protection Service

At full buildout, the project would result in the development of 1,260 single-family residential lots and would generate approximately 4,158 new residents. The project's residents would increase the demand for LACoFD staffing, equipment, and facilities. As indicated above, the LACoFD has indicated that additional manpower, equipment, and facilities are needed in the area now. The proposed project would increase this need potentially resulting in deficiencies in fire service.

As described above, the project would be required to pay fees pursuant to the Los Angeles County Fire Department's Developer Fee Program, which would be used toward land acquisitions, facility improvements, and partial funding of new equipment. The Developer Fees are adjusted annually to ensure that adequate levels of fire protection service are maintained. It is expected that these fees would be sufficient to off-set project demand on LACoFD services. Importantly, the Developer Fee Program has helped fund improvements in the area that would serve the project site, particularly future Fire Station 128, to be located at 28450 Whites Canyon

Road, approximately 0.72 mile from the site. This station is planned to be operational by 2010. Additionally, once residential units are occupied, the project would generate annually recurring revenue to the County's General Fund in the form of taxes and other miscellaneous charges (e.g., sales tax, property tax, utility users tax, library fees, etc.). A portion of such revenue would be used to address costs associated with demand for LACoFD operations and staffing. The allocation of revenue to a specific municipal service is determined through the County's budgeting process by the County Board of Supervisors. While general fund revenues have historically supported adequate levels of fire protection services in the area, if sufficient funding for LACoFD services is not maintained by the County, a potentially significant impact could occur.

Emergency access to the proposed site would be provided primarily via the off-site extension of Whites Canyon Road, which would connect from Plum Canyon on the west (through Tract Map No. 46018) to the southeast and through the project site as Skyline Ranch Road, ultimately connecting to Sierra Highway north of its existing intersection with Adon Avenue. Internal access within the project site would be provided via the project's internal residential streets. All project roadways would be constructed to meet the requirements (i.e., minimum street width, turning radii, slope, etc.) of the LACoFD. Mitigation measures, which are required to be implemented as part of project approval, are proposed to ensure that roadways would be compliant with the above requirements.

As indicated above, the Fire Station 107 is located approximately one mile from the project site, and would provide primary response to the project if Fire Station 128, located approximately 0.75 mile from the site, is not completed and operational prior to project occupancy. Once operational, Fire Station 128 would replace Fire Station 107 as the primary responder to the site. With Fire Station 107 and the future Fire Station 128 both located within approximately one mile of the project site, it is expected that first-due response distance and times for the project would be more than adequate.

(2) Wildfire Hazard

The project does not propose any uses involving the handling of extremely flammable materials, which could increase the potential for fire incidents and/or result in serious fire incidents. Fire incidents that could result during operation of the project would be typical of those occurring for residential uses, such as kitchen/house fires, rubbish fires, car fires, and electrical fires. The project would not expose residents to uses which pose a substantial fire risk, and therefore impacts would be less than significant.

As indicated above, the project is located within a VHFHSZ. However, the project would be subject to the requirements for a VHFHSZ set forth in the Los Angeles County Fire Code. These requirements include the preparation of a Fuel Modification Plan, a landscape plan,

and an irrigation plan. Fuel modification plans vary in complexity and reflect the fire history of the area, amount and type of vegetation, arrangement of the fuels, topography, local weather patterns, and construction, design, and placement of structures. Implementation of the project would require a Fuel Modification Plan consistent with the LACoFD's Fuel Modification Plan Guidelines. At minimum, the Fuel Modification Plan Guidelines would require that the project include a fuel modification zone around each on-site structure. The width of the fuel modification zone and additional site specific requirements would be determined by the LACoFD prior to the issuance of any grading permit. A Preliminary Fuel Modification Plan, depicting fuel modification and brush clearance areas is shown on Figure 4.M-2, Preliminary Fuel Modification Plan, on page 4.M-11. To ensure that the proposed project would be compliant with the Fuel Modification Plan Guidelines and LACoFD requirements, Mitigation Measure 4.M-2 is proposed below for incorporation into the project. Compliance with this measure would ensure that the proposed project is consistent with the purpose and requirements of the guidelines.

Additionally, the project would comply with other applicable requirements including the County Fire Code, Building Code, and California Fire Code, and Conditions of approval from the LACoFD regarding site access, fire hydrant spacing, water-storage, building materials, and fire flow. Based on the study conducted by Sikand Engineering, the proposed water system could deliver fire flow of 1,250 gpm at 20 pounds per square inch (psi) for a duration of two hours in compliance with LACoFD requirements for residential uses. Fire flow requirements for the proposed school site are preliminarily estimated to be 5,000 gallons per minute at 20 psi for a duration of 5 hours from 3 hydrants. This requirement for the school site may be reduced at the time a detailed site plan for the proposed elementary school is submitted by Sulphur Springs School District. The water system would also be designed to meet additional fire flow requirements associated with the school site. Therefore, the project would provide sufficient fire flows. The project would also be equipped with design features and fire suppression equipment including an automatic fire suppression system, fire alarm system, and evacuation life safety system. Project plans would be reviewed by LACoFD prior to the issuance of building permits to ensure that the project would be compliant with applicable fire codes, regulations, and conditions. Additionally, the proposed mitigation measures would ensure that such fire codes, regulations, and conditions are adhered to.



Figure 4.M-2
Preliminary Fuel Modification Plan

4. MITIGATION MEASURES

To mitigate the project's impacts regarding fire protection and fire hazards, the following mitigation measures, which may be subject to further refinement from LACoFD, are proposed:

a. Fire Protection Services

- 4.M-1(a)** *Prior to issuance of building permits, the applicant shall pay fees to support the Los Angeles County Fire Department (LACoFD) pursuant to the LACoFD Developer Fee Program.*
- 4.M-1(b)** *Development of the project shall occur in accordance with all applicable code and ordinance requirements for construction, access, water mains, fire flows, and hydrants.*
- 4.M-1(c)** *Project buildings shall adhere to all applicable State and County Fire and Building Codes.*
- 4.M-1(d)** *The project shall provide adequate emergency access. Access roads shall:*
- *Provide a minimum width of 20 feet;*
 - *extend to within 150 feet of any exterior portion of all structures;*
 - *meet the minimum width requirements prescribed by the LACoFD;*
 - *be constructed with an all-weather surface;*
 - *have a minimum of 10 feet of brush clearance on each side;*
 - *have an unobstructed vertical clearance clear-to-sky with the exception of protected tree species;*
 - *have a vertical clearance of 13.5 feet when protected tree species are overhanging; and*
 - *have a turning radii of no less than 32 feet.*
- 4.M-1(e)** *A turning area satisfactory to the LACoFD shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.*
- 4.M-1(f)** *All fire lanes must be a minimum of 26 feet in width (clear-to-sky) and marked "NO PARKING—FIRE LANE."*

4.M-1(g) *All access devices and gates for the proposed school shall comply with California Code of Regulations, Title 19, Article 3.05, including providing a minimum paved access width of 26 feet for circulation purposes.*

4.M-1(h) *Proposed traffic calming measures shall be submitted to the LACoFD for review and approval.*

4.M-1(i) *All fire hydrants shall:*

- *Measure 6"x4" x 2-1/2" brass or bronze, conforming to current AWWA standard C503 or approved equal;*
- *On-site hydrants shall be installed a minimum 25 feet from a structure or protected by a two- hour rated firewall;*
- *Fire hydrants shall be installed, tested, and accepted prior to construction;*
- *Vehicular access to fire hydrants shall be provided and maintained serviceable throughout construction.*

b. Wildfire Hazard

4.M-2 *Prior to the issuance of any grading permit, a Fuel Modification Plan, consistent with the Fuel Modification Plan Guidelines, shall be submitted for review and approval by the Department of Regional Planning and the Forestry Division of the LACoFD to reduce the threat of wildfire. The Fuel Modification Plan shall require that applicant or homeowners association provide and maintain fuel modification and brush clearance zones around each on-site structure. Said plan shall be approved by the Forestry Division prior to completion of final landscape plans.*

Please also see Mitigation Measures 4.M-1(b), 4.M-1(c), and 4.M-1(d).

5. CUMULATIVE PROJECT IMPACTS

Development associated with growth within the service boundaries of the LACoFD, including the proposed project and the related projects described in Chapter 3.0, Cumulative Impact Analysis Methodology, would combine to generate a demand for additional fire protection services. As with the proposed project, most of the related projects would be subject to discretionary review, including an evaluation of the adequacy of fire services and the need for

mitigation measures. The proposed project and related projects would be required to fund their fair share to support increases in demand for services through the LACoFD Developer Fee Program. With payment of these fees and the provision of other project-by-project mitigation, the proposed project, in conjunction with other past, present, or reasonably foreseeable future projects, would not result in a significant cumulative impact related to the provision of fire protection services.

With implementation of Mitigation Measure 4.M-2 and compliance with applicable fire requirements, the project would not contribute to a cumulative increase in fire hazards for the project area. Furthermore, it is expected that future projects would be subject to LACoFD review to ensure that appropriate fire hazard risks are reduced. Therefore, the proposed project would not result in a significant cumulative impact related to fire hazards.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With payment of LACoFD Developer Fees and implementation of the above mitigation measures, project-related and cumulative impacts on fire services would be less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS N. EDUCATION

1. INTRODUCTION

The project site is within the attendance boundaries of the Sulphur Springs School District (SSSD), Saugus Union School District (SUSD), and William S. Hart Union High School District (HUHSD). This section evaluates whether these districts have sufficient capacity available within existing and proposed public schools to accommodate students generated as a result of the proposed project. This section addresses the potential for students generated by the proposed project to require to construction or expansion of schools. Interim impacts on public schools prior to completion of the elementary school that would serve the Skyline Ranch development are also addressed, as well as cumulative impacts. This section is based, in part, on information provided by the SSSD,¹ the SUSD,² and the HUHSD.³

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Funding

Funding mechanisms to support construction of new public elementary, intermediate, and high school facilities are provided by various State and local sources.⁴

¹ Diane Tennen, Assistant Superintendent, Business, Sulphur Springs School District, correspondence dated January 5, 2005; updated information provided by Carol Greenwood, Sulphur Springs School District via email correspondence April 15, May 19, 2009.

² Harold J. Pierre, P.E., Director of Facilities, Saugus Union School District, correspondence dated January 11, 2005 updated information provided by Harold J. Pierre, Saugus Unified School District via email correspondence May 19, 2009.

³ Lorna Baril, Business Services, William S. Hart Union High School District, correspondence dated February 25, 2005; Updated information provided by Lorna R. Baril, Senior Administrative Assistant, William S. Hart Unified School District via email May 2009.

⁴ The majority of information presented in this subsection is based on information contained in the Santa Clarita Valley General Plan Technical Background Report, February 2004; Sulphur Springs Union School District School Facilities Needs Analysis and Determination of Permissible Alternative School Facility Fees, February 2009; School (Footnote continued on next page)

The major State funding program for providing permanent school facilities is the Leroy F. Green State School Building Lease-Purchase Law of 1976, which is funded by State bonds. Senate Bill 50 (SB 50) enacted on November 4, 1998, established the School Facility Program which provided school bond construction funding of approximately \$9.2 billion and established a new program to provide state funding for school facilities. The legislation states that local agencies are restricted, with but a few exceptions, from exacting fees or other requirements to mitigate the effects of new land development on school facilities beyond the fee amounts authorized by SB 50. The State Allocation Board is responsible for determining the allocation of State resources used for the construction and modernization of local public schools. The State Allocation Board increases the base developer fee rates biennially. The statutory fees (known as Level 1 fees) approved by the State Allocation Board on January 30, 2008, are \$2.97 per square foot (sq.ft.) of new residential and \$0.47 per sq.ft. for commercial and industrial development. Non-unified school districts share the maximum authorized development fee based on agreements between the districts.

School districts are eligible to increase fees equal to one-half the cost of providing new school facilities (or Level II fees) if they meet two of the four following requirements set forth in Government Code Section 65995.5(b)(3):

1. The school district is an elementary school district with a substantial portion of its students enrolled on a multi-track year-round calendar;
2. The school district has placed at least one general obligation bond measure on the ballot in the last four years, and the measure received at least 50 percent plus one of the votes cast;
3. The school district has issued debt or incurred obligations for capital outlay in an amount equivalent to the percentage of its bonding capacity specified in Government Code Section 65995.5(b)(3)(C); and/or
4. At least 20 percent of the teaching stations within the school districts are relocatable classrooms.

With Level II fees, it is assumed that the State, through the issuance of statewide general obligation bonds, will provide the other half of the cost of new schools and, therefore, fully fund new construction.

Facilities Needs Analysis Saugus Union School District, Dolinka Group, Inc., July 16, 2008; and School Facilities Need Analysis William S. Hart Union High School District, February 11, 2009.

Developer Fee Justification Studies have been prepared and adopted by the SSSD, the SUSD, and the HUHSD. All three districts currently collect Level II fees. The SSSD collects \$3.40 per sq.ft. of residential development. The SUSD and HUHSD fees are \$3.84 and \$2.73 per sq.ft. of residential development, respectively. In certain instances, mitigation agreements and community facilities districts (CFDs) are also used by the districts to help secure school construction funding. SB 50 states that the maximum fee amounts (i.e., Level I or Level II fees) are “deemed to provide full and complete school facilities mitigation” for purposes of CEQA.⁵

Other funding sources for the districts include Proposition 47 and local bond measures, Measure V and Measure E. Proposition 47, approved in November 2002, established \$13.5 billion in 2002 and 2004 for state school facilities bond construction funding. Measure V, approved in 2001, provides \$158 million in school bonds to allow the HUHSD to build new schools and renovate older campuses in the District. Local bond proceeds and developer fees are expected to provide funding for construction and modernization of HUHSD facilities identified in the District’s 10-year facility plan.⁶ Measure E, approved in June of 2002, provides additional funding for several construction and improvement projects within the SUSD.⁷ These projects are identified in the SUSD’s Facility Master Plan. No recent local bond measures have been approved for the SSSD.

(2) Interdistrict Transfers

Students who reside in one district may choose to attend school in another district by applying for an interdistrict permit from the receiving school district, per Education Code Sections 46600-46611 and 48300-48315. Such an agreement may be considered for approval by the receiving district if the parent works within the district, if a sibling attends a school within the district, if the family will be moving into the district, or based on other considerations accepted by the district. Interdistrict permits are granted for one year only and therefore, must be renewed annually.

(3) Site Selection

The criteria for development of a school site are contained in the California Code of Regulations, Title 5, commencing with Section 14001 and the *Guide to School Site Analysis and Development* (California Department of Education, School Facilities Planning Division, 2000 Edition). Such considerations for the suitability of a school site include the following:

⁵ California Government Code, Section 65996(b).

⁶ Website, <http://www.hart.k12.ca.us/news/Publications/bond.htm>.

⁷ Website, <http://www.saugus.k12.ca.us/home>.

adequate site size; a location within the proposed attendance area; and the ability to avoid significant traffic, earthquake, flooding, air toxic emission sources, hazardous waste generators, and other environmental hazards.

b. Environmental Setting

As previously noted, the project site is within the attendance boundaries of the SSSD, SUSD, and HUHSD. Existing and future enrollment and facilities within these districts are described below.

(1) Sulphur Springs School District









The SSSD is comprised of nine schools that serve kindergarten through sixth grade students, including the newly developed Golden Valley Elementary, located south of the Antelope Freeway near Golden Valley Road. Golden Valley Elementary has a planned capacity for 500 students and opened in August 2008. The SSSD is located in the northeastern portion of the Santa Clarita Valley. Enrollment within the SSSD for the 2008-2009 school year is approximately 5,725 students. The SSSD currently operates above capacity and approximately 40 percent of the classrooms are temporary portable facilities. To relieve current overcrowded conditions within the SSSD and help meet future demand in the area, a new school is planned within the district. Spring Canyon Elementary, proposed for a site north of Antelope Valley Freeway and east of Vasquez Canyon Road, is planned for a capacity for 700 students with no scheduled date of operation.⁸

Depending on their location within the project site, students would either be within the attendance boundaries of Mint Canyon Elementary School or Leona Cox Elementary School. These facilities, located to the east and south of the site, respectively, are shown on Figure 4.N-1, Public Schools in the Project Vicinity, on page 4.N-5. As shown on Table 4.N-1, Existing Enrollment and Capacity of Schools Serving the Project Site (2008-2009), on page 4.N-6, there is currently available capacity at both elementary schools.

⁸ *Diane Tennen, Assistant Superintendent, Business, Sulphur Springs School District, correspondence dated January 5, 2005; Carol Greenwood, Administrative Secretary, Business, Sulphur Springs School District, correspondence dated April 15, 2008; Sulphur Springs Union School District School Facilities Needs Analysis and Determination of Permissible Alternative School Facility Fees, February 2009; and <http://www.ed-data.k12.ca.us> (accessed April 28, 2008).*

LEGEND

1. Leona Cox Elementary
2. Skyblue Mesa Elementary
3. Plum Canyon Elementary
4. Bouquet Canyon Elementary Replacement (Proposed)
5. Mint Canyon Elementary
6. Emblem Elementary
7. Monteverde Elementary (Proposed)
8. Skyline Ranch Elementary (Proposed)
9. Tesoro del Valle Elementary
10. West Creek Elementary (Proposed)
11. Arroyo Seco Junior High
12. Sierra Vista Junior High
13. Canyon High
14. Saugus High
15. Rancho Pico Junior High
16. West Ranch High

-  City of Santa Clarita Boundary
-  Angeles National Forest
-  School District Boundary
-  Elementary School - Public
-  Junior High School - Public
-  High School - Public
-  Elementary School - Proposed
-  Project Site Skyline Ranch

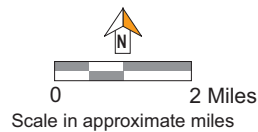
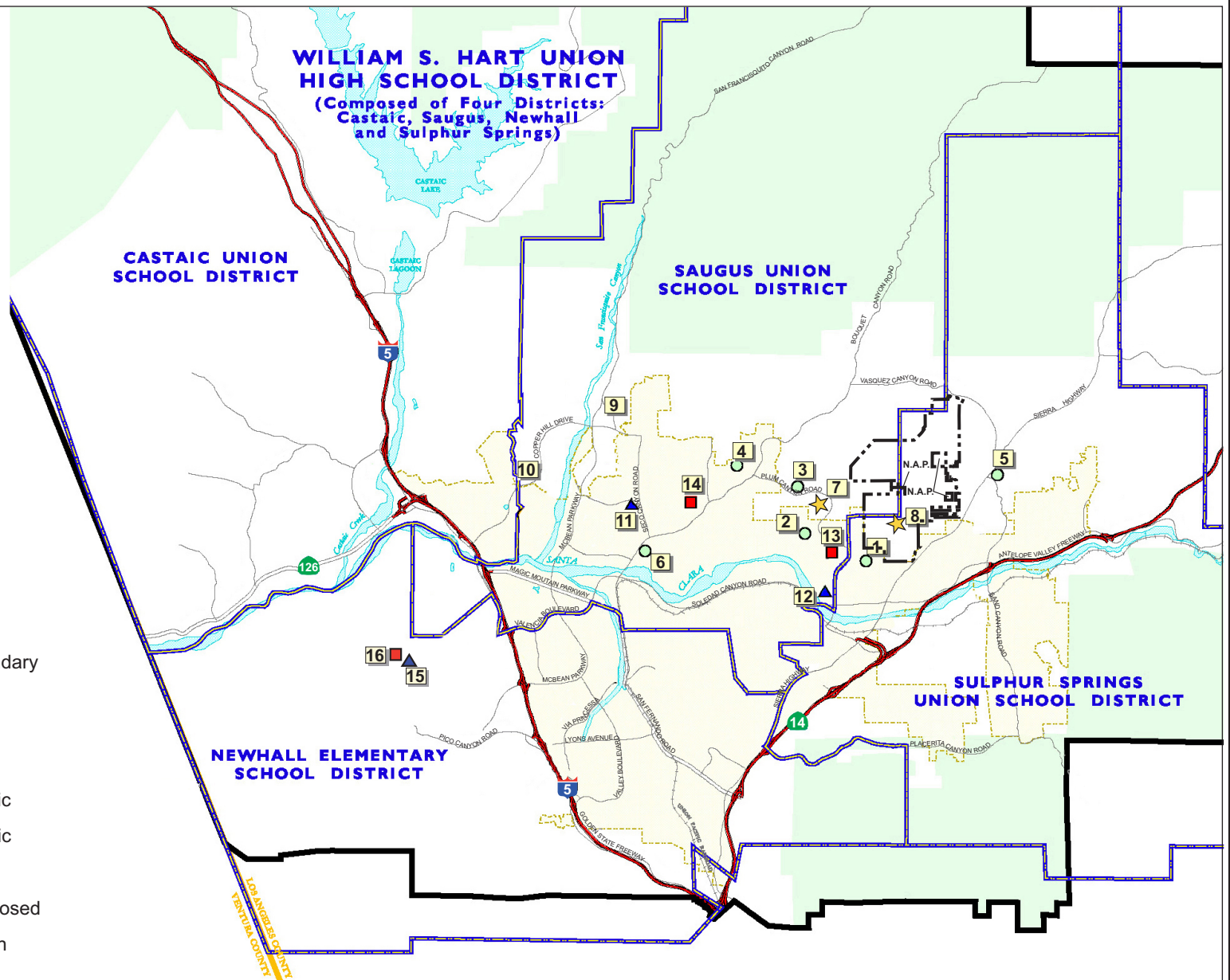


Figure 4.N-1
Public Schools in the Project Vicinity

Source: Santa Clarita Valley General Plan, Technical Background Report, 2004 and PCR Services Corporation, 2008.

Table 4.N-1

**Existing Enrollment and Capacity of Schools
Serving the Project Site (2008-2009)**

School	Design Capacity/Total Capacity^a	Enrollment	Remaining Design Capacity (Above Capacity)	Remaining Total Capacity (Above Capacity)
Sulphur Springs School District				
Mint Canyon Elementary School 16400 Sierra Highway Canyon Country	500	487	13	13
Leona Cox Elementary School 18643 Oakmoor Street Canyon Country	500	538	0	(38)
Saugus Union School District				
Emblem Elementary School 22635 Espuella Drive Saugus	950	301	649	649
Skyblue Mesa Elementary School 28040 Hardesty Street Canyon Country	875	472	403	403
Hart Union High School District				
Arroyo Seco Junior High School 27171 Vista Delgado Drive Valencia	1,431	1,243	188	188
Saugus High School 21900 Centurion Way Saugus	2,511	2,531	0	(20)

^a Includes temporary portable classrooms.

Source: Sulphur Springs School District, Saugus Union School District, William S. Hart Union High School District, and PCR Services Corporation, Inc., 2004 and 2009; and <http://www.ed-data.k12.ca.us>.

By fall 2011, the projected enrollment for Mint Canyon Elementary School is expected to increase to approximately 820 students, exceeding the design capacity of this school. The projected enrollment at Leona Cox Elementary School is expected to increase to approximately 585 students.⁹

⁹ Carol Greenwood, Administrative Secretary, Business, Sulphur Springs School District, correspondence dated April 15, 2008.

(2) Saugus Union School District

As shown on Figure 4.N-2, Elementary School District Boundaries and Proposed School Site, on page 4.N-8, a portion of the project site is located within the SUSD boundaries. The SUSD is comprised of 15 schools that serve kindergarten through sixth grade students within the northern portion of the Santa Clarita Valley in northern Los Angeles County. Enrollment within the SUSD for the 2008-2009 school year was approximately 10,370 students, which exceeded the District wide design facility capacity of 8,935 students.¹⁰ Excess students are accommodated by temporary portable classrooms which presently comprise approximately 35 percent of all classrooms throughout the SUSD, which temporarily increase the District facility capacity to 13,060 students.¹¹ To provide for current and projected enrollment within the SUSD, two new elementary schools (West Creek, Monteverde and Bouquet Canyon), are proposed. The location of these future school sites is shown on Figure 4.N-1. Monteverde Elementary, to be located west of the project site in approved Tract Map 46018, is planned for development but has no scheduled opening date.¹² West Creek Elementary is scheduled to be completed in August 2009 and will be located north of the I-5 Freeway and Copperhill Road in the West Creek/West Hills community. The new Bouquet Canyon Elementary will replace the existing Bouquet Canyon Elementary school (which is comprised of portable facilities to accommodate 600 students) and will provide permanent facilities with a design capacity of 675 students. The replacement school would be constructed adjacent to the existing Bouquet Canyon Elementary, with the expected completion date for the new school yet to be determined.¹³

According to the SUSD, a portion of the project site is within the attendance boundary of either Skyblue Mesa and/or Emblem elementary schools, depending upon available capacity.¹⁴ These schools are shown on Figure 4.N-1 on page 4.N-5. As indicated in Table 4.N-1 on

¹⁰ Does not include facility capacity of temporary portable classrooms; *School Facilities Needs Analysis for Saugus Union School District, Dolinka Group, Inc., July 13, 2007* and <http://www.saugus.k12.ca.us> (accessed April 28, 2008); updated information provided in the *School Facilities Needs Analysis for Saugus Union School District, Dolinka Group, Inc., July 16, 2008*.

¹¹ Based on total of 194 temporary portable classrooms and 365 permanent classrooms. Email information provided by Harold J. Pierre, Director of Facilities, Saugus Union School District, April 2009.

¹² Email information provided by Harold J. Pierre, Director of Facilities, Saugus Union School District, April 2009.

¹³ *Ibid.*

¹⁴ Although Plum Canyon Elementary is located closer to the project site than Emblem Elementary, Plum Canyon is currently over capacity and cannot accommodate additional students.

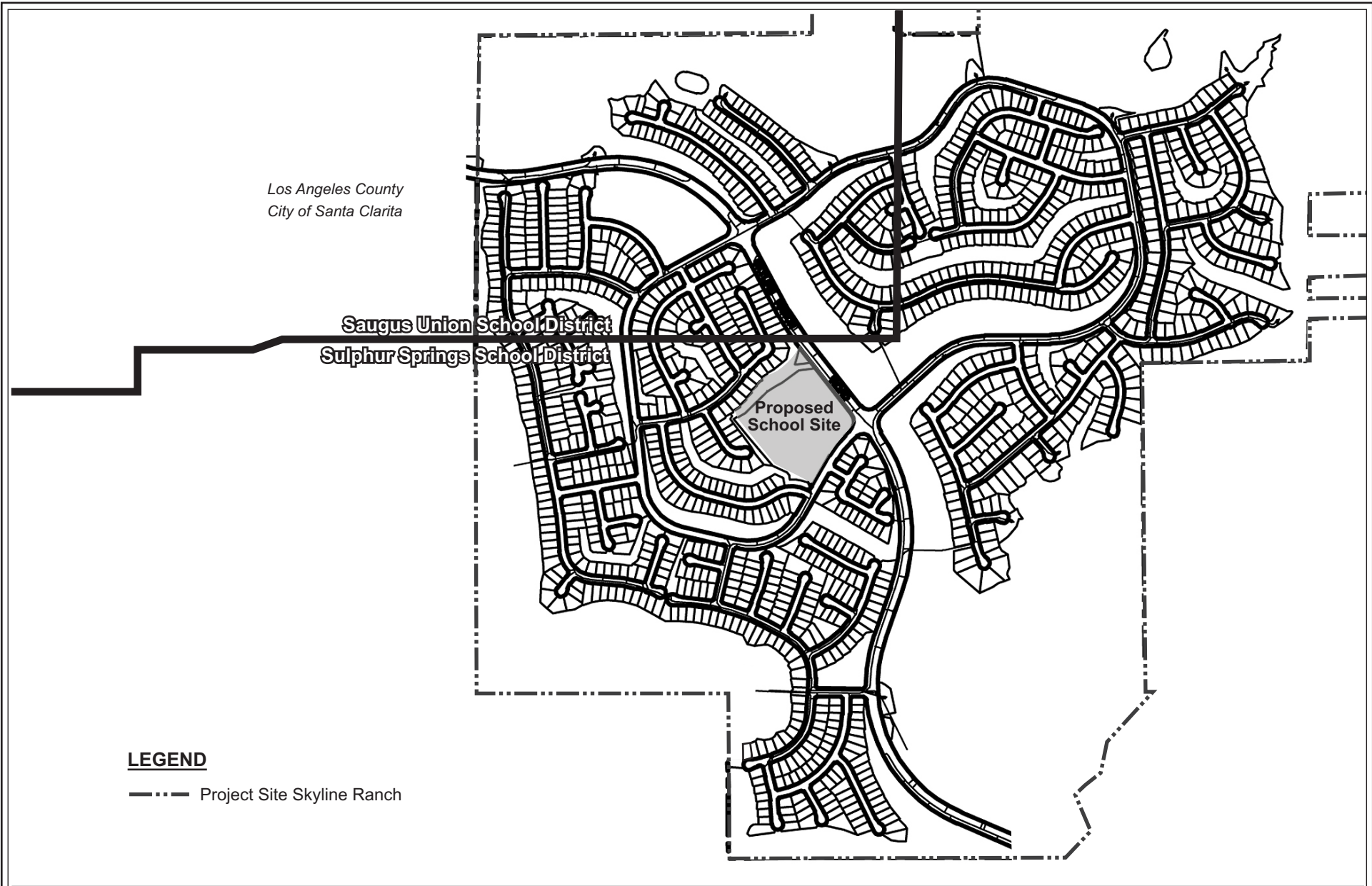


Figure 4.N-2
 Elementary School District Boundaries
 and Proposed School Site



Source: PCR Services Corporation, Sikand Engineering, Sulphur Springs School District, Saugus Union School District, Santa Clarita Valley General Plan Technical Report

page 4.N-6, Skyblue Mesa and Emblem have available capacity. When the Monteverde Elementary school is constructed, students within the project site and SUSD attendance boundaries would attend this school. By fall 2011, the projected enrollment for Skyblue Mesa Canyon Elementary School and Emblem Elementary School would increase to approximately 572 and 508 students, respectively. The enrollment projection would exceed design capacity at Emblem Elementary. However, modernization is currently underway to increase capacity at Emblem Elementary.¹⁵ Additional discussion of future SUSD conditions is provided under the cumulative impacts discussion below.

(3) William S. Hart Union High School District

The William S. Hart Union High School District (HUHSD) is located in the Santa Clarita Valley and is comprised of six high schools (grades 9 through 12), and six junior high schools (grades 7 and 8), two alternative high schools, one continuation high school, and one charter school (serving grades 7 through 12). Enrollment within the HUHSD for the 2008-2009 school year was approximately 24,047 students.¹⁶ Excess students are housed in temporary portable classrooms. However, per the HUHSD, these temporary classrooms should not be included in the capacity analysis.¹⁷ To help accommodate projected demand, a new high school, Castaic High School, is planned for development. This high school would be generally located east of the I-5 Freeway and north of Lake Hughes Road, and will serve approximately 2,600 students. A final site for this school has not been identified, and there is currently no schedule timeline for the opening of this facility.¹⁸

According to the HUHSD, the project site is within the attendance boundaries of Arroyo Seco Junior High and Saugus High School.¹⁹ These facilities are shown on Figure 4.N-1. As shown on Table 4.N-1, Existing Enrollment and Capacity of Schools Serving the Project Site (2008-2009), Arroyo Seco Junior High School is currently operating below design (or permanent) capacity, with a remaining total capacity for 188 students. Arroyo Seco Junior High School and Saugus High School were recently expanded in Summer 2007. However, Saugus High School is still currently operating beyond its capacity, exceeding the design capacity of the school by 20 students. Saugus High School is currently in the process of developing a new theatre building which would provide an addition 96 permanent classrooms to the high school.

¹⁵ Harold J. Pierre, *Op, Cit.*, correspondence dated February 1, 2008.

¹⁶ *School Facilities Needs Analysis William S. Hart Union High School District, February 2009.*

¹⁷ *Ibid.*

¹⁸ Lorna Baril, *Business Services, William S. Hart Union High School District, correspondence dated February 25, 2005 and April 16, 2008.*

¹⁹ *Although Sierra Vista Junior High School and Canyon High School are located closer to the project site, these schools are currently over capacity and cannot accommodate additional students.*

However, the schedule of construction for that new theatre building is still to be determined. Thus, demand currently exceeds capacity at Saugus High School.

3. PROJECT IMPACTS

a. Thresholds of Significance

A significant impact on education facilities would occur if the proposed project causes direct and indirect changes in the environment that would potentially result in the following future condition:

- Overcrowding of schools in the absence of funding for construction of new or expanded school facilities or other strategies for addressing capacity constraints.

b. Methodology

The analysis of potential impacts on public school facilities is based on an assessment of whether the schools within the serving districts can accommodate additional students generated as a result of the development of 1,260 single-family residential units. More specifically, the ability of the districts to accommodate demand is based on existing and projected enrollment, available capacity, and new school development. The number of students generated from the proposed project was estimated based on student generation rates provided by each of the school districts as set forth in their respective school facilities needs analyses. Since the proposed project includes the applicant's voluntary provision of an elementary school site that would be developed by the SSSD with occupancy expected by 2012 to accommodate 750 students, this analysis also looks at potential interim impacts on existing elementary schools within the SSSD and SUSD prior to the completion of this facility. Interim impacts are based on a conservative assumption that 200 units would be built per year for two years (2010 through 2011) for a total interim impact of 400 units.

c. Impact Analysis

As shown on Figure 4.N-2 on page 4.N-8, the proposed project includes 1,260 single-family residential units and an 11-acre school site. As described in Chapter 2.0, Project Description, the site would be voluntarily conveyed to the SSSD who would develop the site with an elementary school with a capacity to accommodate up to 750 kindergarten through sixth grade students. As proposed, the SSSD would develop, operate, and maintain the school under a Mitigation Agreement with the applicant. The construction of the school is projected for 2012 and would be funded under the terms of the proposed Mitigation Agreement with the SSSD.

(1) Sulphur Springs School District

As shown on Figure 4.N-2, the majority of the proposed single-family residential lots (849 dwelling units) are located within the SSSD. As shown in Table 4.N-2, Estimated Project Student Generation (2016-2017), on page 4.N-12, approximately 305 elementary school students within the SSSD would be generated by the proposed project. These students would be accommodated by the proposed SSSD elementary school, which has a proposed capacity of 750 students. In addition to voluntarily providing SSSD with a school site, the applicant could also be requested to pay developer fees to the SSSD. These Level II fees are currently \$3.40 per sq.ft. for residential development. Although payment of developer fees are deemed adequate to provide full and complete mitigation²⁰ under CEQA, the proposed Mitigation Agreement between the applicant and the SSSD would further provide for the development of a new elementary school that would relieve current overcrowded conditions while accommodating other projected growth throughout SSSD. Based on the above, impacts on education facilities within the SSSD would be less than significant.

Since the proposed elementary school would not be developed until 2012, and project occupancy could occur by 2010-2011, interim impacts on the SSSD are assessed based on the development of 400 units by 2011. As presented in Table 4.N-3, Estimated Interim Elementary School Student Generation (2011), on page 4.N-13, approximately 37 elementary students could be generated prior to the construction of the proposed elementary school. These students would attend either Leona Cox Elementary School or Mint Canyon Elementary School.²¹ Based on 2011 projections provided by the SSSD, Leona Cox would have an available capacity for 115 students and Mint Canyon would be above capacity by 120 students. Thus the 34 elementary students would most likely attend Leona Cox Elementary School prior to the construction of the proposed elementary school. Leona Cox is also closer to the project site than Mint Canyon (approximately 0.5 mile from the project boundary).

(2) Saugus Union School District

As shown on Figure 4.N-2, approximately 411 dwelling units are located within the SUSD. As shown in Table 4.N-2, approximately 178 elementary school students generated by the proposed project would be located within the SUSD. Once the elementary school is constructed within the project site, students will most likely attend this SSSD facility, since it would be the closest elementary school and within walking distance. In order to attend a school outside of the SUSD boundaries, parents would apply for an inter-district permit from the SSSD.

²⁰ *California Government Code, Section 65996(b).*

²¹ *Since Leona Cox is the closest elementary school to the project site (approximately 0.5 mile from the project boundary), most students generated from the proposed project would most likely request to attend this school.*

Table 4.N-2

Estimated Project Student Generation (2016-2017)

School District	Single-Family Units	Student Generation Rate ^a	Number of Students
Sulphur Springs	849	0.359	305
Saugus Union	411	0.4329	178
Wm. S. Hart Jr. High	1,260	0.1270	160
Wm. S. Hart Sr. High	1,260	0.2386	301
Total			944

^a Student generation rates derived from *Student Generation Rates for Single Family Units; Table A, Sulphur Springs Union School District School Facilities Needs Analysis and Determination of Permissible Alternative School Facility Fees (February 2009); Table 1, Saugus Union School District School Facilities Needs Analysis (July 16, 2008); and William S. Hart Union High School District School Facilities Needs Analysis, February 11, 2009.*

Source: PCR Services, Sikand Engineering, Sulphur Springs School District, Saugus Union School District, William S. Hart Union High School District, 2009.

The SSSD has indicated that priority to attend this new school would be given to students generated by the project but outside the SSSD attendance boundary.²² The proposed 750-student-capacity elementary school would have more than sufficient capacity to house the 483 elementary students that would be generated by the proposed project.

Prior to the construction of the elementary school within the project site, students within the boundaries of the SUSD would attend either Emblem Elementary School or Skyblue Mesa Elementary School. The location of these schools is shown on Figure 4.N-1. Based on 2011 projections provided by the SUSD, Skyblue Mesa would have a future available capacity of 128 students and Emblem Elementary would exceed forecasted future capacity by 153 students. This future demand is expected to be met through the expansion of the existing facility and the continued use of portable classrooms. Nonetheless, the available capacity at Skyblue Elementary would be adequate to accommodate the 127 students generated from the proposed project and it is expected that some students may request an inter-district permit to attend Leona Cox Elementary within the SSSD. Furthermore, if Monteverde Elementary is constructed prior to 2010, additional capacity would be provided for 750 students which could accommodate growth from the proposed project. Therefore, interim impacts would be less than significant.

The applicant would pay developer fees for those approximately 411 units located within the SUSD. These Level II fees will be assessed at \$3.84 per sq.ft., or the current fee rate in place at the time. Payment of this fee is deemed adequate under CEQA to provide full and complete

²² Diane Tennen, Sulphur Springs School District, telephone conversation February 14, 2005.

Table 4.N-3

Estimated Interim Elementary School Student Generation (2011)

School District	Single-Family Units	Student Generation	
		Rate ^a	Number of Students
Sulphur Springs (Grades K–6)	102	0.359	37
Saugus Union (Grades K–6)	298	0.4329	129
Total	400		166

^a *Sulphur Springs Union School District School Facilities Needs Analysis and Determination of Permissible Alternative School Facility Fees (February 2009); Saugus Union School District School Facilities Needs Analysis (July 16, 2008).*

Source: PCR Services, Sulphur Springs School District, Saugus Union School District, 2009.

mitigation. In addition, the number of students that would attend an elementary school within the SUSD would likely be much less than 178 once the new school within the project boundaries is constructed as a preference is expected for children to attend elementary school within their immediate neighborhood. Therefore, impacts on education facilities within the SSSD would be less than significant.

(3) William S. Hart Union High School District

The proposed 1,260 single-family residential development is entirely within the HUHSD. As shown in Table 4.N-2 on page 4.N-12, approximately 160 junior high students and 301 senior high students would be generated by the proposed project. These students would attend Arroyo Seco Junior High School and Saugus High School, respectively. There are currently no plans to expand Arroyo Seco Junior High School, as expansion recently occurred in Summer 2007. Therefore, projected future enrollment in combination with the 160 junior high students generated by the proposed project could exceed forecasted future capacity at this school. As discussed above, plans to develop a new theatre building are in place for Saugus High School. While, this would provide an additional 96 permanent classrooms to the school, even with this expansion, the projected future enrollment, in combination with the 301 senior high students generated by the proposed project, could exceed forecasted future capacity. Overcrowded conditions throughout the HUHSD are expected to improve with the addition of the new Castaic High School.

The applicant would pay developer fees to the HUHSD. Level II developer fees will be assessed at the current fee rate in place at the time. Payment of the fees is deemed adequate under CEQA to provide full and complete mitigation.

4. MITIGATION MEASURES

Under the provisions of SB 50, the payment of developer fees is “deemed to provide full and complete school facilities mitigation” for purposes of CEQA. The project would also include a school site for a 750-student elementary school to be developed, operated, and maintained by the SSSD.

5. CUMULATIVE PROJECT IMPACTS

a. Sulphur Springs School District

Based on information provided in the School Facilities Needs Analysis, the SSSD is projecting the construction of 1,965 additional residential units between 2009 and 2013. Of these dwelling units 15 single-family units have mitigation agreements in place to fund the construction of new schools. In addition, for the proposed project, payment of developer fees and the proposed voluntary provision of an 11-acre elementary school site would fully mitigate the project’s impacts on school facilities.²³ Therefore, impacts from the proposed project would not contribute toward cumulative impacts. The projected dwellings units without such agreements include 1,730 single-family units and 250 multi-family attached units. Based on a student generation rate of 0.359 per single-family unit, and 0.237 per multi-family attached unit, 675 students are projected within the SSSD over the next four years. The SSSD will construct two elementary schools with a combined capacity of 1,200 students. However, due to current overcrowded conditions within the SSSD, a need to fund construction of a new elementary school is identified in the School Facilities Needs Analysis. The construction of this school is expected to be funded, part, through the payment of Level II fees by new development, which would constitute full mitigation under CEQA. Based on the above, cumulative impacts on school facilities within SSSD would be less than significant.

b. Saugus Union School District

As stated in the School Facilities Needs Analysis for Saugus Union School District, the SUSD is projecting the construction of 6,203 additional residential units within its attendance boundaries between 2008 and 2012. Of these dwelling units 3,294 single- and multi-family have formed communities facilities districts (CFDs) or executed mitigation agreements to fund the construction of new schools. The projected dwellings units without such agreements include 1,642 single-family detached units and 1,267 single-family attached units. Based on a student

²³ *It should be noted that even if the school site were not provided, payment of developer fees would reduce both direct and cumulative impacts to a less than significant level.*

generation rate of 0.4329 per single-family detached unit and 0.1279 per single-family attached unit, 873 students are projected by 2012 within the SUSD boundaries where mitigation agreements are not in place. Although, the construction of three elementary schools within the SUSD would provide a combined capacity of 1,500 to 1,600 students,²⁴ SUSD has identified a capacity shortfall and the need to construct an additional elementary school. The funding of additional facilities would be provided, in part, through the payment of Level II fees by new development. Under CEQA, payment of developer fees constitutes full mitigation for impacts on schools. As describe above, the proposed project would not contribute to cumulative impacts within the SUSD with payment of developer fees. Additionally, students generated by the project are likely to attend the new elementary school within the project site and SSSD attendance boundaries. Based on the above, cumulative impacts on SUSD would be less than significant.

c. William S. Hart Union High School District

Based on information provided in the School Facilities Needs Analysis, the HUHSD is projecting the construction of 7,798 additional residential units between 2009 and 2014. Of these dwelling units, 4,409 single- and multi-family have formed communities facilities districts (CFDs) or executed mitigation agreements to fund new school facilities. The projected dwellings units without such agreements include 2,643 single-family detached units and 746 single-family attached units. Based on a student generation rates by dwelling unit type and grade level, 2,334 students would be generated by future development.²⁵ When added to the students generated from the proposed project, the number of students added to the HUHSD would increase to 2,795. The construction of Castaic-area high school will provide future capacity for 2,600 students. This facility would not be adequate to house the approximately 3,492 students that would result from current shortfall in capacity as identified by HUHSD and projected student demand. However, new development may still include additional mitigation agreements for construction of new schools, and such development would be required to pay developer fees which would constitute full mitigation under CEQA. Based on the above, cumulative impacts on school facilities within HUHSD would be less than significant.

²⁴ *The total design capacity for all three schools is from 2,100-2,200 students. The design capacity for each elementary school is as follows; West Creek Elementary School: 775 students; Bouquet Canyon School: 675 students; Monte Verde School: 650-750 students. However, as the new Bouquet Canyon School would be replacing the existing Bouquet Canyon Elementary (capacity for 600 students) , the overall increase in capacity from the new Bouquet Canyon Elementary School is actually only 75 students.*

²⁵ *Student-generation rates for junior high school 0.1270 per single-family detached unit and 0.0589 per single-family attached units. Student-generation rates for high school are 0.2386 per single-family detached unit and 0.0875 per single-family attached unit.*

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts would be less than significant with payment of developer fees and the project's voluntary provision of a school site under a proposed Mitigation Agreement with SSSD.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

O. LIBRARIES

1. INTRODUCTION

Operation of the proposed project would increase the residential population of the area and the demand for library services. The following section analyzes the project's potential impacts on library services based on input and information provided by the Los Angeles County Public Library.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Los Angeles County Code

Chapter 22.72 of the Los Angeles County Code sets forth the Library Facilities Mitigation Fee program, which requires developers of any new residential projects to pay fees to mitigate impacts on library services. Fees collected are deposited in a special library capital facilities fund for the library planning area in which a project is located in.¹ Fees are to be used solely for the financing of public library facilities, the need for which is generated directly or indirectly by a residential development project.

The fee is calculated for the number of dwelling units proposed and is adjusted annually based on the Consumer Price Index (CPI). The fee rate applied to a project is the rate in effect at the time building permits are issued. Currently, the fee rate for the project area is \$790 per dwelling unit.²

¹ Section 22.72.030 of the Los Angeles County Code establishes seven library planning areas. The project site is located in Planning Area 1: Santa Clarita Valley.

² Ibid. Fee effective July 1, 2008. Annual review of fees conducted by the County Librarian, in consultation with the County auditor-controller, and adjusted on July 1 of each year. Library Facilities Mitigation Fee available at: <http://municipalcodes.lexisnexis.com/codes/lacounty/>.

b. Environmental Setting

Library services for the project site and vicinity is provided by the Los Angeles County Public Library (the County Public Library). The County Public Library is a special fund department operating under the County Board of Supervisors. Funding for the County Public Library is derived primarily from a dedicated share of property tax revenue, with some general fund contribution, special tax revenue, and fees.

The County Public Library serves the unincorporated areas of Los Angeles County and 51 cities in 84 regional and community libraries, 4 bookmobiles, and 7 special reference/resource centers.³ The County Public Library currently has service guidelines of 2.75 items per capita for community libraries (built-out collection), and 0.5 square foot of facility space per capita. The project site is located within the service area of the Canyon Country Jo Anne Darcy Library.

(1) Canyon Country Jo Anne Darcy Library

The Canyon Country Jo Anne Darcy Library is located at 18601 Soledad Canyon Road, approximately 1.15 miles from the site. The service area for this library covers 75.66 square miles and a population of approximately 68,419.⁴ The library currently utilizes 12,864 square feet of its 17,000-square-foot facility and leases 4,136 square feet to the College of the Canyons.⁵ The library features a separate children's area with Homework Center; a periodical lounge reading area; a special young adult area; two-person reference desk; a circulation desk with four check-out stations; a copy center; a Friends of the Library Bookstore; and a meeting room with a capacity of 157 persons. Patrons at this library have public access to six online catalogs; ten Internet workstations; four Homework Center CD-ROM/ Internet workstations; and a coin-operated photocopier.⁶

The Canyon Country Jo Anne Darcy Library has a collection of 100,082 items, which include books, newspapers and magazine subscriptions, audiovisual collections (books on tapes), and video recordings (DVDs).⁷ Therefore, based on the County Public Library's guidelines of

³ Los Angeles County Public Library website, <http://www.colapublib.org>, accessed March 7, 2005 and March 8, 2007.

⁴ Personal Communication, Malaisha Hughes, County of Los Angeles Public Library, March 30, 2005. Information still current as of May 20, 2009 per telephone communication with Mosie Blow, Supervisor of Developer Fee Unit.

⁵ Ibid.

⁶ Los Angeles County Public Library website, <http://www.colapublib.org>, accessed May 18, 2009.

⁷ Written Correspondence, Malou Rubio, Head of Staff Services, County of Los Angeles Public Library, February 25, 2005; updated per telephone communication with Mosie Blow, Supervisor of Developer Fee Unit, on May 20, 2009.

2.75 items per capita and 0.5 square foot per capita, the library has an existing shortage of 88,070 items and 21,345 square feet of facility space. Operating hours for the library are Monday through Wednesday 10 A.M. to 8 P.M., Thursday and Friday 10 A.M. to 6 P.M., and Saturday 10 A.M. to 5 P.M. Staffing at this library includes librarians and administrative staff. Special programs at the library include toddler storytime, preschool storytime, and a Homework Center.⁸

3. PROJECT IMPACTS

a. Thresholds of Significance

For this analysis, impacts on recreational facilities and parks are considered significant if:

- The project includes or would require the construction of new or physically altered library facilities which would have an adverse impact on the environment;
- The proposed project would result in a substantial decrease in library resources (i.e., items, facility space), which could not be offset by the payment of library impact fee requirements pursuant to the Los Angeles County Code (LACC).

b. Methodology

The analysis of the project's potential impacts on library services was based on an assessment of the project's demand for library services and whether the demand would be accommodated. The project's demand for library services was based on guideline factors of 2.75 items per capita and 0.5 square foot of facility space per capita, as provided by the County of Los Angeles Public Library.

c. Impact Analysis

As discussed in Section 4.R, Population, Housing, and Employment, of this EIR, the project would result in a population of 4,158 persons. Project residents would increase the demand for library services and resources (i.e., items, facility space, and staffing). Based upon the County Library's service guidelines of 2.75 items per capita and 0.5 square foot of facility per capita, the project would generate demand for approximately 11,435 library items and 2,079 gross square feet of library space. However, as stated above, the Canyon Country Jo Anne Darcy Library currently has a deficit of 88,070 items and 21,345 square feet of library space.

⁸ Los Angeles County Public Library website, <http://www.colapublib.org>, accessed March 8, 2007.

The project would contribute to this deficit, and would further hinder the library's efforts to meet its service guidelines.

However, the project would be subject to the payment of library impact fees pursuant to Section 22.72 of the Los Angeles County Code, as described above. Based on the current fee rate of \$790 and the 1,260 proposed residential units, a total payment of \$995,400 would be required prior to the issuance of building permits. Fees paid would be used to compensate for the project's increased demand for library resources. The County Public Library has indicated that payment of fees would mitigate the project's impacts on libraries.⁹ Therefore, with the required payment of the above-described fees, impacts on libraries would be less than significant. In addition, the project would not require the construction of new facilities or physically altered library facilities that would have an adverse impact on the environment.

4. MITIGATION MEASURES

No mitigation measures would be necessary as the project would not result in significant impacts on library services with payment of Library Facilities Mitigation Fee as specified in Section 22.72 of the Los Angeles County Code.

5. CUMULATIVE PROJECT IMPACTS

The analysis of cumulative project impacts on library services is based on population projections within the geographic context of the Santa Clarita Valley as analyzed in Section 4.R, Population and Housing, of this EIR. Library services for the Santa Clarita Valley are provided by the Canyon Country Jo Anne Darcy Library, Newhall Library, Valencia Library, and the Santa Clarita Valley Bookmobile. Currently, these libraries and bookmobile have a collection of approximately 399,855 items and 41,805 square feet of facility space.¹⁰ The service areas of these facilities cover a population of 213,857 people.¹¹ Based on this information, the Santa Clarita Valley has an existing deficit of 188,252 library items and a deficit of 65,124 square feet of library space.

Based on the analysis in Section 4.R, Population, Employment and Housing, the 2017 population for the Santa Clarita Valley is projected to be 309,418 persons. This forecasted growth, which includes the proposed project in combination with other related projects, will increase the demand for library services. Therefore, forecasted population growth could result in

⁹ *Malou Rubio, Op. Cit.*

¹⁰ *Personal Communication, Malaisha Hughes, County of Los Angeles Public Library, March 30, 2005; updated from additional correspondence from Malou Rubio, provided on June 26, 2008.*

¹¹ *Los Angeles County Public Library website, <http://www.colapublib.org>, accessed March 7, 2005.*

a future deficit of library items and could worsen the existing deficit of facility space. However, as discussed, in accordance with Section 22.72 of the Los Angeles County Code, the project would be required to pay library impact fees. Similarly, any new residential projects would be subject to the same library impact fee requirements. Therefore, it is anticipated that future demand for library services would be accommodated through the payment of fees, and the project would not result in a cumulative impact on library services.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Not applicable; impacts are less than significant with payment of fees in accordance with Section 22.72 of the Los Angeles County Code.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

P. PARKS

1. INTRODUCTION

This section provides a discussion of existing parks and recreation facilities and applicable regulations, as well as an analysis of the project's potential impacts on such facilities. In general, impacts on local park facilities were analyzed within a 2-mile geographical radius of the project site, which includes the unincorporated Santa Clarita Valley and portions of the City of Santa Clarita. Impacts on regional park facilities were analyzed within the geographical context of the Southern California Association of Government's (SCAG's) North Los Angeles County Subregion.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Quimby Act (California Government Code Section 66477)

In 1965, the Quimby Act was written into state law as California Government Code Section 66477. This legislation was developed in response to the state's rapid urbanization and dwindling parks and open space. The Quimby Act allows a jurisdiction to pass an ordinance requiring developers to provide park space or the payment of park impact fees in lieu thereof, or a combination of both, as a condition to the approval of a tentative map or parcel map. Under the Quimby Act, a city or county may establish a minimum standard of 3 acres per 1,000 population to a maximum standard of 5 acres per 1,000 population for new development projects.

(2) Los Angeles County Code

Pursuant to the Quimby Act, Los Angeles County adopted Chapters 21.24.350 and 21.28.140 of the Los Angeles County Code which sets requirements regarding the dedication of park space and the payment of "in-lieu" park fees for new residential subdivisions in the

unincorporated areas of the County. Developers of new subdivisions are obligated to provide a specified amount of park space prior to the final approval of the project.¹

Park space that may satisfy the obligatory requirements are public or privately owned playgrounds, riding and hiking trails, tennis, basketball or other similar game-court areas, swimming pools, putting greens, athletic fields, and other types of natural or scenic areas as recommended by the director of parks and recreation for passive or active recreation.² If the Los Angeles County Department of Parks and Recreation (LADPR) determines that the proposed park space does not meet certain design criteria (e.g., slope, access, improvements), the LADPR may credit the dedicated parkland against the obligated park space requirement as they deem appropriate. For example, park space with a slope of 3.1 percent to 10 percent will be 87 percent credited against the park space requirement.³

If the developer fails to dedicate the required amount of park space, a park impact fee must be paid. The fee rate varies depending upon the park planning area and is calculated for each acre of the park space the developer fails to dedicate. Park fees are used, as determined by LADPR, to acquire local park land or to develop new or rehabilitate existing facilities in the planning area where the subdivision is located in or to fund county-owned park facilities within city limits that, but for incorporation or annexation, were within, or would have been in, the park planning area in which the subdivision for which the fees were paid is located.

(3) Los Angeles County Conservation, Open Space and Recreation Element

The Conservation, Open Space and Recreation Element of the Los Angeles County General Plan was adopted in 1980 and amended in 1986. The Element sets policy direction for open space-related resources in the unincorporated areas of the County. The purpose of the Element is to address the need to conserve and protect land that provides recreational opportunities, scenic value, natural resources, and agricultural/mineral production. The Element establishes a set of goals and policies related to open space and recreation. The goals and policies regarding the provision of recreational areas which are relevant to the project are:

- To improve opportunities for a variety of outdoor recreational experiences;

¹ *The local park space requirement for a new subdivision is based on the following formula:*

$X = 0.003UP$ where X is the local park space requirement in acres, U is the number of approved dwelling units, and P is a predetermined value based on which park planning area the project is located in.

The formula is derived from 2000 Census Population and Quimby Act requirement of 3 acres per 1,000 persons. The project site is located in Park Planning Area 35D, Canyon Country.

² *Los Angeles County Code 21.24.340.*

- Provide low intensity outdoor recreation in areas of scenic and ecological value compatible with the protection of these natural resources (Policy 31);
- Develop a system of bikeways, scenic highways, and riding and recreational trails; link recreational facilities where possible (Policy 33).

Furthermore, the Element sets a standard of 4 acres of local park space per 1,000 residents in unincorporated Los Angeles County. In addition, the General Plan sets a standard of 6 acres of regional park space per 1,000 residents. Specific development projects are required to comply with the park requirements of the LACMC, which are based on a standard of 3 acres of park space per 1,000 residents for the park planning area.

(4) Santa Clarita Valley Area Plan

The Santa Clarita Valley Area Plan was adopted in 1982 and amended in 1990 as a component of the Los Angeles County General Plan. This document serves as a guide for decision-makers in planning for the future needs of the Santa Clarita Valley. The Area Plan lays out a framework of policies on a variety of issues, including land use, transportation, and recreation. Policies relating to recreational facilities include:

- Promote the acquisition of land for public parks and improvement of existing park sites in park deficient areas (Policy 5.1);
- Apply currently recommended standards for the provision of local park facilities (Policy 5.2);
- Promote the establishment of a centrally located sports complex with gymnasium in the Santa Clarita Valley (Policy 5.3);
- Support efforts by the Department of Parks and Recreation to consolidate park funds and land dedications in order to provide fewer but larger parks to allow for more economically efficient park operation, and to use Quimby “In-Lieu” funds for park development where appropriate (Policy 5.5);
- Support efforts to satisfy demand for more “active use” facilities such as ball fields, soccer fields and golf courses (Policy 5.6);
- Encourage developers to accommodate trail needs within and between equestrian developments, including the construction of private feeder routes into the main trails

³ Per the LACC 21.24.350, proposed park space can have a maximum slope of 3 percent.

system. The provision of local trails is particularly compatible with the hillside management and open space provisions of this plan (Policy 6.2);

- Encourage developers to accommodate local bikeway needs within and between developments of all types (Policy 7.3).

(5) Department of Parks and Recreation Strategic Plan for 2010

The County of Los Angeles Department of Parks and Recreation Strategic Plan for 2010 was adopted in 1992 as a planning tool for the development of parks and recreation programs. The document assesses the recreational needs of the county and outlines goals, objectives and policies for the County's parks and recreation system.

The plan assessed the projected recreational needs for 48 park planning areas in unincorporated Los Angeles County based on the County's standard of 4 acres of local park space per 1,000 residents. For the project's park planning area, Park Planning Area #35—Santa Clarita Valley, the plan projected that 311.4 acres of local park space would be needed by 2010 to accommodate the area's recreational needs.⁴

To achieve the County's park standards, a series of goals, objectives, and policies were adopted. The following goals, objective, and policies are relevant in terms of the proposed project:

- Goal: Provide a system-wide level of planning processes for both long and short range solutions.
 - Objective: Strive to acquire parklands that will achieve both local and regional county standards.
 - Policy: Continue to acquire parkland and in-lieu fees in accordance with the park dedication ordinance.
 - Objective: Provide leadership and support for issues of environmental concern
 - Policy: Coordinate efforts with other governmental and non-profit agencies to preserve and study Significant Ecological Areas
 - Objective: Provide a system of park and recreation facilities that meet the diversified needs of the residents.

⁴ This is based on a projected population of 77,854 persons for 2010.

(6) City of Santa Clarita

Although the project site is located outside the jurisdictional boundaries of the City of Santa Clarita, due to the site's close proximity to the City, project implementation could result in project residents utilizing nearby City parklands. As such, the City's plans and regulations pertaining to parkland may be relevant. Similar to the County, the City of Santa Clarita Municipal Code requires that new subdivision projects dedicate land, pay a fee in lieu thereof, or both, at the option of the City, for neighborhood and community park or recreational purposes. The Code specifies a minimum standard of 3 acres of park space per 1,000 residents to serve the immediate and future needs of project residents. The City of Santa Clarita Parks, Recreation, and Community Services Master Plan, adopted in 1995, establishes a standard of 4 acres of parkland per 1,000 residents as a City-wide goal. Additionally, the Master Plan prescribes a standard of 2.5 acres per 1,000 residents for neighborhood recreation parks and a standard of 3.5 acres per 1,000 residents for metro/community parks. The City's Open Space Acquisition Plan was developed in 2002 as part of the City's efforts to preserve and protect open space in the Santa Clarita Valley. The following goal from the plan is of relevance to the project.

- Create a continuous strip of open space along the northern border of the City of Santa Clarita. Connect open space between the City and the Angeles National Forest whenever possible.

b. Environmental Setting

The LADPR is responsible for the operation and maintenance of public parks in the unincorporated areas of the County, including the project area. The LADPR provides four types of parks: neighborhood, community, regional, and recreation parks. Neighborhood parks are typically 5 to 10 acres and serve a population of less than 5,000 within a 0.5-mile radius. Community parks are usually 10 to 40 acres and serve several neighborhoods of approximately 20,000 within a 2-mile radius. Regional parks are major parks that offer unique recreational opportunities and serve the population living within a radius distance of one hour's drive. Recreation parks are designed specifically for active recreational uses and include sports fields, courts, courses, and swimming pools.

The City of Santa Clarita has jurisdiction over public parks within City limits, with the exception of the County-owned William S. Hart Park and Northbridge Park. City parks are classified as neighborhood parks, community parks, special use parks, or metro-regional parks. Special use parks are special park facilities of less than 5 acres and include vista points, greenbelts, rest areas, or public areas. Metro-Regional parks serve the entire City or significant geographic segment of the City and provide for organized or league sports complexes, individual sports, cultural enrichment, large passive areas, and historical protection and interpretation. In

addition, the City also provides passive parks, which allow for uses such as hiking, equestrian, nature observation, and environmental education.

(1) Local Parks

Local park space includes neighborhood, community, special use parks, and passive parks, which generally serve residents within a 2-mile radius.⁵ Within the unincorporated portion of the Santa Clarita Valley, LADPR's local park space totals 89.9 acres.⁶ This local park space is provided throughout eight local parks, which include seven neighborhood parks and one community park. These parks offer such amenities and facilities as swimming pools, basketball courts, athletic fields, tennis courts, picnic areas, a skateboard park, barbecues, playgrounds, and swimming pools.

As indicated above, the County has a standard of 4 acres of local park space per 1,000 residents for unincorporated areas. Based on an estimated existing population of 61,523 in the unincorporated Santa Clarita Valley,⁷ there is an existing deficit of 260 acres of local park space, or a ratio of 1.38 acres per 1,000 residents. Therefore, the unincorporated Santa Clarita Valley currently does not meet County standards.

The City of Santa Clarita currently operates 16 local park facilities, which include 12 neighborhood parks, 3 community parks, and a special use park. These park facilities provide 135.9 acres of active park space. The City also has passive use parks (e.g., greenbelts, pocket parks, etc.) totaling 169.54 acres. Therefore, based on the population of 166,242, the City has a ratio of 1.84 acres of local park space per 1,000 residents, which is below the City-wide goal of 4 acres of park land per 1,000 residents. However, it should be noted that the current ratio does not account for the 22-mile trail system and over 2,000 acres of dedicated open space. In addition, a new neighborhood park is under construction. The Todd Longshore Park (formerly White Canyon Park) will provide a 32-acre neighborhood park with amenities such as a picnic area, play area, small amphitheater, walkways, and a restroom. Construction of this facility is scheduled for completion by January 28, 2008.⁸

Existing County and City local parks within an approximate 2-mile radius of the project site are provided in Table 4.P-1, Local Parks in Project Area, on page 4.P-7. These parks

⁵ *Santa Clarita Valley General Plan Technical Background Report, February 2004.*

⁶ *Includes the Northbridge Park and William S. Hart Park located within City of Santa Clarita limits, but are maintained by the County of Los Angeles.*

⁷ *Santa Clarita Valley General Plan—Technical Background Report, February 2004.*

⁸ *City of Santa Clarita website, www.santa-clarita.com/cityhall/be/construction/#cip, accessed May 18, 2004 and www.santa-clarita.com/cityhall/pw/construction/#parks, accessed March 8, 2007.*

Table 4.P-1

Local Parks in Project Area
(within an approximate 2-mile radius)

Park	Type	Jurisdiction	Acres
David March County Park	Neighborhood	County	12.9
Begonias Lane Park	Neighborhood	City	4.2
Bouquet Canyon Park	Neighborhood	City	10.5
Oak Springs Canyon Park	Neighborhood	City	5.7
Pamplico Park	Neighborhood	City	7.6
North Oaks Park	Special Use	City	2.3
George Carvalho Sports Complex	Recreation	City	58.0
Canyon Country Park	Community	City	19.3
Total			120.5

Sources: PCR Services Corporation; Santa Clarita General Plan—Technical Background Report; February 2004.

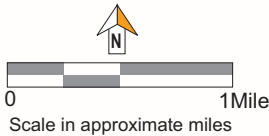
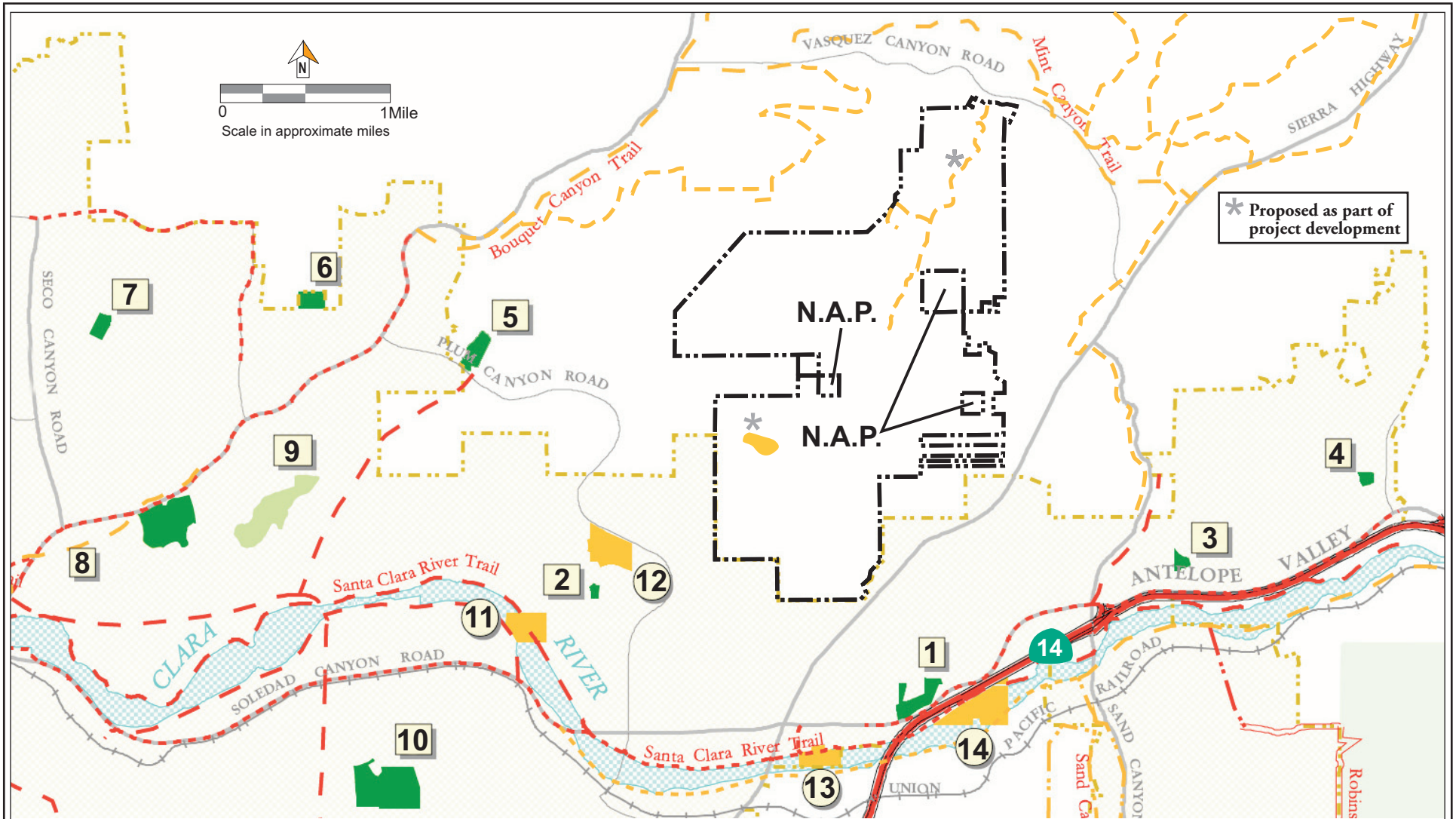
provide 127.8 acres of local park space. As shown in Figure 4.P-1, Existing and Proposed Parks and Trails in Project Vicinity, on page 4.P-8, the closest County-owned local park to the project site is David March County Park, a 12.9-acre neighborhood park located approximately 2 miles to the northwest. The closest City park to the project site is Canyon Country park, a 19.3-acre community park located approximately 0.5 mile south. Based on an approximate population of 45,466 persons within 2 miles of the project site,⁹ the current local park space to population ratio for the project area is 2.65 acres per 1,000 residents. Thus, the project area currently does not meet the County and City goal of 4 acres of local park space per 1,000 residents.

Should additional recreational facilities be needed, the County maintains joint-use agreements with the school districts for the conditional use of school recreational facilities. For example, the County has an agreement with the Saugus Union School District for use of their recreational space. In general, school recreational facilities are available for public use during non-school hours (except during school-scheduled events). In addition, private commercial facilities (i.e., golf courses, amusement parks, paintball facilities) are also available within 5 miles of the project site for area residents. Such facilities include The Friendly Valley Golf Course, The Greens at Valencia, and the Mountasia Family Fun Center.

(2) Regional Parks

Regional park space consists of regional parks, metro-regional parks, and reservations and is provided by LADRP as well as by the State. Within the Subregion Area, there are

⁹ Population estimated from 2000 Census.



* Proposed as part of project development

Proposed Parks

- 11 River Park
- 12 Todd Longshore Park
- 13 Mint Canyon Park
- 14 Lost Canyon Park

Existing Parks

- 1 Canyon County Park
- 2 North Oaks Park
- 3 Oak Spring Park
- 4 Begonias Lane Park
- 5 David March County Park
- 6 Bouquet Canyon Park
- 7 Pamplico Park
- 8 Central Park
- 9 CLWA Conservatory Garden
- 10 George Carvalho Sports Complex

LEGEND

Park and Recreational Areas

- Existing Local Park and Recreation
- Existing Regional Park and Recreation
- Proposed Local Park and Recreation

Approximate Project Boundary

Trails (County)

- Existing Unknown
- Proposed Multi-Purpose
- Approved Unknown
- City of Santa Clarita Boundary

Trails (City)

- Existing Class I - III
- Existing Multi-Purpose
- Proposed Class I - II
- Proposed Multi-Purpose



Source: Santa Clarita Valley General Plan Technical Background Report, 2004; Santa Clarita Valley Area Plan Trails Map, 2007; Sikand Engineering, 2007.

Figure 4.P-1
Existing and Proposed Parks and Trails in the Project Vicinity

currently nine regional park facilities, comprising a total of 13,439.6 acres. Of this acreage, 80 acres are City-owned, 409.4 acres are County-owned, and 12,590.2 acres are State-owned, as shown in Table 4.P-2, Regional Parks in Santa Clarita Valley, on page 4.P-10. The City-owned metro-regional park is Central Park, County-owned regional parks include Val Verde Park and William S. Hart Park. State-owned regional parks include the Castaic Lake Recreation Area; Placerita Canyon State Park; and the Santa Clarita Woodlands. These regional parks provide a wide range of recreational activities such as boating, jet skiing, camping, hiking, and fishing. As indicated in Section 4.R, Population, Housing and Employment, the current estimated population in the Subregion Area is 614,502 persons. As such, the Subregion Area should provide a total of 3,564.5 acres to meet the County's standard of six acres of regional park space per 1,000 residents. As indicated above, there are currently 13,439.6 acres of regional park space, or 21.9 acres per 1,000 residents. Thus, the project area far exceeds the standard for regional park space.

(3) Trails

The Santa Clarita Valley trail system, which links together State-, County-, and City-owned trails, provides additional recreational opportunities in the park planning area. These trails in and of themselves serve as recreational facilities and additionally connect existing recreational facilities such as rivers, open space, parks, and forest areas. These trails are part of a larger National Scenic trail system, the Pacific Crest Trail, which spans 2,650 miles from Mexico to Canada. The Santa Clarita trails are available for use by joggers, equestrians, hikers, bicyclists, and commuters alike. Trails are typically operated and maintained by the jurisdiction in which the trail is located (e.g., Los Angeles County or the City of Santa Clarita). The nearest existing trail to the project site is the Santa Clara River Trail located approximately 1.25 miles to the south.

As shown on Figure 4.P-1, the Bouquet Canyon Trail, Mint Canyon Trail, and one unnamed trail are in the vicinity of the project site and are part of the approved adopted County Trail system as depicted on the Santa Clarita Valley Area Plan Trails Map.¹⁰ The Bouquet Canyon Trail is located approximately one mile northwest of the site and generally follows Bouquet Canyon Road. The Mint Canyon Trail is located immediately north and northeast of the project site, in an area proposed to remain as open space and adjacent to Sierra Highway and Sand Canyon Road. Based on consultation with the LADPR, the Mint Canyon Trail alignment would not cross the proposed development portion of the project site. The unnamed trail is located northwest and outside of the project boundary, adjacent to the undeveloped northern portion of the site. One trail is depicted in the northeastern portion of the project site, which

¹⁰ *Santa Clarita Valley Area Plan Trails Map, adopted on and amended through January 16, 2007.*

Table 4.P-2

Regional Parks in Santa Clarita Valley

Park	Ownership	Acres
Castaic Lake State Recreation Area	State	8,700
Placerita Canyon Nature Center	State	341
Santa Clarita Woodlands Park	State	3,169.7
Vazquez Rocks Park	State	739.5
Subtotal		12,950.2
Acton Open Space	County	76.8
Val Verde Park	County	57.6
William S. Hart Park	County	224
Castaic Sports Complex	County	51.0
Central Park	City	80
Subtotal		489.4
Total		13,439.6

Source: Santa Clarita General Plan—Technical Background Report; PCR Services Corporation, 2007.

generally follows the main roadway alignment shown within Recorded Tract Map No. 44967. This is the proposed extension of the Mint Canyon Trail.

3. PROJECT IMPACTS

a. Thresholds of Significance

For this analysis, impacts on recreational facilities and parks are considered significant if:

- The proposed project would not provide adequate park space and recreation facilities as determined by the park space and/or “in-lieu” fee requirements of the Los Angeles County Code (LACC);
- The project would result in a substantial decrease in the existing local park space to population ratio;
- The project would conflict with local park and recreation policies or objectives;
- The project would physically interfere or conflict with existing parks and recreation facilities;

- The project includes or would require the construction of park facilities which would have an adverse impact on the environment;
- The project would result in the physical deterioration of off-site park facilities in the surrounding area; and
- The project would substantially decrease the existing regional park space to population ratio.

b. Methodology

Analysis of the project's potential impacts on recreational facilities and parks considered the following factors: the existing supply of park space in the area, the population to be generated by the project, the proposed acreage of parks and recreational facilities (i.e., private parks, public parks, community center, etc.), impacts on existing parks and recreational facilities, the amount of obligated parkspace as required under the LACC Chapter 21.28 and/or the amount of "in-lieu" park fees (if required), and the project's consistency with State, County, and local policies and objectives with respect to parks and recreation.

c. Impact Analysis

As described in Chapter 2.0, Project Description, the project would provide approximately 18 acres of public and private park space, which include a 12-acre public neighborhood park, a 2.5-acre private park, and eight pocket parks totaling approximately 3.7 acres. The proposed public park would be fully improved and provide 10.6 acres of parkland dedicated to the LADPR. As shown on Figure 2-7, Proposed Park Plan, the public park would include the following features: a community gathering area and shade structure; a children's play area with parents' seat wall; picnic tables; grass volleyball area; open lawn area; basketball court; ballfield with bleachers; multi-use ballfield; a comfort station with restrooms, a drinking fountain, and storage room; and parking for 20 cars. In addition, security lighting, trash enclosures, and locking gates would also be provided.¹¹ The neighborhood park and pocket parks would be maintained by a homeowners' association. Other proposed recreational amenities within the development area, as depicted on Figure 2-8, include approximately two miles of hiking trails along the western, northern, and eastern perimeters of the development area, approximately one mile of paseos, and approximately eight miles of bike lanes located along Skyline Ranch Road, Main Street North and Main Street South. The undeveloped northern portion of the site would also include a trail easement of approximately 2.2 miles that would connect to the Mint Canyon Trail to the north and the existing Plum Canyon fire road to the

¹¹ Written correspondence, James Barber, Section Head, Land Acquisition/Developer Obligations, County of Los Angeles Department of Parks and Recreation, October 20, 2008.

south, and southwesterly towards a lookout point. The location of the public park and trail easement are shown on Figure 4.P-1.

As indicated above, LACC requires that new subdivisions dedicate on-site parkland, development improvements, and/or the payment of in-lieu fees to meet the recreational demands of its residents. The project proposes the development of 1,260 single-family detached dwelling units. As indicated by the LADPR, based on the LACC park requirement formula, the proposed project is required to provide 12.23 net acres of on-site park space that meets LADPR criteria.¹² The proposed project would provide approximately 18 acres of parkland, including a fully improved 10.6-acre public park as described above. Because the 10.6 acres of public park space is less than the 12.23 acres required by LADPR, payment of in-lieu fees would also be required. With the payment of fees and development and conveyance of a fully improved park to LADPR, impacts related to the provision of parks and recreational facilities would be less than significant. Although not credited under LACC park requirement formulas, it should also be noted that the project would also provide approximately two miles of hiking trails, one mile of paseos, approximately eight miles of bike lanes, and 2.2 miles of trail easement associated with the Mint Canyon Trail.

The project would be consistent with the goals and objectives of the Los Angeles County Parks and Recreation Strategic Plan for 2010 and the Open Space, Conservation and Recreation Element by providing opportunities for outdoor recreational activities and providing recreation that is compatible with the scenic and natural resources value of the area. The project would also support the recreational goals of the Santa Clarita Valley Area Plan to acquire new park land through the provision of on-site park space and dedicated open space. Finally, the project would not conflict with the City of Santa Clarita plans and policies for parks and open space since the project would include on-site park space to serve new residents. Thus, the project would not conflict with the recreational goals of the County or the City of Santa Clarita, and no significant impacts on the environment associated with the plan inconsistencies would occur.

The project includes the development of approximately 18 acres of on-site parks and recreational facilities to meet the recreational demands of project residents. Therefore, the project would not necessitate the construction of additional off-site facilities, which could result in secondary, adverse impacts on the environment. Project residents are expected to primarily utilize the proposed on-site parks and recreational facilities, which provide for both active and passive recreation. While it is recognized that the project would not preclude the use of off-site park facilities, such use would be minimal and would not result in substantial physical deterioration of off-site facilities.

¹² *Written correspondence, James Barber, Section Head, Land Acquisition/Developer Obligations, County of Los Angeles Department of Parks and Recreation, October 20, 2008. The entire parkland obligation and in-lieu fees, as determined for 1,270 units, would be provided as a condition of project approval for the 1,260 units now proposed.*

As discussed above, the Santa Clarita Valley faces no shortage of regional park space. The Subregion Area currently has a ratio of 21.9 acres of regional park space per 1,000 residents, which exceeds the standard of 6 acres per 1,000 residents. Thus, the existing supply of regional park space would be sufficient to accommodate the project's 4,158 new residents. Based on the above, impacts on regional parks are considered less than significant.

The proposed trail alignment in the northeastern portion of the site was developed based on consultation with the LADRP and adjusted for site topography and other site conditions. As depicted on the Santa Clarita Valley Area Plan Trails Map, the trail would connect with the existing Mint Canyon Trail and extend south towards the Plum Canyon Fire Road. In addition, a portion of the trail would extend west and south and terminate at a lookout point for a total trail easement length of approximately 2.2 miles. This proposed alignment is shown on Figure 2-3, Aerial View – Development and Conservation Area, on page 2-7. The proposed trail would require the dedication of a variable width trail easement for the Mint Canyon Trail to the satisfaction of the LADPR and National Forest Service. The proposed project would not conflict with or have an impact on the trail as it is located in an area of the site that will remain as open space and is remote from the development area. As analyzed in Section 4.E, Visual Qualities, there would be no impacts on views from existing and proposed trails north, northeast, and northwest of the project site, or on views from the proposed trail, since areas proposed for development are not visible from the north due to a major intervening ridgeline.

4. MITIGATION MEASURES

No mitigation measures would be necessary as the project would not result in significant impacts on parks and recreational facilities.

5. CUMULATIVE PROJECT IMPACTS

The analysis of cumulative project impacts on parks and recreational facilities is based on population projections as analyzed in Section 4.R, Population, Housing and Employment, of this EIR. The geographic area for cumulative impacts on local recreational space is the Santa Clarita Valley, and the geographic area for cumulative impacts on regional recreation space is the project's Subregional Area. Based on the analysis in Section 4.R, Population, Housing and Employment, the 2017 population for the project's unincorporated Santa Clarita Valley is projected to be 309,418 persons and the 2017 population for the project's Subregion Area is projected to be 887,968 persons. This forecasted growth will increase the demand for local and regional park space.

As discussed above, in accordance with the Los Angeles County Code, the project would provide approximately 10.6 acres of fully-improve public park space and in-lieu fees to meet the recreational demands of its residents within the park planning area, as determined by LADPR.

Similarly, any new residential projects would be subject to the same park space requirements. Therefore, it is anticipated that the future demand for local parks would be accommodated by privately-funded park space (via compliance with the LACC park requirements), and the project would not result in a cumulative impact on local park space.

Existing regional park space is sufficient to accommodate the projected 2017 population of the project's Subregion Area. Assuming that there will be no increases in the acreage of regional park space, there will be 15.1 acres of regional park space per 1,000 residents in 2017, which would still exceed the County's standard for regional park space within the Subregion Area. Furthermore, beyond meeting local park land requirements, the proposed project would provide approximately two miles of hiking trails, eight miles of bike lanes, 2.2 miles of trail easement associated with the Mint Canyon Trail, along with dedication of approximately 1,355 acres of open space for the Skyline Ranch Conservation Area which is expected to have some allowance for public access. Thus, given that the project fully mitigates its impacts and would not have a cumulatively considerable effect on demand for parkland, no cumulative impacts on regional park space would occur in combination with other projects identified in Chapter 3.0, Cumulative Impact Analysis Methodology.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Not applicable.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

Q. LAND USE

1. INTRODUCTION

This section analyzes the proposed project's consistency with applicable land use regulations, as well as the effects of project implementation upon land use patterns in the surrounding area. The analysis addresses whether the project would conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect; or whether the project would physically divide an established community or be incompatible with surrounding uses so as to create a conflict between uses or the principal division of an established community.

2. EXISTING CONDITIONS

a. Regulatory Framework

(1) Regional

The project site is located within the boundaries of the South Coast Air Quality Management District (SCAQMD), the Southern California Association of Governments (SCAG) region, and the State-mandated Congestion Management Program (CMP), implemented in the project area by the Metropolitan Transit Authority (MTA).

(a) SCAG

The Southern California Association of Governments (SCAG) is a Joint Powers Agency established under California Government Code Section 6502 et seq. Pursuant to Federal and State law, SCAG serves as a Council of Governments, a Regional Transportation Planning Agency, and the Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial Counties. SCAG's mandated responsibilities include developing plans and policies with respect to the region's population growth, transportation programs, air quality, housing, and economic development. Specifically, SCAG is responsible for preparing the Regional Comprehensive Plan, the Regional Transportation Plan (RTP), and Regional Housing Needs Assessment (RHNA), in coordination with other state and local agencies. As part of its planning obligations, SCAG prepared the 1996 Regional

Comprehensive Plan and Guide (RCPG), and more recently prepared the 2008 Regional Comprehensive Plan (RCP) which has been accepted by SCAG for use as an advisory document that may be voluntarily used by local jurisdictions for developing local plans and addressing local issues of regional significance. These plans address issues related to future growth and to provide a means for assessing the potential impact of projects within the context of the region.

SCAG also engages in the Compass Growth Visioning effort that addresses the regional development pattern so as to accommodate future development and provide land patterns that support improved mobility and reduced vehicle miles traveled and support the goals and policies established in the RTP. As part of the visioning effort, the Compass Blueprint 2% Strategy provides guidance for how and where SCAG can implement the Growth Vision for Southern California's future. It calls for modest changes to current land use and transportation trends on only 2% of the land area of the region. Directing the changes to the selected 2% of the land identified produces the greatest policy achievement for the least land affected.

SCAG reviews environmental impact reports of projects which are of statewide, regional, or areawide significance to determine consistency with regional plans. The criteria for determining whether a project is of "statewide, regional, or areawide significance" are set forth in *State CEQA Guidelines* Section 15206. The proposed project meets these criteria as it contains more than 500 dwelling units (Section 15206(b)(2)(A)). SCAG has provided a written response to the Notice of Preparation for the project, in which it identifies policies to be addressed in the Draft EIR.¹ The policies cited in the letter are taken from the 1996 RCPG, RTP and the Growth Visioning Program. Since submitting their NOP letter response, SCAG prepared the new Comprehensive Plan to be used as an advisory document, and SCAG no longer reviews projects in regard to RCPG policies; only the RTP and Growth Visioning Program. Applicable policies from these documents are cited in the analysis discussion below. (See Table 4.Q-1, Project Consistency with Relevant SCAG Policies, on page 4.Q-18).

(b) SCAQMD—Air Quality Management Plan

The SCAQMD was established in 1977 pursuant to the Lewis-Presley Air Quality Management Act. The SCAQMD is responsible for bringing air quality in the South Coast Air Basin (SCAB) into conformity with Federal and State air pollution standards. The SCAQMD is responsible for monitoring ambient air pollution levels throughout the SCAB and for developing and implementing attainment strategies to ensure that future emissions will be within Federal and State standards. The SCAQMD's Air Quality Management Plan (AQMP), adopted 2007, presents strategies for achieving the air quality planning goals set forth in the Federal and

¹ "Comments on the Notice of Preparation for a Draft Environmental Impact Report for the Skyline Ranch Project—SCAG No. I 20040723," November 23, 2004. Included in Appendix A of the Draft EIR.

California Clean Air Acts, including a comprehensive list of pollution control measures aimed at reducing emissions. Specifically, the AQMP proposes a comprehensive list of pollution control measures aimed at reducing emissions and achieving ambient air quality standards. Further discussion of the AQMP can be found in Section 4.H, Air Quality, of this EIR.

(c) Metro—Congestion Management Program

The Los Angeles County Metropolitan Transportation Authority (Metro) administers the Congestion Management Program (CMP), a state-mandated program designed to provide comprehensive long-range traffic planning on a regional basis. The CMP includes a hierarchy of highways and roadways with minimum level of service standards, transit standards, a trip reduction and travel demand management element, a program to analyze the impacts of local land use decisions on the regional transportation system, a seven-year capital improvement program, and a county-wide computer model used to evaluate traffic congestion and recommend relief strategies and actions. CMP guidelines specify that those freeway segments to which a project could add 150 or more trips in each direction during the peak hours be evaluated. The guidelines also require evaluation of designated CMP roadway intersections to which a project could add 50 or more trips during either peak hour. The project's consistency with the CMP is discussed further in Section 4.F, Traffic/Access, of this EIR.

(2) Local Level—County of Los Angeles

The Countywide General Plan was prepared in 1980, with several Elements being revised and updated over the years. The Streamlined General Plan is a document that was prepared by Los Angeles County in January 1993 to provide a simplified version of the General Plan, and ease user access to its key components. It includes Countywide Goals and Policies that were current to 1993.²

The Land Use Element of the General Plan was last updated in 1990 and sets forth Countywide policy for the general location and intensity of land use. This Element serves as the basis for more specific land use planning activities and provides general guidance for coordinating future development. The goals and policies of the Land Use Element address a large range of Countywide land use issues pertaining to the overall form of the region, and the County's large array of communities, e.g. urbanized, rural, etc. The policies, with elaboration in

² *The County is currently updating the General Plan and has prepared a Draft General Plan (September 2008) that is available for public review at: <http://planning.lacounty.gov/generalplan>. An EIR that addresses the environmental impacts of the amended plan is expected to become available in the winter of 2009. Adoption of the updated Countywide General Plan is estimated for 2010. Until this Draft Plan is approved, the existing General Plan is the current governing document.*

the Land Use Element appendices, also provide guidelines for development in non-urban hillside areas such as those in which the proposed project is located.

- Policy 1: Require that new developments in non-urban areas have adequate accessibility to paved roads and water lines of sufficient capacity.
- Policy 14: Assure that new development is compatible with the natural and man-made environment by implementing appropriate locational controls and high quality design standards.
- Policy 15: Protect the character of residential neighborhoods by preventing the intrusion of incompatible uses that would cause environmental degradation such as excessive noise, noxious fumes, glare, shadowing and traffic.
- Policy 17: Establish and implement regulatory controls that ensure compatibility of development adjacent to or within major public open space and recreation areas including National Forests, the National Recreation Area, and State and regional parks.
- Policy 25: Establish land use controls that afford effective protection for significant ecological resources, and lands of major scenic value.
- Policy 30: Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards, and in areas where essential services and facilities do not exist and are not planned.

Land Use Element Appendix A includes general conditions and standards for development. Sections 5, 6, and 7 of Appendix A address non-urban residential development for projects with the characteristics and settings of the proposed project. Sections 5 and 6 set a residential density limit for non-urban areas of one unit per five acres, to a maximum of one unit per acre subject to certain conditions. Consistent with other provisions of the general plan, these sections encourage density transfer as a means of reducing potential adverse impacts, preserving scenic areas and providing increased open space and other design amenities. Section 7 establishes density limits for non-urban hillside areas (slopes of 25 percent or greater) that are dependent on slope conditions. For slopes of 25 percent to 50 percent, the density limit ranges from 1 unit per 10 acres to 1 unit per 5 acres. The maximum density on slopes over 50 percent is 1 unit per 20 acres.

Land Use Element Appendix B provides Hillside Management/Performance Review procedures for development projects in hillside areas. As such, this appendix elaborates on previous policies and gives specific guidance for reviewing development proposals. Among

other elements, it specifies a method for calculating densities, and identifies findings required for approval of hillside development. These findings address public safety, resource protection, suitability for development, and quality of design.

The Countywide General Plan/Streamlined General Plan also includes a Circulation Element with a Highway Policy Map that shows existing and planned roadways in the County. The Highway Policy Map shows roadways that, if developed as proposed in 1993, would cross the project site. These roadways include an extension of Whites Canyon Road to Vasquez Canyon Road, connecting with a roadway segment for Cruzan Mesa Road between Whites Canyon Road and Sierra Highway.

(a) Santa Clarita Valley Area Plan

The Santa Clarita Valley Area Plan, last updated by the County in December 1990, is a component of the County of Los Angeles General Plan. It has been developed in conjunction with the other chapters and elements of the General Plan as a coordinated statement of public policy for use in making critical public decisions relating to the future of the Santa Clarita Valley. The County's Area Plans supplement and refine the countywide perspective to reflect local needs. They set forth precise standards and criteria tailored to conditions within a community, which are still consistent with the general countywide provisions.

Section V.B.1 of the Santa Clarita Valley Area Plan allows for density transfer among land use classifications within a project site in order to preserve open space and hillsides when it does not increase the number of units or detrimentally affect health and safety. Section V.B.7.c.3, includes density transfer as a tool to preserve Significant Ecological Areas (SEAs). Sections V.C.1.a.2 and V.C.1.b.2, encourage density transfer and clustering of structures from steeper to more level land as means of preserving the natural terrain, minimizing grading, and reducing exposure to natural hazards.

Policies included in the Santa Clarita Valley Area Plan that are most relevant to the issues addressed in this section of the EIR include the following:³

- Land Use, Policy 2.3: Concentrate land use growth in and adjacent to existing urban, suburban, and rural communities. Within these areas, encourage development of bypassed lands designated and appropriate for development.

³ *Other policies are discussed in the EIR where applicable. In particular, growth and development policies that are kin to the policies discussed here are addressed in Section 4.R, Population, Housing and Employment.*

- Land Use, Policy 2.4: Consider residential densities as averages to allow for the clustering of development and/or transfer of unit credit as provided for in the Plan.
- Land Use, Policy 2.5: Allow for density transfer (the rearrangement of allowed residential units among various land use classifications on a project site) as a means to attain plan goals such as preservation of hillsides, and to promote superior design and allow flexibility to respond to changing housing needs.
- Land Use, Policy 4.2: Designate areas of excessive slope (exceeding 25 percent) as “Hillside Management Areas,” with performance standards applied to development to minimize potential hazards such as landslides, erosion, excessive run-off and flooding.
- Land Use, Policy 5.1: Direct future growth away from areas exhibiting high environmental sensitivity to development unless appropriate mitigating measures can be implemented.
- Land Use, Policy 5.3: Designate significant plant and wildlife habitats in the Santa Clarita Valley as Significant Ecological Areas and establish appropriate measures for their protection.
- Land Use, Policy 5.4: Permit appropriate land uses that are compatible with the resource values present in identified Significant Ecological Areas.
- Land Use, Policy 7.1: Encourage development of convenient services to meet the needs of Santa Clarita Valley residents including health; education; welfare; police and fire protection; governmental operations; recreation and cultural facilities; and public utilities. Such services should be expanded at a rate commensurate with population growth. Phasing of development and implementation should be timed to prevent gaps in service as the area grows. Where feasible, service facilities will be established in central urban areas, with branches located in outlying communities. When the population base in a community is too small to support a facility, a common facility—to be shared by several small communities—should be established at a central point.
- Land Use, Policy 9.2: Encourage development of access throughout the Santa Clarita Valley.
 - a. As development occurs in each community, appropriate links should be provided from residential areas to major destination points; e.g., employment, shopping, public facilities and services, recreation and entertainment.

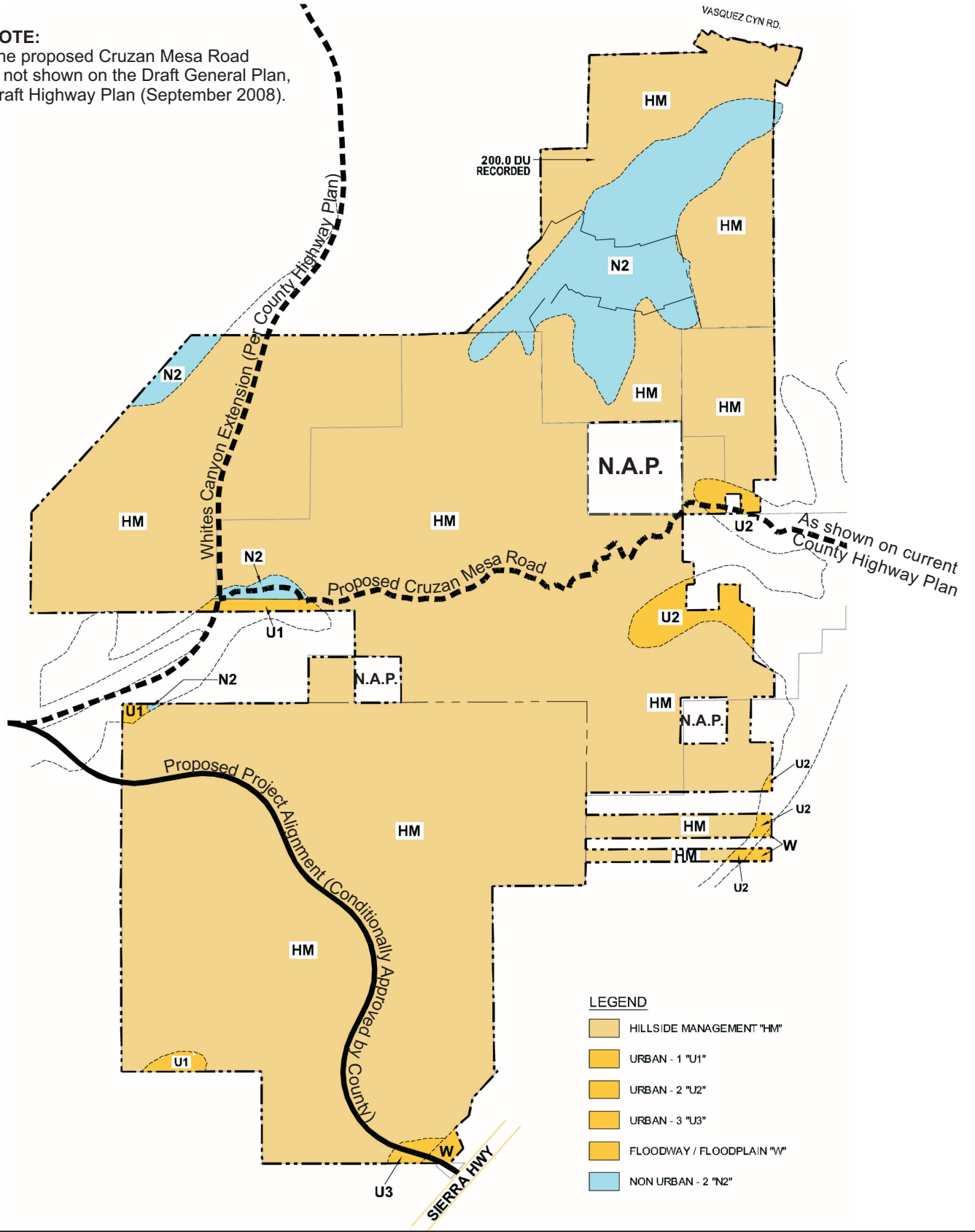
- b. Support public transportation within communities and from outlying, low-density communities to urban area services and functions as feasible. Emphasis will be placed on service to those of highest need; e.g., the low-income and elderly, who are dependent on public services).
- Land Use, Policy 9.3: Encourage development of transportation systems consistent with the plan.
 - Land Use, Policy 11.1: Encourage development of distinct neighborhoods. Residents should be able to identify themselves as a part of a specific neighborhood or community within the greater Santa Clarita Valley.
 - Environmental Resources Management, (Natural Resources), Policy 1.5: Encourage clustering of residential uses in hilly and mountainous areas to minimize grading and to preserve the natural terrain where consistent with existing community character.

Pursuant to the General Plan and the Santa Clarita Valley Area Plan, the project site contains plan designations as shown on Figure 4.Q-1, Existing Land Use Designations, on page 4.Q-8. The plan designations and the permitted densities for each are as follows: U1 (Urban 1.1 to 3.3 dwelling unit [du]/acre), U2 (Urban 3.4 to 6.6 du/acre), U3 (Urban 6.7 to 15 du/acre), N2 (Non-Urban 2, 0.5 to 1.0 du/acre), W (Floodway and Floodplain), and HM (Hillside Management). Density limits for non-urban hillside areas (slopes of 25 percent or greater) are dependent on slope conditions. Lands designated as HM contain slopes which average 25 percent or more and are subject to special development requirements. For slopes of 25 percent to 50 percent the density limit ranges from 1 one unit per 10 acres to 1 unit per acre. The maximum density on slopes over 50 percent is one unit per 20 acres. Within the project site 14.2 acres are designated U1; 33.3 acres are designated U2; 4.4 acres are designated U3; 155.2 acres are designated N2; 6.6 acres are designated W; and 1,959.5 acres are designated HM. Allowable density based on land use classifications and slope area is described in Section 3.d.(f), below.

The Santa Clarita Valley Area Plan was initially drafted prior to the incorporation of the City of Santa Clarita, and was later amended to reflect the incorporation. The City of Santa Clarita is responsible for land use decisions within its jurisdiction, while the County is responsible for land use decisions in the unincorporated area in which the project site is located. However, the project site is located adjacent to the City of Santa Clarita, and would contribute to the overall land use relationships in the area. Because the land use relationships within the City of Santa Clarita and the surrounding unincorporated areas are interrelated, the City and County are cooperatively preparing a twenty plus year Valleywide General Plan. Preparation of the Plan is referred to as the “One Valley One Vision,” program (OVOV). Visioning activities for this program began in Summer 2000, with subsequent preparation of a Vision and Guiding Principles

NOTE:

The proposed Cruzan Mesa Road is not shown on the Draft General Plan, Draft Highway Plan (September 2008).



Not to scale

Figure 4.Q-1
Existing Land Use Designations

statement and development of a Background Report. Drafts of the Plan Elements are currently being reviewed and public hearings on the plan are expected to occur in the later part of 2009, with adoption occurring in 2010. Until such time as this plan is adopted, the County's existing Santa Clarita Valley Area Plan prevails.

(b) County of Los Angeles Zoning Code

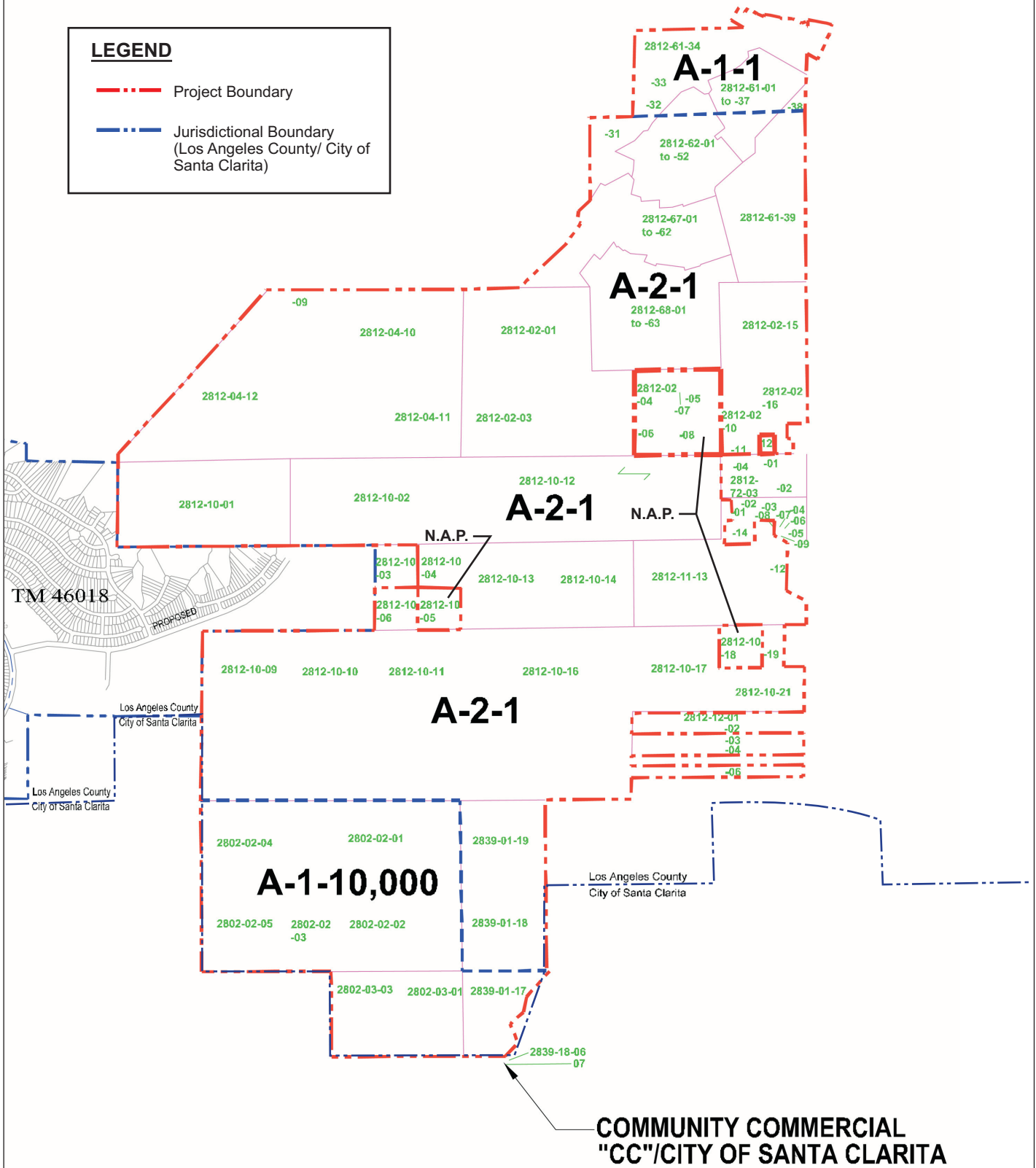
The County of Los Angeles Zoning Code designates the project site for agricultural uses, including 1757.4 acres as A-2-1 (Heavy Agricultural), 87.6 acres as A-1-1 and 328.2 acres as A-1-10,000 (Light Agricultural). Figure 4.Q-2, Existing Zoning, on page 4.Q-10 shows the existing zoning designations for the project site. Permitted uses for areas zoned as A-1 include, but are not limited to, single family residences, crops, greenhouses, and the raising of cattle, horses, sheep, goats, poultry, etc. Areas zoned as A-2 may have A-1 permitted uses and animal hospitals, dairies, dog kennels, livestock feed lots, manure spreading, and oil wells.

Other sections of the Zoning Code include provisions that are applicable to projects which, like the proposed project, include planned development, and transfer of development densities. Applicable Zoning sections include Subsection 22.56.205 regarding Conditional Use Permits for density-controlled development, and Subsection 22.56.215 regarding Conditional Use Permits in hillside management areas. Subsection 22.56.215 requires Conditional Use Permits for hillside management areas to protect environmentally sensitive areas, and address issues related to development in areas with steep slopes. Under Section 22.56.205, the hearing officer may impose conditions regarding the location, separation and height of buildings, as deemed necessary to insure compatible placement on the proposed site with relationship to the surrounding area.

On November 18, 2008 the Los Angeles County Board of Supervisors adopted a series of ordinances that together comprise the Green Building Program. The purpose of the Green Building Program is to minimize the impact development has on the environment by improving design and construction techniques so that buildings last longer, use fewer natural resources, are healthier for occupants, and suitably located on the site. The Green Building Program includes the Low Impact Development (LID) Standards Ordinance (Title 12, Chapter 12.84); The Drought Tolerant Landscaping Ordinance (Title 22, Chapter 22.52, Part 21); and the Green Building Ordinance (Title 22, Chapter 22.52, Part 20). The LID Ordinance reduces the impact from a proposed development by utilizing softscape and hardscape surface features to retain, detain, store, change the timing of, or filter storm water and urban runoff across a development site. Under the LID Standards Ordinance, developments consisting of five or more residential units are subject to storm water handling and treatment requirements. The Drought-Tolerant Landscaping Ordinance is designed to help conserve water resources by requiring landscaping that is appropriate to the region's climate and to the nature of a project's use. The ordinance applies to all projects regardless of size, and requires that 75 percent of projects' total landscaped

LEGEND

- Project Boundary
- Jurisdictional Boundary (Los Angeles County/ City of Santa Clarita)



Not to scale

Figure 4.Q-2
Existing Zoning

Source: Sikand Engineering, 2004

areas contain drought-tolerant plants and limits the amount of turf allowed on a project site. The Green Building Ordinance is intended to encourage building practices that conserve water, energy and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment. Implementation of this ordinance would reduce energy demand in new buildings. Additional discussion of these ordinances and the County's Green Building Program is provided in Section 4.S, Global Climate Change.

b. Environmental Setting

(1) Project Site

The project site lies within the Santa Clarita Valley in the unincorporated area of Los Angeles County. The project is located immediately north of the City of Santa Clarita, west of Sierra Highway, and south of the Angeles National Forest. The project site is comprised of 2,173 acres of undeveloped land, of which 1,551 acres located in the northern portion of the site are proposed to remain undeveloped, including 1,355 acres to be dedicated or designated as natural open space through the establishment of the Skyline Ranch Conservation Area (SRCA). Approximately 166 acres within this undeveloped area of the project site on the Cruzan Mesa would be designated as a Non-Development/Continuing Use Area. The balance of the undeveloped northern area would remain as open space. Approximately 622 acres located in the southern portion of the site are proposed for development.

The northern portion of the site contains steeply sloped canyon areas and the relatively flat, Cruzan Mesa. Portions of the Cruzan Mesa have been used previously for cattle grazing. Remnants of an old landing strip are still present on Cruzan Mesa. This landing strip was in operation until the early 1990s. Currently, the northern portion of Cruzan Mesa is being leased for use as an outdoor movie location. Approximately 360 acres within the Cruzan Mesa area was previously approved in May 1988 and recorded in May 1999 for subdivision into 200 residential lots as part of Recorded Tract Map No. 44967. This 360-acre area has not been developed and is being considered instead as part of a proposed density transfer that would shift development to the southern area of the site. Cruzan Mesa is the subject of a proposed SEA designation as part of the ongoing Los Angeles County General Plan update. The Cruzan Mesa SEA, which is proposed to encompass 958 acres within the northern 1,551 acre undeveloped area of the site, has been identified for preservation due in large part to the presence of the Cruzan Mesa vernal pool complex and the smaller Plum Canyon vernal pool. These areas constitute regionally unique biotic communities that can support a variety of special-status plant and animal species. Within the northern portion of the site, but not a part of the proposed project, are seven parcels under private ownership (see Figure 2-2). These include five vacant parcels and two parcels with one single-family unit each.

The southern portion of the site, the area proposed for development, is an undeveloped area containing rolling hills. With the exception of the flat mesa in the northern portion of the site, this area is less rugged than other portions of the site, with relatively more areas with slopes of less than 25 percent and less than 50 percent. The majority of this area is designated as a Hillside Management Area due to the presence of slopes in excess of 25 percent. There are no active uses occurring within this portion of the site.

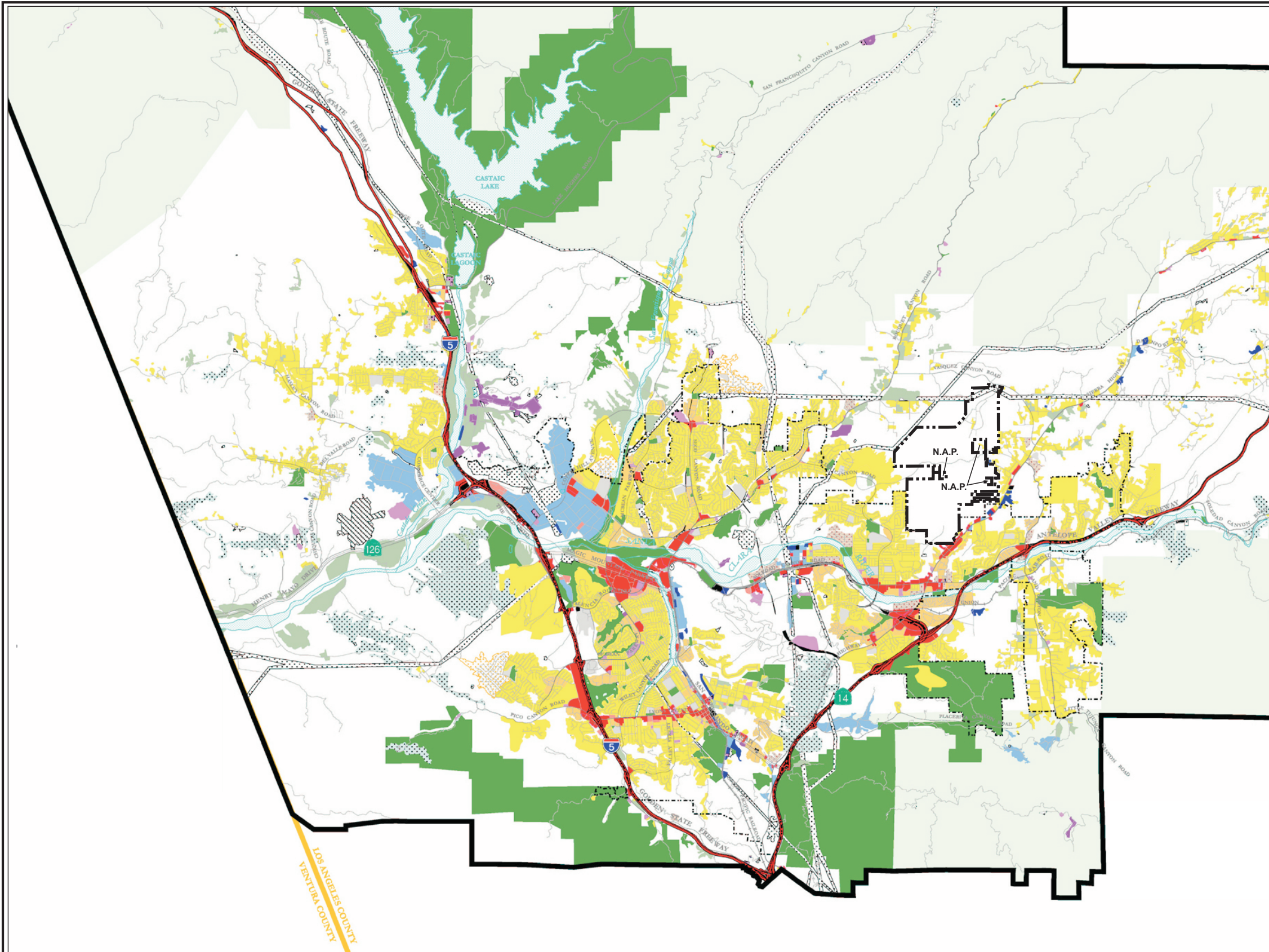
(2) Adjacent Uses

A generalized portrayal of land uses in the project vicinity is shown in Figure 4.Q-3, Surrounding Land Uses, on page 4.Q-13. Large portions of the project site, located to the north, lie adjacent to undeveloped lands. The southern portion of the project site, the portion designated for development, lies adjacent to or in the vicinity of existing urban development. Residential development in the City of Santa Clarita lies adjacent to the southernmost edge of the west side of the project site, with residential development continuing southward into the larger city area. A smaller residential tract is located to the southeast of the project site along Sierra Highway.

In particular, within the immediate vicinity of the location of the proposed connection of the new access road that would extend from Whites Canyon Road to Sierra Highway just north of Adon Avenue are several multi-family residential developments, motels, and daycare/preschool facilities. Sierra Highway extends southeast and northwest from its closest point to the project site with limited strip commercial uses interspersed with residential development and industrial uses further to the north. Soledad Canyon Road is located approximately one mile south of the project site and provides the nearest major commercial activities to the project site.

(3) Regional Context

In a larger context, the project site is located along the northern, outlying edge of the City of Santa Clarita. Development in the area is somewhat patchwork due to the area's topography (rolling terrain, canyons, creeks and the Santa Clara River) and historic development patterns. Development and open space areas are interspersed. Denser urban development with residential and commercial uses is located in flatter lands and along transportation arteries, with newer residential development in hillside areas. The land use pattern includes a mix of older development with strip commercial patterns and pocketed industrial activities, and newer planned developments with major commercial and industrial centers. The Angeles National Forest lies to the north of the project site beyond Vasquez Canyon Road. It contains undeveloped and protected forest areas.



LEGEND

Existing Land Use*

- RESIDENTIAL**
- Single Family Residential (Low & High Density SFR, Rural Residential Low & High Density)
 - Multi-Family (Multi-Family & Mixed-Multi-Family Residential, Duplexes, Triplexes, & 2 or 3 Unit Condos and Townhouses, Low-Rise Apartments & Condos, Medium-Rise Apartments & Condos)
 - Mobile Homes and Trailer Parks (Low & High Density)
 - Mixed Residential (Not shown on West Planning Area Map - Small parcel @ North tip of Castaic Lake)
- COMMERCIAL/OFFICE**
- Commercial (Commercial, Commercial Storage, Retail Stores and Commercial Services, Modern & Older Strip Development, Retail Centers Non-Strip Contiguous Interconnected, Commercial Recreation, Regional Shopping Mall, Hotels & Motels, Other Commercial)
 - General Office Use (Unknown, Low- & Medium-Rise Major Office Use)
- INDUSTRIAL**
- Extraction (Mineral - Oil & Gas, Mineral - Other Than Oil & Gas, Wholesaling & Warehousing)
 - Industrial & Light Industrial (Wholesaling & Warehousing, Research & Development, Open Storage, Motion Picture & Television Studio Lots, Manufacturing Assembly & Industrial Services)
 - Heavy Industrial (Chemical Processing, Manufacturing, Open Storage)
 - Unknown Industrial
- PUBLIC SERVICES**
- Public Facilities (Government Offices, Police & Sheriff Stations, Fire Stations, Major Medical Health Care Facilities, Religious Facilities, Other & Unknown Public Facilities)
 - Special Use Facilities (Correctional, Special Care, & Other Special Use Facilities, Base Built-up Area)
 - Educational Institutions (Pre-Schools Day Care Centers, Elementary, Junior or Intermediate or Senior High, Schools, Colleges & Universities)
- TRANSPORTATION, COMMUNICATION, AND UTILITIES**
- Transportation (Airports, Railroads, Freeways & Major Roads, Truck Terminals, Bus Terminal & Yards, Park & Ride Lots)
 - Utility & Communication Facilities (Electrical Power, Water Storage & Transfer, Natural Gas & Petroleum, Improved Waterways & Structures, Communication Facilities)
 - Unknown Transportation, Communications, and Utilities
 - Maintenance Yards
 - Mixed Transportation
 - Mixed Commercial and Industrial
 - Solid and Liquid Waste Facilities
- VACANT LAND**
- Vacant (Urban, Undifferentiated, w/Limited Improvements, Abandoned Orchards & Vineyards)
- OPEN SPACE**
- Agriculture (Existing Orchards & Vineyards, Dairy, Livestock, and Associated Facilities, Horse Ranches, Irrigated & Non-Irrigated Cropland and Improved Pasture Land, Nurseries, Other Agriculture, Poultry Operations, Unknown Agriculture)
 - Open Space & Recreation (Cemeteries, Golf Courses, Local Parks & Recreation, Other & Unknown Open Space & Recreation, Regional Parks & Recreation, Unknown Open Space & Recreation, Developed & Undeveloped Local & Regional Parks)
 - Angeles National Forest
 - Waterbody and Perennial Stream

*Land Use Data updated as of September 9, 2003.

--- Project Boundary

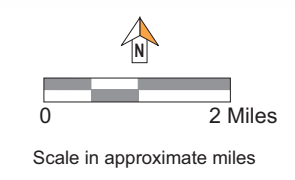


Figure 4.Q-3
Surrounding Land Uses

Source: Santa Clarita Valley General Plan, Technical Background Report, 2004

Once an outlying bedroom community, the Santa Clarita Valley has more recently gained attraction as an employment center and reached a sufficient population size to support an increasing range of commercial activities. Northern Los Angeles County and the Santa Clarita Valley are rapidly growing areas accommodating ever-larger portions of regional growth. Between 1990 and 2000, the 10 largest cities in Los Angeles County with populations greater than 50,000 had an annual growth rate of 0.7 percent in contrast to 3.2 percent for the City of Santa Clarita.⁴

3. PROJECT IMPACTS

a. Thresholds of Significance

For the purposes of this analysis, the proposed project would have a significant impact on land use if:

- The project would be inconsistent with existing land use plans, policies or regulations intended to prevent an impact to the environment.⁵
- The interface of physical and operational characteristics of the project would substantially conflict with the surrounding land uses.
- The project would result in the division, disruption or isolation of an existing established community or neighborhood.

b. Methodology

The land use analysis addresses the projects' relationship to the existing land use regulations that are applicable to the project site, and the relationship between the project and its surrounding uses. The analysis regarding the regulatory framework compares the proposed uses to the uses recommended, encouraged and/or facilitated in applicable local and regional plans and policies. This analysis identifies applicable plans, policies and goals, delineates the pertinent sections, and discusses the relationship between the proposed uses and the regulatory requirements. *State CEQA Guidelines* Section 15125(d) requires that an EIR discuss

⁴ *OVOV Program. Santa Clarity Valley General Plan, Technical Background Report, February 2004. Page 2-35.*

⁵ *This criterion of significance is focused on whether a project is generally compatible with and does not frustrate adopted land use policies. The evaluation recognizes that an inconsistency with a plan, policy, or regulation does not necessarily equate to a significant impact on the environment. Impacts on the environment pursuant to CEQA ordinarily focus on changes in the physical environment. A plan or policy inconsistency is considered significant if it would directly or indirectly lead to a physical impact on the environment.*

inconsistencies with applicable plans that the decision-makers should address. Evaluations are made as to whether the project is inconsistent with the plans. The project is considered consistent with General Plan provisions and SCAG policies if it is generally compatible with and would not preclude attainment of their primary intent.

The analysis of the project's relationship to existing uses compares the proposed uses to the existing land uses surrounding the project site to determine whether the project would physically divide established communities. The analysis is based on aerial photography, land use maps, and field surveys in which surrounding uses were identified and characterized. As such, the analysis addresses general land use relationships and urban form. The extent to which the project would result in impacts on traffic, noise, etc. is addressed throughout the EIR in the analysis of the applicable issues, such as Traffic (Section 4.F), Air Quality (Section 4.H), and Noise (Section 4.G).

c. Proposed Development

The project applicant proposes to develop approximately 622 acres of the site with 1,260 single-family residential lots along with a 12-acre elementary school site, approximately 12 acres of public parkland, approximately 6 acres of private parkland, and hiking and bicycle trails. The 1,260 single-family homes would be characterized by a traditional lot orientation at net densities ranging from 3.0 to 4.0 dwelling units per acre on lots with pads ranging in size from 5,775 to 7,350 square feet. Maximum building heights would be 35 feet and minimum setbacks would be 5 feet for side-yards, 15 feet for backyards and 20 feet (14 feet to the sidewalk) for front yards.⁶ A plan map of the area to be developed in housing is provided in Figure 2-4 on page 2-8 of the Project Description.

The 12-acre parcel of land that is proposed to be set aside for the construction of an elementary school would be developed, operated and maintained by the Sulphur Springs School District. The project would provide approximately 18 acres of public and private park space, which would include a 12-acre public neighborhood park, a 2.5-acre private park for passive recreation, and eight pocket parks totaling approximately 3.7 acres. The proposed 12-acre public park would include the following features: a community gathering area and shade structure; a children's play area with parents' seat wall; picnic tables; grass volleyball area; open lawn area; basketball court; ball field with bleachers; multi-use ball field; a comfort station with restrooms, a drinking fountain, and storage room; and parking for 20 cars. In addition, security lighting,

⁶ *The number and size of lots within the proposed project may be subject to change. However, such changes would not increase the number or residential lots, decrease the amount of open space nor parks, or alter the overall footprint proposed for development.*

trash enclosures, and locking gates would also be provided.⁷ Project development would be organized along a system of internal roadways, sidewalks and parkways. Internal roadways would link to the regional network via the extension of Whites Canyon Road from the west through the project site east to Sierra Highway. This roadway is planned for two travel lanes in each direction separated by a center median and containing landscaped parkways of variable width within an 88- to 94-foot right-of-way northerly to the public park site and within an 80-foot right-of-way from the park site to Whites Canyon Road. The extension of Whites Canyon Road was conditionally approved as Skyline Ranch Road by the Los Angeles County Department of Public Works on July 19, 2006 and is shown on the Draft Highway Plan.

Development is proposed for the southern portion of the property where slopes of 25 percent or less predominate. As further described in Chapter 2.0, Project Description, nearly three quarters of the site (the northern 1,551 acres) would remain undeveloped with approximately 1,355 acres proposed as the Skyline Ranch Conservation Area (SRCA). Approximately 166 acres of undeveloped land on the Cruzan Mesa would remain undeveloped and designated as a Non-Development/Continuing Use Area. In addition, approximately 21.6 acres within the northern portion of the site would be preserved as replacement habitat for 21.6 acres of preserve area within recorded Tract 46018 that would be disturbed due to the proposed construction of Skyline Ranch Road. Together these areas would preserve nearly all of the proposed Cruzan Mesa SEA, and no development associated with the project would occur within the proposed SEA that is located on site. The remaining undeveloped northern area, approximately 9 acres, would be designated as undeveloped open space without conservation easements or restrictions.

d. Impact Analysis

(1) Impacts regarding Regulatory Setting

(a) SCAG RTP and Compass Growth Visioning

As described in the Setting Section above, SCAG reviews projects for consistency with goals, policies and principles of the RTP and Compass Growth Visioning process. Multiple elements of the project are supportive of the concepts and policies within those documents. The proposed project consists of a residential development which supports/encourages the efficient use of infrastructure facilities by; placing housing adjacent to existing development; concentrating development in an area via a density transfer to preserve environmentally sensitive lands; developing land uses (such as paseos, bike lanes and hiking trails) which create opportunities for residents to walk and bike; and preserving open space. More specifically,

⁷ *Written correspondence, James Barber, Section Head, Land Acquisition/Developer Obligations, County of Los Angeles Department of Parks and Recreation, October 20, 2008.*

project implementation would increase the supply of housing to accommodate the region's growth. The proposed infrastructure improvements and the provision of an on-site school and parks would serve the residents' demand for public services.

Based on these characteristics, the project would be consistent with the SCAG policies. Table 4.Q-1, Project Consistency with Relevant SCAG Policies, on page 4.Q-18 provides a more detailed analysis of the project's consistency with specific SCAG goals and policies.

(b) SCAQMD AQMP

The air quality impacts associated with the project and the project's consistency with the AQMP are discussed fully in Section 4.H, Air Quality. As discussed therein, the project would be consistent with the AQMP and would not have a significant long term impact with respect to the plans and policies contained in the AQMP.

(c) MTA CMP

The traffic impacts associated with the project and the project's consistency with the CMP are discussed fully in Section 4.F, Traffic/Access. As discussed therein, development of the project would not result in significant impacts to the CMP road network (after mitigation), freeway segment, or public transit. As such, the project would be consistent with the CMP, and would not have a significant impact with respect to the CMP.

(d) Countywide General Plan

As described in the Setting subsection above, the Countywide General Plan/Streamlined Plan includes numerous policies that address development for projects and setting similar to those of the proposed project. Those policies are listed and discussed in Table 4.Q-2, Project Consistency with Los Angeles County General Plan Policies, on page 4.Q-22. As indicated, the project is supportive of and consistent with those policies.

(i) Circulation Element

The project would construct a network of collector roads to provide local access for proposed land uses as well as a tie-in to the regional network via a connecting road between Whites Canyon Road and Sierra Highway. As further described in Section 4.F, Traffic/Access,

Table 4.Q-1

Project Consistency with Relevant SCAG Policies

Regional Transportation Plan Policies (Adopted May 2008)	Project Consistency
Regional Transportation Plan Goals	
RTP G1: Maximize mobility and accessibility for all people and goods in the region.	Consistent. As presented in Section 4.F, Traffic, the proposed project would include a new roadway extending Whites Canyon Road to Sierra Highway (i.e., Skyline Ranch Road), provide other intersection improvements, and pay Bridge and Thoroughfare (B&T) Districts Fees, all of which would contribute towards transportation improvements within the Santa Clarita Valley to accommodate future growth. The proposed project would also facilitate the extension of existing bus service along Skyline Ranch Road.
RTP G2: Ensure travel safety and reliability for all people and goods in the region.	Consistent. As described above for Goal RTP G1, the proposed project would contribute towards transportation improvements identified within the B&T Districts. These improvements are consistent with those identified in the Draft County and City Circulation Elements, the County Congestion Management Program (CMP), the Regional Transportation Plan (RTP), the Regional Transportation Improvement Plan (RTIP), and the State Transportation Improvement Plan (STIP) to ensure regional travel safety and reliability. These plans are addressed in Section 4.F, Traffic/Access.
RTP G3: Preserve and ensure a sustainable regional transportation system.	Consistent. Refer to discussion above for Goal RTP G1 and Goal RTP G2.
RTP G4: Maximize the productivity of our transportation system.	Consistent. Refer to discussion above for Goal RTP G1 and Goal RTP G2.
RTP G5: Protect the environment, improve air quality and promote energy efficiency.	Consistent. The proposed project would concentrate development in the southern portion of the site to minimize environmental impacts on sensitive resources and steep slope areas in the northern portion of the site. As described in Section 4.H, Air Quality and 4.S, Global Climate Change, the proposed project would incorporate provisions of the County's Drought-Tolerant Landscaping Ordinance and Green Building Ordinance, project features and mitigation measures to improve air quality and promote energy efficiency. Such measures and features include the provision of landscaped pathways, paseos and bike lanes, and the extension of existing bus service along Skyline Ranch Road to reduce vehicle miles traveled and encourage alternate forms of transportation. The proposed project would also include energy efficient lighting, energy efficient building standards, and a green educational program to reduce energy use.

Table 4.Q-1 (Continued)

Project Consistency with Relevant SCAG Policies

Regional Transportation Plan Policies (Adopted May 2008)	Project Consistency
RTP G6: Encourage land use and growth patterns that complement our transportation investments.	Consistent. The proposed residential development would be located adjacent to existing residential use and would include a new road to extend Whites Canyon to Sierra Highway. This roadway is consistent with the recommended alignment in the County's Draft Highway Plan, and in conjunction with other B&T improvements, would improve regional circulation. Also refer to the discussion regarding Growth Visioning, Principle 1 below.
RTP G7: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies	Not Applicable. This goal applies to system monitoring and planning activities that would be carried out by SCAG and/or other transportation agencies
Regional Transportation Plan Policies	
RTP P1: Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.	Consistent. This policy is directed toward SCAG activities pertaining to the implementation of its own policies and to agencies with jurisdiction over the management of transportation systems (e.g., Caltrans, Metro, County and City transportation departments, etc.). The performance standards (or measures) set levels of service and/or improvements that can be used to monitor the quality of transportation systems (e.g., improve travel speeds by 8 percent, a return of \$2.21 for every \$1.00 invested). However, as previously stated, the proposed project would provide a regional roadway connection and funding or implementation of additional improvements within the B&T District.
RTP P2: Ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-modal transportation system will be RTP priorities and will be balanced against the need for system expansion investments.	Consistent. Refer to discussion above for Goal RTP G1 and Goal RTP G2.
RTP P3: RTP land use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions.	Consistent. As discussed in Section 4.R, Population, Housing and Employment, the proposed project would be consistent with currently expected trends for the Regional Area and Subregional Area. Also refer to the discussion regarding Growth Visioning, Principle 1 below.
RTP P4: HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy #1.	Not Applicable. This policy is directed toward agencies with jurisdiction over the management of transportation systems (e.g., Caltrans, Metro, County and City transportation departments, etc.). No HOV gap closures are proposed as part of the project or as traffic mitigation measures associated with project traffic.

Table 4.Q-1 (Continued)

Project Consistency with Relevant SCAG Policies

Regional Transportation Plan Policies (Adopted May 2008)	Project Consistency
RTP P5: Progress monitoring on all aspects of the Plan, including timely implementation of projects, programs, and strategies, will be an important and integral component of the Plan.	Not Applicable. This policy pertains to SCAG planning and monitoring activities. The proposed project would not interfere with the ability of SCAG to perform such monitoring.

COMPASS/Growth Visioning Principles

Principle 1: Increasing the Region's Mobility

GV P1.1: Encourage transportation investments and land use decisions that are mutually supportive.

GV P1.2: Locate new housing near existing jobs and new jobs near existing housing.

GV P1.3: Encourage transit-oriented development.

GV P1.4: Promote a variety of travel choices.

Consistent. Through the Growth Visioning effort, SCAG seeks to address densification, infill and increased employment opportunities on the 2% of the land that produces the greatest policy achievement for the least land affected. This strategy is intended to address the regional distribution of development so as to reduce vehicle miles traveled, improve the jobs/housing balance ratio, etc. The proposed project site is located outside of the 2% areas, on a parcel that is zoned for, and by its character best suited for, single family residential development. As such, the project's residential development would not interfere with implementation of the 2% strategy. The proposed residential use is consistent with SCAG's adopted projections for housing needs within the Regional and Subregional Areas; and represents a type of development that is accounted for by SCAG and addressed in their planning efforts. For further discussion, see Section 4.R, Population, Housing and Employment.

Further, the project would be located near existing commercial uses along Sierra Highway, and planned commercial uses associated with development to the west. It would include the extension of Whites Canyon Road to Sierra Highway, which would provide a connection to the regional roadway system and facilitate the extension of bus service to the project site. The proposed project would also provide landscaped pathways, paseos, and bike lanes that link to the onsite parks and school as well as offsite areas.

Principle 2: Foster Livability in all Communities

GV P2.1: Promote infill development and redevelopment to revitalize existing communities.

GV P2.2: Promote developments, which provide a mix of uses.

GV P2.3: Promote "people scaled," walkable communities.

Consistent. The proposed project is an extension of existing residential uses to the west and would provide new utility infrastructure, which would connect to the existing infrastructure. Development of the residential uses would include landscaped pathways, paseos, and bike lanes to encourage walking and bicycling to the school, parks, and offsite areas. The proposed development would provide

Table 4.Q-1 (Continued)

Project Consistency with Relevant SCAG Policies

Regional Transportation Plan Policies (Adopted May 2008)	Project Consistency
GV P2.4: Support the preservation of stable, single-family neighborhoods.	distinctive neighborhoods, parks, and a neighborhood school, at a density that would contribute to the overall range of housing and would be located adjacent to a mixed-use development planned to the west of the project site. The proposed project would not conflict with the goal to enhance the stability of existing single-family neighborhoods, as the residential uses would be similar in mass, height, and density as the adjacent neighborhood.
Principle 3: Enable Prosperity for all People	
GV P3.1: Provide, in each community, a variety of housing types to meet the housing needs of all income levels.	Consistent. Many of the Principle 3 items apply to civic responsibilities that are beyond the scope of an individual project. However, the proposed project would be consistent with associated policies because the project would provide a school site and additional tax revenues that may be used by the County to enhance the community and support local policies that encourages balanced growth and civic activities. There is nothing in the project that would inhibit the furtherance of the stated principle.
GV P3.2: Support educational opportunities that promote balanced growth.	
GV P3.3: Ensure environmental justice regardless of race, ethnicity or income class.	
GV P3.4: Support local and state fiscal policies that encourage balanced growth.	
GV P3.5: Encourage civic engagement.	
Principle 4: Promote Sustainability for Future Generations	
GV P4.1: Preserve rural, agricultural, recreational and environmentally sensitive areas.	Consistent The proposed project would cluster development within the southern portion of the site to preserve or otherwise avoid development within the environmentally sensitive areas in the northern portion of the site and preserve portions of the site that are within the County's proposed Cruzan Mesa Vernal Pools SEA. The proposed project would incorporate the provisions of the County's Green Building Ordinance and Drought-Tolerant Landscaping Ordinance. The Green Building Ordinance requires the recycling of 65 percent of construction waste. As described in Section 4.S, Global Climate Change, the proposed project would utilize green development techniques such as the incorporation of energy efficient lighting, energy efficient building standards, and a green educational program to reduce energy use.
GV P4.2: Focus development in urban centers and existing cities.	
GV P4.3: Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.	
GV P4.4: Utilize "green" development techniques.	

Sources: PCR Services Corporation, 2008; SCAG, 2008.

Table 4.Q-2

Project Consistency with Los Angeles County General Plan Policies

General Plan Policy	Analysis of Project Consistency
Policy 1: Require that new developments in non-urban areas have adequate accessibility to paved roads and water lines of sufficient capacity.	Consistent. The project would be located adjacent to existing development and would connect to existing infrastructure. In addition, the project proposes new paved roads to ensure adequate on-site circulation and access and connections with the surrounding roadways. The project would provide adequate utility infrastructure and road access as further described in Sections 4.I, Water Resources, 4.J, Wastewater Disposal, and 4.F, Traffic/Circulation, of this EIR.
Policy 14: Assure that new development is compatible with the natural and manmade environment by implementing appropriate locational controls and high quality design standards.	Consistent. The project would concentrate development within the southern portion of the project site via a density transfer. This would allow the northern portion of the project site to remain as open space, thus preserving portions of the site that are being proposed by the County as a major portion of a Significant Ecological Area, and reducing potential impacts on hillsides. Additionally, project implementation would be guided by development and design standards and would be subject to County review and approval. The project's compatibility with surrounding environment is discussed further below.
Policy 15: Protect the character of residential neighborhoods by preventing the intrusion of incompatible uses that would cause environmental degradation such as excessive noise, noxious fumes, glare, shadowing and traffic.	Consistent. The project would locate residential uses adjacent to existing residential development. Therefore, the project would not introduce incompatible uses that would disrupt existing neighborhoods. While the project would have impacts associated with noise, air quality, and traffic, these impacts would not meaningfully change the character of residential neighborhoods. Noise, air, light, and traffic are analyzed in Sections 4.G, Noise; 4.H, Air Quality; 4.E, Visual Qualities; and 4.F, Traffic/Circulation, respectively, of this EIR.
Policy 17: Establish and implement regulatory controls that ensure compatibility of development adjacent to or within major public open space and recreation areas including National Forests, the National Recreation Area, and State and regional parks.	Consistent. As discussed above, the project would involve a density transfer that would allow the northern portion of the site to remain as open space; thus, resulting in a contiguous area of open space leading up to the Angeles National Forest. The project's proposed residential development would be buffered from the proposed SEA and open space areas by existing topography. The project's compatibility with the surrounding environment is discussed further below.
Policy 25: Establish land use controls that afford effective protection for significant ecological resources, and lands of major scenic value.	Consistent. As discussed above, the project would concentrate development within the southern portion of the project site via a density transfer. This would allow the northern portion of the project site to remain as open space, thus preserving areas of the site being proposed by the County as a major portion of a potential Significant Ecological Area and minimizing environmental impacts on the hillsides. The

Table 4.Q-2 (Continued)

Project Consistency with Los Angeles County General Plan Policies

General Plan Policy	Analysis of Project Consistency
Policy 30: Prevent inappropriate development in areas that are environmentally sensitive or subject to severe natural hazards, and in areas where essential services and facilities do not exist and are not planned.	<p>project site's most prominent and visible ridgeline, running along the eastern edge of the site, would also be preserved.</p> <p>Consistent. As discussed above, the northern portion of the project site would remain as open space, thus preserving a potential Significant Ecological Area and minimizing environmental impacts on the hillsides. Additionally, the proposed residential development would be concentrated in an area adjacent to existing development. Thus, the project would have access to existing services and would connect to existing infrastructure adjacent to the site and in the nearby vicinity.</p>

this connecting roadway has been proposed pursuant to consultation with the County and has been conditionally approved by the Los Angeles County Department of Public Works as Skyline Ranch Road. The Los Angeles County Highway Plan currently shows an extension of Whites Canyon Road being routed through the property's proposed northern open space area and the SEA proposed by the County with a connection to Vasquez Canyon Road. The plan also shows a future roadway segment for Cruzan Mesa Road between Whites Canyon Road and Sierra Highway. Issues associated with constructing these roadways as shown in the Highway Plan have been of concern to the County due to the amount of grading that would be required and the impact the proposed alignments would have on sensitive biological resource areas, and the County's interest in establishing an SEA on the project site. The proposed project would support the County's interests in protecting a proposed SEA and eliminating the need to provide the roadways through this regionally significant biological resource area by transferring development to the southern portion of the project site, and providing a new roadway between Whites Canyon Road and Sierra Highway which could serve as an alternative routing. This proposed roadway has been conditionally approved by the Los Angeles County Department of Public Works and, under the current County General Plan Update process, the roadway connection proposed by the project is shown on the Draft Highway Plan. Implementation of an amendment to the Highway Plan will be at the discretion of the County as part of their General Plan update independent of the proposed project.

(e) Santa Clarita Valley Area Plan

As described in the Setting subsection above, the Santa Clarita Valley Area Plan includes numerous policies and provisions that address development for projects and settings similar to those of the proposed project. Applicable policies are listed and discussed in Table 4.Q-3, Project Consistency with Santa Clarita Area Plan Policies, on page 4.Q-24. As indicated, the

Table 4.Q-3

Project Consistency with Santa Clarita Area Plan Policies

Area Plan Policy	Analysis of Project Consistency
<p>Land Use, Policy 2.3: Concentrate land use growth in and adjacent to existing urban, suburban, and rural communities. Within these areas, encourage development of bypassed lands designated and appropriate for development.</p>	<p>Consistent. The project would concentrate development in the southern portion of the site, an area more suited for development. The proposed residential uses would be located adjacent to existing residential development and would have access to existing services and infrastructure.</p>
<p>Land Use, Policy 2.4: Consider residential densities as averages to allow for the clustering of development and/or transfer of unit credit as provided for in the Plan.</p>	<p>Consistent. The project would involve a density transfer from the northern portion of the project site to the southern portion as provided for in the Plan.</p>
<p>Land Use, Policy 2.5: Allow for density transfer (the rearrangement of allowed residential units among various land use classifications on a project site) as a means to attain plan goals such as preservation of hillsides, and to promote superior design and allow flexibility to respond to changing housing needs.</p>	<p>Consistent. As discussed above, the project would involve a density transfer from the northern portion of the project site to the southern portion. The northern portion of the site would remain as open space; thus, avoiding impacts to the existing hillsides in the north. The southern portion of the site would be developed with residential uses that would help meet the Santa Clarita Valley's housing needs.</p>
<p>Land Use, Policy 4.2: Designate areas of excessive slope (exceeding 25 percent) as "Hillside Management Areas," with performance standards applied to development to minimize potential hazards such as landslides, erosion, excessive run-off and flooding.</p>	<p>Consistent. The majority of the project site is designated as Hillside Management Areas, due to the presence of slopes in excess of 25 percent. The project's residential uses would be developed in accordance with the County's ordinance for Hillside Management Areas and other applicable regulations. In addition, project construction would occur in accordance with a NPDES permit and County storm drain requirements to minimize the potential for landslides, erosion, run-off, and flooding. The project's impacts on landslides, erosion, runoff, and flooding would be less than significant with mitigation, as further analyzed in 4.A, Geological Resources, and 4.B, Hydrology and Water Quality, of this EIR.</p>
<p>Land Use, Policy 5.1: Direct future growth away from areas exhibiting high environmental sensitivity to development unless appropriate mitigating measures can be implemented.</p>	<p>Consistent. As discussed above, the project would involve a density transfer from the northern portion of the project site to the southern portion. This would allow the northern portion of the project site with the highest environmental sensitivity to remain as open space, and would preserve large portions of a potential Significant Ecological Area and minimize environmental impacts on the hillsides.</p>

Table 4.Q-3 (Continued)

Project Consistency with Santa Clarita Area Plan Policies

Area Plan Policy	Analysis of Project Consistency
<p>Land Use, Policy 5.3: Designate significant plan and wildlife habitats in the Santa Clarita Valley as Significant Ecological Areas and establish appropriate measures for their protection.</p>	<p>Consistent. As part of the County General Plan update, the majority of the northern portion of the project site has been identified as a potential Significant Ecological Area. As discussed above, the project proposes that 1,355 acres of this area remain as open space and avoids impacts to an additional 166 acres of this area. Together these two areas would preserve the undeveloped area of the site within the proposed SEA. Thus, the project would be consistent with the County's proposed Significant Ecological Area designation.</p>
<p>Land Use, Policy 5.4: Permit appropriate land uses that are compatible with the resource values present in identified Significant Ecological Areas.</p>	<p>Consistent. As discussed above, the project proposes that 1,355 acres concentrated in the northern portion of the project site, which has been identified as a potential Significant Ecological Area, remain as open space. Approximately 166 additional acres within the northern area of the site also proposed as an SEA, would remain undeveloped. The project's proposed development would not significantly affect existing or proposed SEAs. Therefore, the project would not introduce incompatible uses that could impact a potential Significant Ecological Area.</p>
<p>Land Use, Policy 7.1: Encourage development of convenient services to meet the needs of Santa Clarita Valley residents including health; education; welfare; police and fire protection; governmental operations; recreation and cultural facilities; and public utilities. Such services should be expanded at a rate commensurate with population growth. Phasing of development and implementation should be timed to prevent gaps in service as the area grows. Where feasible, service facilities will be established in central urban areas, with branches located in outlying communities. When the population base in a community is too small to support a facility, a common facility—to be shared by several small communities—should be established at a central point.</p>	<p>Consistent. As discussed above, the project's residential uses would be located adjacent to existing residential development. Therefore, project residents would have access to existing services and infrastructure. The project proposes infrastructure improvements (i.e., water, sewer, energy) to meet the utility demands of the new residents. The project would also include a new school and parks and recreation facilities. In addition, the project would generate revenue to the County that would be available for use for capital/staffing improvements to public services.</p>
<p>Land Use, Policy 9.2: Encourage development of access throughout the Santa Clarita Valley.</p> <p>a. As development occurs in each community, appropriate links should be provided from residential areas to major destination point; e.g., employment, shopping, public facilities and services, recreation and entertainment.</p>	<p>Consistent. The project would include a new roadway extending Whites Canyon Road to Sierra Highway. This roadway would provide a new link in the regional network creating improved access for off-site population, and linking the project population to major destination points and facilitate the extension of existing bus service to the project site.</p>

Table 4.Q-3 (Continued)

Project Consistency with Santa Clarita Area Plan Policies

Area Plan Policy	Analysis of Project Consistency
<p>b. Support public transportation within communities and from outlying, low-density communities to urban area services and functions as feasible. Emphasis will be placed on service to those of highest need; e.g., the low-income and elderly, who are dependent on public services).</p>	
<p>Land Use, Policy 9.3: Encourage development of transportation systems consistent with the plan.</p>	<p>Consistent. Pursuant to consultation with the County, the project would provide access via a new connecting link between Whites Canyon Road and Sierra Highway. The new link between Whites Canyon Road and Sierra Highway would provide an alternative routing to existing plans that would be consistent with changes being proposed by the County and shown on the Draft Highway Plan. This alignment was conditionally approved by the Los Angeles County Department of Public Works on July 19, 2006.</p>
<p>Land Use, Policy 11.1: Encourage development of distinct neighborhoods. Residents should be able to identify themselves as a part of a specific neighborhood or community within the greater Santa Clarita Valley.</p>	<p>Consistent. The project would be distinct from, but compatible and consistent with, the existing character of the surrounding residential neighborhoods. Proposed landscaping and architectural themes would provide visual distinction between the proposed project and surrounding neighborhoods.</p>
<p>Environmental Resources Management, (Natural Resources), Policy 1.5: Encourage clustering of residential uses in hilly and mountainous areas to minimize grading and to preserve the natural terrain where consistent with existing community character.</p>	<p>Consistent. The project would cluster development in the southern portion of the site, through a density transfer, thus preserving or otherwise avoiding the existing hillsides in the north. The proposed development would be consistent with the existing community character of the surrounding residential neighborhoods.</p>

project is supportive of and consistent with those policies. The Santa Clarita Valley Area Plan allows the transfer of densities as further described below.

(f) Regulatory Guidelines/Los Angeles County Zoning Code

As mentioned above, the proposed project would be developed through the provisions specified in Condition Use Permits (CUPs) for density-controlled development and hillside management in accordance with the County Zoning Code. Under the provisions of the CUPs, the project would be subject to special requirements pertaining to area, density, open space, parking, etc. The CUPs would serve as a bridge to the policies of the General Plan, the Santa

Clarita Valley Area Plan, applicable County Zoning requirements and guidelines, and the development plans for the property. The project would be designed to comply with height and yard/setback requirements of the R-1 zone, which are applicable to the project site's underlying A-1-10,000 and A-2-1 Agricultural zones.

The density of the project would be consistent with the provisions of the General Plan and Santa Clarita Valley Area Plan. These plans establish density limits that range from 1 dwelling unit per 20 acres to 15 dwelling units per acre depending on the land use classification. The plans also allow for the transfer of densities from one portion of a site to another to encourage development that avoids steep slopes, avoids potentially hazardous conditions, preserves significant ecological areas, minimizes grading, encourages efficient use of infrastructure, etc. As discussed above, the project site is designated by the Santa Clarita Area Plan as urban (U1, U2, U3), nonurban (N2), floodway (W), and hillside management area (HM). (See Figure 4.Q-1 on page 4.Q-8.) The majority of the site is designated as Hillside Management.

A calculation of the maximum amount of development allowed on the project site, given its land use classifications, is presented in Table 4.Q-4, Allowable Density for the Proposed Project, on page 4.Q-28. Table 4.Q-4 identifies the amounts of each land use classification on the project site, the density allowed in each classification, and the resulting number of units that could be developed on the project site. As indicated, the maximum number of units allowed is approximately 1,362 units, or 102 more than the proposed 1,260 units.

The calculation of the density in Table 4.Q-4 has been prepared pursuant to the Santa Clarita Valley Area Plan, County Zoning Ordinance, and County protocols for calculating allowable density transfers. Generally speaking, the project is proposing to transfer the entitled 200 units from the northern portion of the project site to the southern portion. Further, it is transferring potential development from the more rugged central locations of the site to the southern part of the site. While the net densities of the neighborhood development would fall within the range of 3.0 to 4.0 dwelling units per acre, the overall/gross densities would be approximately 0.6 units per acre over the entire site, and approximately 2 units per acre over the 620 acres in the southern developed portion of the site.

In requesting the Conditional Use Permits, the project design supports County policies and the aims of the County provisions for density-controlled development and hillside management for the following reasons:

- The density transfer moves development from the more rugged portions of the project site (e.g., the central portion of the site which is dominated by areas in excess of 50 percent) to flatter portions of the project site. This would avoid impacts on a major

Table 4.Q-4

Allowable Density for the Proposed Project

Existing Land Use Designation	Acreage	Maximum Density	Maximum Units Allowed
Urban 1 (U1)			
0 to 25 Percent Slope	6.8	3.3 du/acre ^a	22.40
25 to 50 Percent Slope	3.0	3.3 du/acre ^a	9.90
> 50 Percent Slope	4.4	3.3 du/acre ^a	14.50
Subtotal	14.2		46.80
Urban 2 (U2)			
0 to 25 Percent Slope	10.82	6.6 du/acre ^a	71.40
25 to 50 Percent Slope	7.26	6.6 du/acre ^a	47.90
> 50 Percent Slope	15.22	6.6 du/acre ^a	100.50
Subtotal	33.33		219.80
Urban 3 (U3)			
0 to 25 Percent Slope	1.8	15 du/acre ^a	27.00
25 to 50 Percent Slope	1.6	15 du/acre ^a	24.00
> 50 Percent Slope	1.0	15 du/acre ^a	15.00
Subtotal	4.4		66.00
Floodway (W) (adjacent to U3) ^b			
0 to 25 Percent Slope	2.60	15 du/acre ^a	39.00
25 to 50 Percent Slope	.21	15 du/acre ^a	3.20
> 50 Percent Slope	0.21	15 du/acre ^a	3.20
Subtotal	3.02		45.40
Floodway (W) (adjacent to U2)			
0 to 25 Percent Slope	0.69	6.6 du/acre ^a	4.60
25 to 50 Percent Slope	1.0	6.6 du/acre ^a	6.60
> 50 Percent Slope	0.61	6.6 du/acre ^a	4.00
Subtotal	2.30		15.20
Floodway (W) (adjacent to Hillside Management)			
0 to 25 Percent Slope	0.24	0.5 du/acre	0.10
25 to 50 Percent Slope	0.20	0.5 du/acre	0.10
> 50 Percent Slope	0.85	0.5 du/acre	0.00
Subtotal	1.25		0.20
Nonurban 2 (N2) (outside ¼ mile Urban)			
0 to 25 Percent Slope	133.00	1 du/acre	133.80
25 to 50 Percent Slope	13.00	1 du/2 acre	6.50
> 50 Percent Slope	8.21	1 du/20 acre	0.42
Subtotal	154.21		140.72

Table 4.Q-4 (Continued)

Allowable Density for the Proposed Project

Existing Land Use Designation	Acreage	Maximum Density	Maximum Units Allowed
Hillside Management and N2 (within ¼ mile Urban)			
0 to 25 Percent Slope	183.74	1 du/acre	183.74
25 to 50 Percent Slope	164.70	1 du/acre	164.70
> 50 Percent Slope	263.56	1 du/20 acre	13.17
Subtotal	612.00		361.61
Hillside Management (outside ¼ mile urban)			
0 to 25 Percent Slope	438.95	1 du/2 acre	219.00
25 to 50 Percent Slope	450.95	1 du/2 acre	225.00
> 50 Percent Slope	458.67	1 du/20 acre	22.00
Subtotal	1,348.57		466.00
Total	2,173.25		1,361.73

^a Urban density transfer of units allowed per Santa Clarita Valley Area Plan, page 34.

^b The floodway designation W is used as U3 density through mitigating floodway measures, such as a drainage concept plan, that is required as part of the tract map approval process. Subject to LA County approval.

Source: PCR Services Corporation and Sikand Engineering, 2009.

ridgeline and development on steeper slopes in less accessible areas, reducing the amount of grading required for development, the area of disturbance per unit, potential development difficulties, and visual impacts;

- The density transfer moves development from an area within Cruzan Mesa that contains regionally significant biotic resources (vernal pools), that was previously approved for development, and supports that areas preservation and designation as a County SEA;
- The density transfer clusters development in an area that is adjacent to existing urban development with nearby infrastructure thereby avoiding the need to extend infrastructure to remote areas of the site;
- The density transfer would help support development of a regional roadway that would connect Whites Canyon Road and Sierra Highway consistent with a proposed update to the County Highway Plan. Compared to alignments shown on the current Highway Plan, this alternative roadway improvement would reduce grading and avoid impacts on sensitive biotic resources;

- The density transfer maintains the northern portion of the site in open space, thus preserving the rural character of the surrounding areas to the north, avoiding additional traffic in these areas, and providing transitional open space between development to the south and the National Forest to the north; and
- The density transfer supports the establishment of a well designed neighborhood with easily accessible parks and a public school site.

Further, the project would be consistent with zoning regulations as implemented through the Conditional Use Permit provisions and underlying zoning. Maximum building heights would not exceed 35 feet and setbacks would be consistent the setback requirements (20 feet for front yards (14 feet from the sidewalk), 5 feet for side yards, and 15 feet for rear yards). The location of buildings would be subject to the requirements of the Conditional Use Permit.

As described in Section 4.S, Global Climate Change, the proposed project would comply with the provisions of the Drought Tolerant Landscaping Ordinance and Green Building Ordinance. The proposed project would include energy efficient lighting, energy efficient building standards, and a green educational program. As stated in Section 4.B, Hydrology, the project was determined by the Los Angeles County Department of Regional Planning Department (LACDRP) to be exempt from the LID Standards Ordinance, because a completed application for a Vesting Tentative Map was filed prior to January 1, 2009.⁸ However, to address potential impacts on water quality due to construction and operation of the project, a Storm Water Pollution Prevent Plan and Standard Urban Stormwater Mitigation Plan would be prepared and submitted to the Los Angeles County Department of Public Works and Los Angeles Regional Water Quality Control Board for approval.

Summary and Conclusions Regarding Regulatory Consistency: As described above, the proposed project includes design features that support and that are compatible with policies established in the SCAG RTP and Compass Growth Visioning process, the Countywide General Plan, and the Santa Clarita Valley Area Plan. Further, the project would include zoning and conditional use conditions that support County policies and are consistent with the County's zoning ordinance and Green Building Program Ordinances. Therefore, it is concluded that the proposed project would be consistent with the existing land use plans, policies and regulations intended to prevent impacts on the environment. As such, the project would have no significant impacts related to consistency with applicable land use plans, regulations or policies.

⁸ A copy of the correspondence received from LACDRP and related County policy for determining whether a project is exempt is provided in Appendix C-4, LID Standards Ordinance Exemption Determination.

(2) Impacts Regarding the Relationship Between Uses/Compatibility

As discussed above, the project would involve a density transfer from a 360-acre northern portion of the project site to a 622-acre area in the south. This density transfer within the project site would allow the northern 1,551 acres of the site to remain undeveloped and allow for the establishment of the 1,355-acre SRCA, the 166-acre Non-Development/Continuing Use Area, and the County's proposed Cruzan Mesa SEA, while concentrating residential development in the south. Thus, the greatest length of the project edge abuts open space portions of the project. As there is no development along these edges, there would be no impacts on adjacent uses in these areas.

The placement of housing in the southern portion of the site would provide residential uses in areas adjacent to an existing single-family residential neighborhood, which lies immediately west and south of the site within the City of Santa Clarita. The residential uses would be similar in mass, height, and density to the adjacent neighborhood, but would be kept distinct by landscaping and architectural themes that would unify site development. The residential uses would not occur immediately adjacent to the existing mixed uses along Sierra Highway and would not have an effect on the character of that development.

Project development would be typical of new housing tracts occurring in the area, but would be separated by terrain and distance from other nearby tracts. The proposed housing lies within a large expanse of open space beyond nearby development, and outside of any existing neighborhoods. Access to the site would be via the extension of Whites Canyon Road/Skyline Ranch Road, an addition to the regional transportation network, and would not require the use of local neighborhood streets for site access. However, in order to provide access to the project entrance at Skyline Ranch Road and Sierra Highway, Sierra Highway is proposed to be widened approximately 28-feet within the existing right-of-way. Development of the proposed entrance would also require a cul-de-sac and hammerhead turnaround at the northeasterly terminus of Beneda Lane, where the road currently dead ends due to change in topography. These improvements at Skyline Ranch Road and Sierra Highway, along with other areas where the project's physical and operational characteristics interface with existing land uses, would not substantially conflict with the surrounding land uses nor result in the division, disruption or isolation of existing established neighborhoods. Therefore, impacts regarding the project's relationship to nearby land uses would be less than significant.

4. MITIGATION MEASURES

Impacts of the proposed project on land use would be less than significant. No mitigation measures are required.

5. CUMULATIVE PROJECT IMPACTS

The related projects consist mostly of single-family dwelling tract housing developments, with a total of 8,693 single-family dwelling units. They also include 8,746, multi-family units. Two of the projects (Golden Valley Ranch and the Town Center Mall Expansion) contain large commercial components of 619,000 square feet and 490,000 square feet respectively. Another project (Tract 51599) also contains a large amount of commercial development (i.e., 1.5 million square feet) and single- and multi-family residential units (i.e., 1,456 total dwelling units). In addition, the Downtown Newhall Specific Plan and North Newhall Specific Plan together anticipate additional development of 262,000 square feet commercial retail use, 205,000 square feet commercial office use, 245,000 square feet industrial park use, and a 1,350 student elementary school. The locations of the 48 related projects are referenced in Table 3-1 on page 3-3 and Figure 3-1 on page 3-6.

The related projects represent a densification of development within the Santa Clarita Valley, with development spreading outward from the more urbanized development within the City. For the most part the related projects are located at some distance from the proposed project. The nearest related project, primarily single and multi-family residential development within Tract 46018, is located west of the proposed project and north and south of the proposed extension of Whites Canyon Road. This related project is a continuation of existing residential development west and south of the project site and would also provide commercial development to support these uses. The related projects would extend and add to the development in the area, but would not substantially alter existing land use patterns in the vicinity of the project site, either individually or in combination with the proposed project. Therefore, the cumulative effect the project's physical and operational characteristics would not substantially conflict with the surrounding land uses. Further, the project would not contribute, in combination with other related projects, to the division, disruption or isolation of existing established neighborhoods. Cumulative impacts regarding the project's relationship to nearby land uses would be less than significant.

The proposed project would be consistent with the policies and regulations that are applicable to the project site, and would not contribute to a lack of consistency with the land use policies and regulations discussed in this section, even in combination with other related projects. It is expected that the related projects would be developed pursuant to the policies and regulations, and/or would include plan amendments to accommodate their development. Such amendments would be subject to appropriate review and CEQA analysis as required by law. As the proposed project is fully consistent with the existing density limits for the project site, and would not require plan nor zoning amendments, the project would not contribute to a cumulative effect with regard potential amendments associated with related projects. Therefore, the cumulative impacts regarding the regulatory framework would be less than significant.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Not applicable; impacts are less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

R. POPULATION, HOUSING AND EMPLOYMENT

1. INTRODUCTION

This section addresses the potential population, housing, and employment effects of the proposed project in the context of the local area (the Santa Clarita Valley Area Plan area), the Southern California Association of Governments (SCAG) subregion within which the project site is located (North Los Angeles County Subregion),¹ as well as a larger regional area (the County of Los Angeles). The analysis evaluates the proposed project's population, housing, and employment effects in relation to adopted growth forecasts and relevant policies and programs.

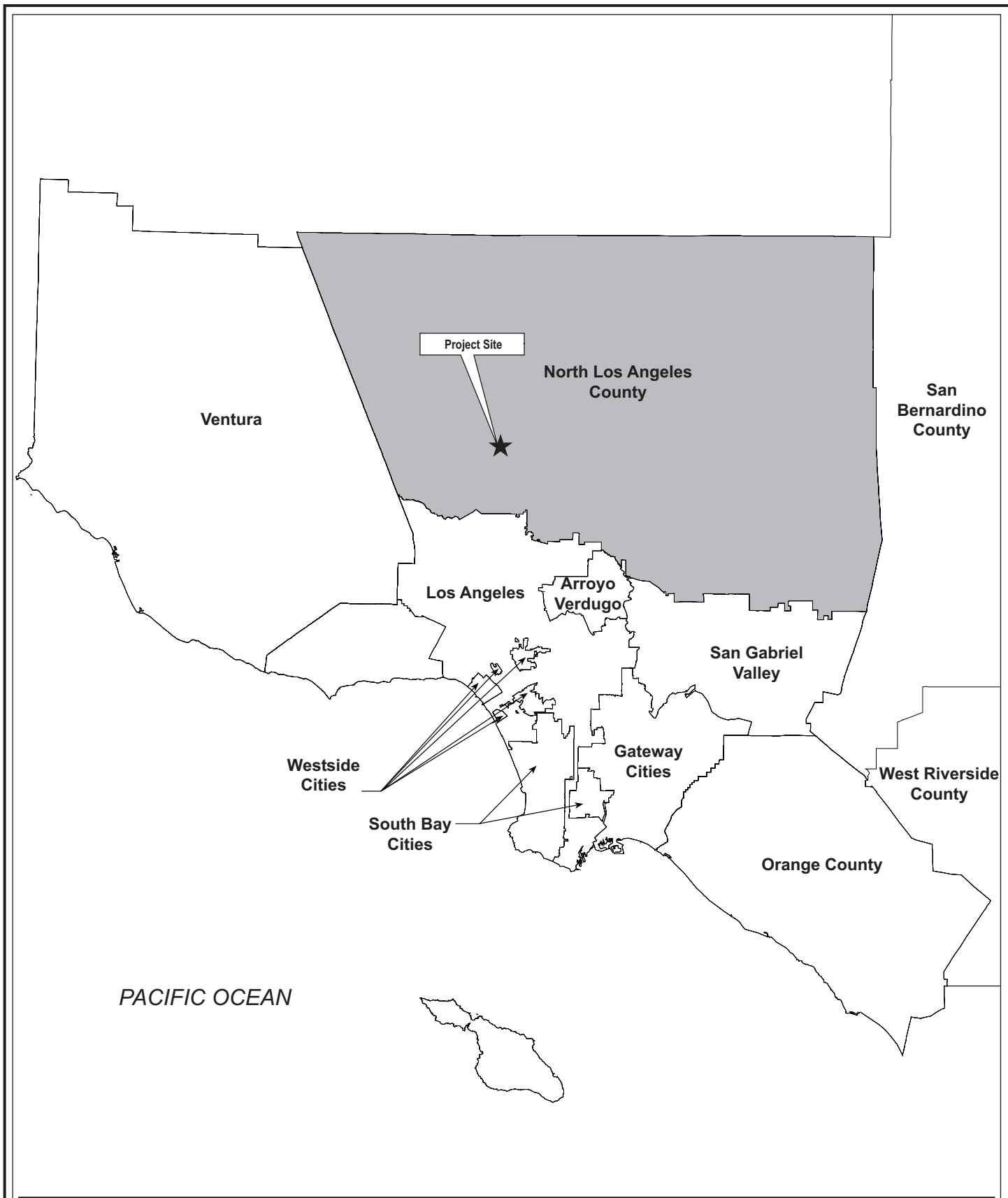
2. ENVIRONMENTAL SETTING

a. Regulatory Framework

(1) Regional Level

The proposed project is located within the jurisdiction of the Southern California Association of Governments (SCAG). SCAG is a Joint Powers Agency established under California Government Code Section 6502 et seq. Pursuant to federal and state law, SCAG serves as a Council of Governments, a Regional Transportation Planning Agency, and the Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial Counties. SCAG's mandated responsibilities include developing plans and policies with respect to the region's population growth, transportation programs, air quality, housing, and economic development. Specifically, SCAG is responsible for preparing the Regional Comprehensive Plan (RCP), the Regional Transportation Plan (RTP), and Regional Housing Needs Assessment (RHNA), in coordination with other state and local agencies. These documents include population, employment, and housing projections for the region and 13 subregions. The 13 subregions are shown on Figure 4.R-1, SCAG Planning Subregions, on page 4.R-2. The project site is located within the North Los Angeles County subregion.

¹ *The City of Los Angeles Subregion includes the City of Los Angeles and the City of San Fernando plus a small area of unincorporated Los Angeles County.*



No Scale Provided

Source: SCAG

Figure 4.R-1
SCAG Planning Subregions

(a) Regional Comprehensive Plan

As part of its planning obligations, SCAG prepared the 1996 Regional Comprehensive Plan and Guide (RCPG), and more recently prepared the 2008 Regional Comprehensive Plan (RCP), which has been accepted by SCAG for use as an advisory document that may be voluntarily used by local jurisdictions for developing local plans and addressing local issues of regional significance. These plans address issues related to future growth and to provide a means for assessing the potential impact of projects within the context of the region.

(b) Regional Transportation Plan

In May 2008, SCAG's Regional Council adopted the 2008 Regional Transportation Plan (RTP). The RTP contains Baseline Socioeconomic projections that are used as the basis for SCAG's transportation planning. They include projections of total population, households, and employment at the regional, county, subregional, jurisdictional, census tract, and transportation analysis zone levels. The 2008 RTP uses 2003 as the base year with projections for the years 2005, 2010, 2015, 2020, 2025, 2030, and 2035. The RTP identifies the amount of expected growth in the region and provides the expected distribution of that growth. The distribution reflects goals cited in the 2008 RTP. These goals are to maximize mobility and accessibility; ensure travel safety and reliability; preserve and ensure a regional transportation system; maximize productivity of our transportation system; protect the environment, improve air quality, and promote energy efficiency; encourage land-use and growth patterns that complement our transportation investments; and maximize the security of the regional transportation system through improved system monitoring.

(c) Compass Growth Visioning

SCAG also engages in the Compass Growth Visioning effort that addresses the regional development pattern so as to accommodate future development and provide land patterns that support improved mobility and reduced vehicle miles traveled and support the goals and policies established in the RTP. As part of the visioning effort, the Compass Blueprint 2% Strategy provides guidance for how and where SCAG can implement the Growth Vision for Southern California's future. It calls for modest changes to current land use and transportation trends on only 2% of the land area of the region. Directing the changes to the selected 2% of the land identified produces the greatest policy achievement for the least land affected.

(d) Regional Housing Needs Assessment

SCAG has also prepared a Regional Housing Needs Assessment (RHNA), which includes regional housing needs for the planning period from January 2006 through June 2014 as

adopted by SCAG on July 12, 2007.² The needs assessment provides the housing needs for very low income, low income, moderate income, and above moderate income groups. The housing needs for North Los Angeles County stated in the assessment were to provide 73,352 dwelling units of which 18,499 would be very low income, 11,661 would be low income, 12,554 would be moderate income, and 30,639 would be above moderate income.

(2) County Level

(a) County-Wide General Plan/Streamlined General Plan and General Plan Housing Element

The Countywide General Plan for Los Angeles County was prepared in 1980, with several Elements being revised and updated over the years.³ The Streamlined General Plan is a document that was prepared in January 1993 to provide a simplified version of the General Plan that would ease user access to its key components. It includes Countywide Goals and Policies that were current to 1993.

The Streamlined General Plan includes population, housing and employment data based on a 1987 base year, with projections to 2010. The 1987 data for the Santa Clarita Valley Planning Area indicates a population of 120,000 with 37,500 housing units and 32,000 employees. The 2010 projections estimate a future population of 270,000 with 93,400 housing units and 111,000 employees.

The Economic Development Element of the General Plan examines the economic conditions of the County and establishes goals and policies that support economic development and creation of job opportunities. These goals include increasing access to employment opportunities, improving job skills and encouraging the growth of new businesses in the County.

The Housing Element of the General Plan was updated in 2008.⁴ This Plan Element analyzes existing conditions, provides a needs assessment for future housing, identifies land availability/constraints to housing, identifies quantified housing objectives and provides goals and policies to support housing development that would meet housing needs. The quantified housing objectives for new housing construction address the time period of 2008 through 2014;

² Available at: <http://www.scag.ca.gov/housing/rhna/index.htm>.

³ The County is currently updating the General Plan, and has prepared a Draft General Plan (2008) that is available for public review at: <http://planning.lacounty.gov/generalplan>. An EIR that addresses the environmental impacts of the amended plan is expected to become available in the winter of 2009. Adoption of the updated Countywide General Plan is estimated for 2010. Until the updated plan is approved, the existing General Plan is the current governing document.

⁴ Adopted by the County on August 5, 2008 and certified by the California Department of Housing on November 6, 2008.

and they are presented in Table 2-1 of the Housing Element. The housing needs objectives for the unincorporated areas of Los Angeles County between 2008 and 2014 are as follows: 57,176 housing units, of which 46,621 are proposed as new construction. Of the 46,621 units, 591 units are proposed as extremely low income units; 621 are proposed as very low income units; 2,103 are proposed as lower income units; 4,341 are proposed as moderate income units; and 38,965 are proposed as above moderate income units.

The Goals in the Housing Element identify the County's desire to provide sufficient housing to meet all housing needs. The policies are oriented toward meeting the needs of special populations; e.g., lower income families, senior citizens, etc. They are oriented toward actions that the County can take to facilitate production of housing for these populations. Goals that are most relevant to the proposed project include the following:

- Goal 1: A wide range of housing types in sufficient quantity to meet the needs of current and future residents, particularly persons with special needs, including but not limited to low-income households, seniors, persons with disabilities, single-parent households, the homeless and at-risk homeless, and farmworkers.
- Goal 3: A housing supply that ranges broadly enough in price and rent to enable all households, regardless of income, to secure adequate housing.

(b) Santa Clarita Valley Area Plan

The Santa Clarita Valley Area Plan, adopted in 1984 and updated in 1990, is a component of the County of Los Angeles General Plan. It has been developed in conjunction with the other Chapters and Elements of the General Plan as a coordinated statement of public policy for use in making critical public decisions relating to the future of the Santa Clarita Valley. The Area Plan contains 11 elements: Land Use, Housing, Community Revitalization, Community Design, Economic Development, Circulation, Public Services and Facilities, Environmental Resources Management, Noise, Safety, and Energy Conservation. The County's Area Plan supplements and refines the Countywide perspective to reflect local needs. They set forth precise standards and criteria tailored to conditions within the community, which are still consistent with the general Countywide provisions.

The Santa Clarita Valley Area Plan includes demographic estimates for 1989, just prior to approval of the update, and projections for 2010. The 1989 data for the Santa Clarita Valley Planning Area indicated a population of 151,000 with 48,300 housing units and 32,000 employees. The 2010 projections are the same as those reported in the Streamlined General Plan: a future population of 270,000 with 93,400 housing units and 111,000 employees.

Policies included in the Land Use Element that are applicable to the population, housing and employment issue include the following:

- Accommodate the year 2010 population and land use demand as projected for the Santa Clarita Valley, designating sufficient area for appropriate use and a reasonable excess to provide adequate flexibility (Land Use, Policy 1.1);
- Closely monitor growth in the Santa Clarita Valley, so that growth does not exceed the capacity of the existing or planned infrastructure nor result in significant negative environmental impacts. (Land Use, Policy 1.2);
- Promote a balanced, autonomous community with a full range of public and commercial services and a wide variety of housing and employment opportunities to minimize the dependence upon southern Los Angeles County and to reduce long distance commuting and its impacts upon gasoline consumption and air pollution. (Land Use, Policy 1.4).

The policies included in the Housing Element of the Area Plan address a variety of means for promoting the development of housing to meet the needs of a variety of income levels and special housing needs.

The Santa Clarita Valley Area Plan was initially drafted prior to the incorporation of the City of Santa Clarita, and was later amended to reflect the incorporation. The City of Santa Clarita is responsible for land use decisions within its jurisdiction, while the County is responsible for land use decisions in the unincorporated area in which the project site is located. However, the project site is located adjacent to the City of Santa Clarita, and would contribute to the overall land use relationships in the area. Because the land use relationships within the City of Santa Clarita and the surrounding unincorporated areas are interrelated, the City and County are cooperatively preparing a 20-year plus Valleywide General Plan, referred to as the “One Valley One Vision,” program (OVOV). The OVOV would supplant the existing Santa Clarita Valley Area Plan. Visioning activities for this program began in Summer 2000, with subsequent preparation of a Vision and Guiding Principles statement and development of a Background Report. Drafts of the Plan Elements are currently being reviewed and public hearings on the plan are expected to occur in the later part of 2009, with adoption occurring in 2010. Until such time as this plan is adopted, the County’s existing Santa Clarita Valley Area Plan prevails.

b. Existing Setting

(1) On-Site Conditions

There are no existing residential uses within the proposed project site boundaries and, therefore, there is no permanent population on the site. The project site has no active land uses other than those that occur in the northern portion of the site within the area known as Cruzan Mesa. The northern portion of Cruzan Mesa is currently being leased for use as an outdoor movie location, thus supporting small amounts of employment activity on an intermittent basis. There is no employment activity within the portion of the site designated for new development.

(2) Demographic Analysis Areas

The project site lies within the boundaries of three geographic areas that have been identified to address the project's population, housing and employment impacts. These analytical areas represent three scales of development. The largest, the "Regional Area" is the County of Los Angeles. The "Subregional Area" is the North Los Angeles County Subregion as defined by SCAG. The location of this Subregion in the context of all SCAG subregions is shown on Figure 4.R-1. The most immediate area, the "Local Area" is the Santa Clarita Valley Area Plan area, as discussed above. The Local, Subregional and Regional demographic analysis areas are shown in Figure 4.R-2, Demographic Analysis Areas, on page 4.R-8. Conditions relating to population, employment, and housing for the Local, Subregional, and Regional Areas in 2007 are discussed below and shown in Table 4.R-1 , Total 2007 Population, Housing, and Employment (On- and Off-Site), on page 4.R-9.

(a) Population

The Santa Clarita Valley was, historically, an outlying residential suburb located beyond the Los Angeles metropolitan area. As land within the metropolitan area and, in particular, the San Fernando Valley, became scarce and land prices rose, the Santa Clarita Valley became the focus of increased regional growth, along with other locations within the North Los Angeles County Subregion. Much of the growth has been associated with the demand for residential development, largely fueled by those working in the metropolitan area who are seeking more affordable housing. While the growth was led predominantly by residential development, at the beginning of the 1990s, demand for industrial development in the Santa Clarita Valley increased along with the number and diversity of jobs. The growing population for the Santa Clarita Valley and other geographic areas addressed in this analysis are shown in Table 4.R-1. According to SCAG, the Local Area had a residential population of approximately 240,565 persons in 2007, while the Subregional and Regional Areas had estimated populations of 632,442 and 10,369,902, respectively.



LOCAL AREA: **Santa Clarita Valley Area Plan**

SUBREGIONAL AREA: **North Los Angeles County**

REGIONAL AREA: **County of Los Angeles**



Figure 4.R-2
Demographic Analysis Areas

Source: Santa Clarita Valley Area Plan, 1990 and PCR Services Corporation, 2008

Table 4.R-1

**Total 2007 Population, Housing, and Employment
(On- and Off-Site)**

	Total Population	Total Households^a	Total Employment
Local Area^b			
Santa Clarita Valley Area Plan	240,565	74,063	79,425
Subregional Area^c			
North Los Angeles County Subregion	632,442	190,587	174,323
Regional Area			
Los Angeles County	10,369,902	3,270,580	4,459,174

^a SCAG's growth forecasts reflect the number of households present within an area rather than the number of housing units.

^b The project site does not contain permanent employment facilities. However, the northern portion of the site is used as an outdoor movie location, supporting small amounts of employment activity on an intermittent basis.

^c Total population, housing, and employment estimates are based on SCAG 2008 RTP projections. Values for 2005 and 2010 have been interpolated to arrive at 2007 estimates.

Source: PCR Services Corporation based on the SCAG RTP projections.

(b) Housing

The Local Area, as shown in Table 4.R-1, had a forecasted total of 74,063 total housing units in 2007, while the Subregional Area had an estimated 190,587 units. The Regional Area included a forecasted total of 3,270,580 households in 2007.

(c) Employment

Development that has been occurring within the Santa Clarita Valley has included both the creation of new housing and new employment opportunities. Various industrial, institutional, and commercial activities have been drawn to the area, due to the increasing population base and the location's qualities for accommodating such development. Increased employment has been occurring along the major thoroughfares and within major planned communities. As described in the OVOV Santa Clarita Valley General Plan Technical Background Report (February 2004), the main, existing, and potential employment assets are the Valencia Marketplace, the Valencia Town Center, the Henry May Newhall Memorial Medical Center, the Old Newhall Area, Six Flags Magic Mountain Theme Park, the Valencia Commerce Center, and three colleges (CalArts, College of the Canyons, and Masters College). The 2007 employment figures for the Local Area, Subregion, and Region are shown in Table 4.R-1. As indicated, the estimated employment is 79,425 employees for the Local Area, 174,323 employees for the Subregion, and 4,459,174 for the Regional Area.

c. Projections and Trends

The 2008 Regional Transportation Plan (RTP) provides data on projected population, housing, and employment at various geographical levels within the SCAG Region. The following discussion provides an overview of the projections and trends anticipated for the population, employment, and housing in relation to the proposed project. The SCAG projections for population, employment, and housing are shown in Table 4.R-2, Population, Housing, and Employment Projections, on page 4.R-11.

(1) Population

According to SCAG's regional forecast, population will increase in all geographic zones, during the 10-year period from 2007 to 2017. In percentage terms, the growth within the Local Area is approximately 28.6 percent between 2007 and 2017. The population in the North Los Angeles County Subregional Area is forecasted to increase 40.4 percent over the 2007 to 2017 time period. Within the Los Angeles County Regional Area, the growth during the 2007 to 2017 period is a much lower rate of 7.2 percent.

(2) Housing

The SCAG housing projections indicate that the growth in the Local area is forecasted to increase by 30.8 percent between 2007 and 2017. The projected increase for the Subregion is 41.6 percent, and the projected increase for the Regional Area is 9.2 percent. The number of new households forecasted during the 2007 to 2017 time period is 22,784 units in the Local Area, 79,223 units in the Subregion and 301,821 units in the Regional Area.

(3) Employment

In percentage terms, the employment growth in the Local Area is forecasted to increase by 23.8 percent between 2007 and 2017. The projected increase for the Subregion is 29.1 percent, and the projected increase for the Regional Area is 5.6 percent. The number of new jobs forecasted during 2007 to 2017 time period is 18,920 in the Local Area, 50,763 in the Subregion and 248,243 in the Regional Area.

Table 4.R-2

Population, Housing, and Employment Projections

Geographic Zone	Existing 2007	Projected 2017	2007-2017	
			Growth	Percentage
Population				
Local Area				
Santa Clarita Valley Area Plan	240,565	309,418	68,853	+28.6%
Subregional Area				
North Los Angeles County Subregion	632,442	887,968	255,526	+40.4%
Regional Area				
Los Angeles County	10,369,902	11,114,892	744,990	+7.2%
Housing				
Local Area				
Santa Clarita Valley Area Plan	74,063	96,847	22,784	+30.8%
Subregional Area				
North Los Angeles County Subregion	190,587	269,810	79,223	+41.6%
Regional Area				
Los Angeles County	3,270,580	3,572,400	301,821	+9.2%
Employment				
Local Area				
Santa Clarita Valley Area Plan	79,425	98,346	18,920	+23.8%
Subregional Area				
North Los Angeles County Subregion	174,323	225,087	50,763	+29.1%
Regional Area				
Los Angeles County	4,459,174	4,707,417	248,243	+5.6%

Source: PCR Services Corporation based on the SCAG 2008 RTP projections.

3. PROJECT IMPACTS

a. Thresholds of Significance

The proposed project would have a significant impact on population, housing and employment, if:

- The project would cause growth (i.e., new housing or employment) or accelerate development in an undeveloped area that exceeds SCAG's adopted projections for the year of project occupancy/buildout.

- Housing, population, or employment growth is not consistent with local and regional adopted housing and/or employment policies.⁵
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

b. Methodology

The analysis regarding Population, Housing and Employment compares the project's development program and estimated population and employment to development projections and policies in applicable plans regarding development. The analysis evaluates whether the project's housing, estimated residential population and estimated employment generation are compatible with projections and related policies in plans that are applicable to the project area. The analysis addresses impacts at the Regional (Los Angeles County), Subregional (SCAG North Los Angeles Subregion), and Local (Santa Clarita Area Plan) Areas. The project's residential population is estimated by applying a per-household population that is the same as that occurring elsewhere in the Local Planning Area. The number of employees for the school and park has been estimated on the basis of Institute of Transportation Engineers (ITE) factors associated with similar types of development.

Construction employment has been estimated based on the number of pieces of construction equipment and the type and phasing of construction activity conducted on the project site, as described in URBEMIS2007 Users' Guide published by the California Air Resources Board. All supporting calculations are presented in the Construction Emissions Appendix of the Air Quality Technical Appendix, Appendix H to this Draft EIR.

c. Impact Analysis

The general goal of the project is to increase the supply of housing in response to projected demand and future needs within the Santa Clarita Valley in a manner that is compatible with existing and planned development. Development of the proposed project would occur on approximately 622 acres of the site, and the balance of the 2,173 acre site (1,551 acres) would remain as natural, undeveloped open space, as further described in Section 2.0, Project Description. The project would provide 1,260 single-family homes characterized by a traditional lot orientation at net densities ranging from 3.0 to 4.0 dwelling units per acre. In addition, the

⁵ *This criterion of significance is focused on whether a project is generally compatible with and does not frustrate adopted housing or employment policies. The evaluation recognizes that an inconsistency with a plan, policy, or regulation does not necessarily equate to a significant impact on the environment. Impacts on the environment pursuant to CEQA ordinarily focus on changes in the physical environment. A plan or policy inconsistency is considered significant if it would directly or indirectly lead to a physical impact on the environment.*

project would provide for a new school on an approximately 12-acre parcel within the project site; and also provide approximately 18 acres of public and private park space to meet the needs of the community. The new residential units would support an increase in the residential population of the area, and the school and parks would support a small amount of new employment. Off-site street, drainage, and wastewater improvements would also be required to support the proposed development

(1) Impacts Regarding Growth Projections

(a) Resident Population

The proposed project is forecast to result in a projected on-site resident population increase of 4,158 at buildout, as shown in Table 4.R-3, Proposed Project Development Summary, on page 4.R-14. This population estimate is based on applying a factor of 3.3 persons per household. This estimated household size is based on the projected population and number of households in the North Los Angeles Subregion and Local Area (i.e., the Santa Clarita Valley Area Plan area) in 2007 and 2017.

The significance of the population increase associated with the proposed project was assessed by comparing the expected population increase during the 2007 to 2017 period with the population growth projected for the Local Area, the Subregion Area within which the project is located and the Regional Area during the same period. The proposed project would have a significant impact on population if the population generated by the proposed project exceeds SCAG's adopted growth forecasts for the Subregion and/or Regional areas.

The project's population change in relation to the three analysis areas is presented in Table 4.R-4, Proposed Project Population, Household, and Employment Impacts, on page 4.R-15.⁶ The population of the proposed project site is projected to increase by 4,191 during the 2007 to 2017 period. This represents a total of 0.6 percent, 1.6 percent, and 6.0 percent of the total population growth projected by SCAG for the Regional Area, the North Los Angeles County Subregion and the Local Area during the same time period, respectively. This growth is a relatively small component of the expected growth projected by SCAG for these three geographic areas. As a result, the population impacts of the proposed project would not cause population growth or accelerate development in an undeveloped area that exceeds adopted growth projections with project occupancy/buildout. As such, a less-than-significant impact would occur.

⁶ *The analysis presented in Table 4.R-4 is based on projections in the SCAG 2008 RTP. As such, the analysis is consistent with SCAG Policy 3.01 that states, "The population, housing, and job forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review."*

Table 4.R-3

**Proposed Project
Development Summary**

Population

Total Housing Units	1,260
Average Household Size ^a	3.3
Total Population ^b	4,158

Employment

Use	Development Area	Number of Employees
School	12 acres	50 ^c
Parks	18 acres	12 ^d
Total Employment		62

^a Number of residents per household based on SCAG 2017 projections for households and population within the North Los Angeles County Subregion.

^b Assumes 100 percent occupancy.

^c Based on data provided in the ITE *Trip Generation Manual, 7th Edition*, 2003. The total employment is based on the Elementary School classification (520) on page 902. Total employment of 50 indicates the average number of employees during the weekday.

^d Based on data provided in the ITE *Trip Generation Manual, 7th Edition*, 2003. The total employment is based on the Regional Park classification (417) on page 678. The estimated total employment of 12 indicates the conservative average number of employees.

Source: PCR Services Corporation, October 2005.

(b) Housing

The impact of the housing unit increase associated with the proposed project is assessed by comparing the expected housing unit increase during the 2007 to 2017 period with the housing unit growth projected for the three analysis areas during the same period. The number of housing units within the project site is projected to increase by 1,260 during the 2007 to 2017 period. This represents a total of 0.4 percent, 1.6 percent, and 5.5 percent of the total housing unit growth projected by SCAG for the Regional Area, the Subregional Area, and the Local Area during that period, respectively. As a result, the housing impacts of the proposed project would not cause housing growth or accelerate development in an undeveloped area that exceeds adopted growth projections with project occupancy/ buildout. As such, impacts on housing are considered less than significant.

(c) Employment

The proposed project is forecast to result in a total employment increase of 62 new jobs. New employment would result from the development of the proposed school and parks, as shown in Table 4.R-3. The school is projected to result in an increase of 50 jobs. The park areas would support a small number of employees for various maintenance and operation activities.

Table 4.R-4**Proposed Project Population,
Household, and Employment Impacts**

	Regional Area^a	Subregional Area^a	Local Area^a
Population 2007 to 2017			
Proposed Project	4,158	4,158	4,158
SCAG Projected Growth ^a	744,990	255,526	68,853
Percent of Growth	0.6%	1.6%	6.0%
Households 2007 to 2017			
Proposed Project	1,260	1,260	1,260
SCAG Projected Growth ^a	301,821	79,223	22,784
Percent of Growth	0.4%	1.6%	5.5%
Employment 2007 to 2017			
Proposed Project	62	62	62
SCAG Projected Growth ^a	248,243	50,763	18,920
Percent of Growth	0.03%	0.12%	0.32%

^a From Table 4.R-2 on page 4.R-11.

Source: PCR Services based on the SCAG 2008 RTP projections.

The employment opportunities generated by the project, as shown in Table 4.R-4, represent 0.32 percent of the SCAG employment growth forecast for the Local Area, which is negligible. The relative employment for the Regional and Subregional areas is less.

As a result, the employment impacts of the proposed project would not cause employment growth or accelerate development in an undeveloped area that exceeds adopted growth projections with project occupancy/buildout. As such, impacts on employment are considered less than significant.

The development of the proposed project is estimated to generate a maximum of 200 construction workers on-site at any one time. The number of construction workers was estimated based on the number of pieces of equipment used and the type and phasing of construction activity, as described in URBEMIS2007 Users' Guide published by the California Air Resources Board.

Individual projects do not necessarily generate new employment within the region. Rather, there is a pool of construction workers who move from project to project and who are somewhat mobile. To the extent that the project supports and contributes to the pool of construction workers, its impacts would be considered beneficial. Further, such contribution would comprise the equivalent of very few full-time workers, whereas all of the demographic areas analyzed are expected to incur notable growth in employment. The construction activities

of the project would not cause the expected growth to be exceeded and construction related employment impacts would be less than significant.

(2) Consistency with Applicable Plans

The goals, policies, and objectives in the various plans that were described in the Environmental Setting Subsection, above, address two plan aims that are applicable to the proposed project site. The first aim is to support housing and employment needs at the Local, Subregional, and Regional levels. The intent is to meet all future needs in a manner that is consistent with expected projections. The second aim is to broaden the extent of housing and employment opportunities to a broad array of populations. The following discussion addresses the project's relationship to these two aims.

(a) Contributions to Housing and Employment Opportunities

The proposed project, with 1,260 housing units, would support and help to implement all of the policies regarding the additional housing required in the three geographies analyzed, per the various needs assessments. As described in the Environmental Setting subsection, above, all of the applicable plans address the need for housing of all types and sizes.

The SCAG policies described in the Environmental Setting subsection, as implemented through the RTP and the RHNA, identify considerable amounts of new housing that is needed to meeting the growing population needs of the three demographic areas analyzed. The RTP projections are used by SCAG in all phases of implementation and review. While the previous subsection of this analysis pointed out that the proposed project would not exceed projections, here it may be noted that the project's 1,260 housing units would make a contribution to creation of needed housing stock, and would thus support the SCAG policies and projections. Further discussion of the project's relationship to the SCAG Compass Growth Visioning Program, and the regional location of development is addressed in Section 4.Q, Land Use.

The addition of the new housing would also support goals and policies established in the County's General Plan/Streamlined Plan/Housing Element and Santa Clarita Valley Area Plan. Housing Element Goal 1 and Housing Element Goal 3 both address the need to provide a wide range of housing types in sufficient quantity to meet the needs of current and future residents. The Streamlined Plan identifies a need for the construction of 55,900 new housing units in the Santa Clarita Valley Area Plan area between 1987 and 2010. The Housing Element specifies a specific objective for development of 46,621 new dwelling units between 2008 and 2014. Of the 46,621 total units, the objectives state that 38,965 units, approximately 84 percent, should be privately produced for above-moderate-income families.

The Santa Clarita Valley Plan addresses the General Plan/Streamlined Plan policies and objectives at the local level. As described in the Environmental Setting subsection, above, within this Plan, Land Use Policy 1.1 seeks to see the provision of sufficient housing to meet 2010 population needs, plus an excess to provide adequate flexibility. Land Use Policy 1.3 promotes a balanced, autonomous community with a full range of public and commercial services and a wide variety of housing and employment opportunities. Land Use Policy 1.3 would be further served by including the school and park lands proposed within the project, thus contributing to the range of public services and the employment base of the area.

By providing 1,260 housing units and 62 employment opportunities, the project would support the numerous policies cited here without exceeding housing and employment projections and would, therefore, be consistent with the policies regarding provision of housing and employment. Impacts regarding these policies would be less than significant.

(b) Broadening of Opportunities

As described in the Environmental Setting subsection, above, all of the cited plans include provisions for broadening the range of housing opportunities. The County General Plan/Housing Element and Santa Clarita Valley Area Plan include policies to encourage the development and rehabilitation of housing for a large variety of populations; e.g., low-income families, manufactured housing, deteriorating housing requiring revitalization, etc. These policies support two overriding goals. Goal 1: A wide range of housing types in sufficient quantity to meet the needs of current and future residents, particularly persons and households with special needs, including but not limited to lower-income households, senior citizens, and the homeless. Goal 3: A housing supply that ranges broadly enough in price and rent to enable all households, regardless of income, to secure adequate housing. The focus of these policies is on actions that the County can take to help meet the needs of the large range of populations addressed. Of particular note, the Santa Clarita Valley Area Plan includes Land Use Policy 1.4: “Promote a balanced, autonomous community with a full range of public opportunities to minimize the dependence upon southern Los Angeles County and to reduce long distance commuting and its impacts upon gasoline consumption and air pollution.” The policies place no specific requirements on any individual projects.

The proposed project would add new units to the general housing supply, and in so doing contribute generally to housing availability and opportunity in the area. The project would occur in an undeveloped location without substantially affecting either the existing amount of housing units, generally, or low-income units, in particular. Further, the proposed project would not interfere with the potential provision of such housing in the plan geographies analyzed. As noted above, the stated objectives in the County’s General Plan Housing Element anticipate that approximately 84 percent of the housing provided in the unincorporated area of the County would be provided privately without focus on the specialized housing needs.

Therefore, while this project meets housing needs for only one sector of the housing market, its overall contribution to the housing stock would be beneficial, and its development would not have adverse affects on the existing or future availability of housing for other sectors. Therefore, the project's development would be compatible with the policies. For these reasons, the proposed project would be consistent with the policies that address the broadening of opportunities and would not have a significant impact with regard to these policies.

4. MITIGATION MEASURES

Population, housing, and employment increases, anticipated under the proposed project, do not exceed adopted SCAG 2017 projections, and thus are concluded to be less than significant. In addition, the project would be compatible with adopted housing policies, and as such, project impacts are less than significant. As the project does not result in any significant impacts, mitigation measures are not required.

5. CUMULATIVE IMPACTS

a. Related Projects and SCAG Projections

The cumulative impact analysis is based on all known and anticipated construction projects and development proposals, including the proposed project. The known projects that contribute to cumulative effects (related projects) are generally those that require some form of discretionary approval. Table 4.R-5, Related Projects and Proposed Project Cumulative Population, Housing, and Employment Growth, on pages 4.R-19 through 4.R-21 provides a list of the known residential, commercial, institutional and other projects that were identified and mapped in Chapter 3.0 of this EIR. Table 4.R-5 also presents the methodology for determining the residential and employment growth expected for each project. Factors, based on the type of land use, are applied to non-residential uses, according to the total square footage of each project. The total area of non-residential uses is divided by square footage per employee. Office and general commercial uses typically have one employee per 250 square feet, retail uses have one employee per 500 square feet, institutional uses have one employee per 500 square feet, and so on.

The analysis of cumulative impacts also includes an increment of "background" growth to account for small projects that may not require discretionary approval, or may otherwise not be reflected in the list of related projects. An assumption is made in the cumulative impact analysis that the "background" growth of small residential projects would be approximately 25 percent of the known residential projects, and the background growth of small commercial projects would be approximately 10 percent of the known commercial projects. This

Table 4.R-5
Cumulative Population, Housing, and Employment Growth

Project	Description	Factor	Employees	Residents^a
Los Angeles County				
TR 46018 (S&S)	1,298 Single-Family DU	3.3 ^b		4,283
	1,202 Condominium Units	3.3 ^b		3,967
	150 TSF Commercial	500 ^c	300	
TR 52763 (S&S)	11 Single-Family DU	3.3 ^b		36
TR 31803	498 Single-Family DU	3.3 ^b		1,643
CP 99226/TR 52990	63 Single-Family DU	3.3 ^b		208
TR 46353	110 Multi-Family DU	3.3 ^b		363
TR 54372	74 Single-Family DU	3.3 ^b		244
TR52790	75 Single-Family DU	3.3 ^b		248
TR 060259 (Park Place)	492 Single-Family DU and 34-acre Park	3.3 ^b		1,624
TT 43589/98-046	91 Single-Family DU	3.3 ^b		300
TT 52829	95 Single-Family DU	3.3 ^b		314
TT 47760 (Copper Hill @ Haskell)	480 Single-Family DU and 1 Elementary School	3.3 ^b	43	1,584
TR 060999	44 Single-Family DU	3.3 ^b		145
TR 47573/03-386	75 Single-Family DU	3.3 ^b		248
TR 52193	62 Single-Family DU	3.3 ^b		205
TR 52194	126 Single-Family DU	3.3 ^b		416
TR 52785	26 Single-Family DU	3.3 ^b		86
TR 52192	141 Single-Family DU	3.3 ^b		465
TR 45123	10 Single-Family DU	3.3 ^b		33
TR 066202	31 Single-Family DU	3.3 ^b		102
TR 52938/45023 (Fair Oaks Ranch)	752 Multi-Family DU	3.3 ^b		2,482
TR 52833 (Canyon Park)	71 Single Family DU	3.3 ^b		234
TR 063483	171 Multi-Family DU	3.3 ^b		564
West Creek/West Hills	1,248 Single-Family DU	3.3 ^b		4,118
TR 52455	1,297 Multi-Family DU	3.3 ^b		4,280
	180 TSF Commercial	500 ^c	360	
Tesoro Phase 2/TR 051644	714 Single-Family DU	3.3 ^b		2,356
City of Santa Clarita				
02-232 (Rodgers Development)	34 TSF Retail	375	91	
TR 49621 (Wes Thompson)	365 Single-Family DU	3.3 ^b		1,204
TR 52355	63 Single-Family DU	3.3 ^b		208
Sand Canyon Gateway/TR53074	24 Single-Family DU	3.3 ^b		79
Mattson Project	14 TSF Church and 2 TSF Daycare	500 ^d (church)	38 (10 jobs estimated for daycare)	

Table 4.R-5 (Continued)

Cumulative Population, Housing, and Employment Growth

Project	Description	Factor	Employees	Residents ^a
TR 62252	300 Multi-Family DU	3.3 ^b		990
TR 60536	68 Multi-Family DU	3.3 ^b		224
02-063 (Montezuma)	174 Single-Family DU	3.3 ^b		513
VTTM 53425 (Riverpark incl. Cross Valley Connector between Soledad Cyn. Rd. and Bouquet Cyn. Rd.)	432 Single-Family DU 657 Multi-Family DU 16 TSF Retail Commercial	3.3 ^b 3.3 ^b 375	43	1,426 2,168
TR 060258 (The Keystone incl. Golden Valley Rd. between Plum Cyn. Rd. and the Cross Valley Connector)	312 Single-Family DU 187 Multi-Family DU 1,200 Student Middle School 30,476 SF YMCA	3.3 ^b 3.3 ^b 0.11 ^e 424 ^f	132 72	1,030 617
TR 51599-Partial (Partial Whittaker Bermite incl. Via Princessa gap closure)	622 Single-Family DU 834 Multi-Family DU 1,456 TSF Commercial Retail 224.4 Acres Open Space	3.3 ^b 3.3 ^b 375	3,883	2,053 2,752
Canyon Country Education Center	8,000 Students 15 TSF Commercial	500 ^c	30	
TT 062322 (Soledad Village)	407 Multi-Family DU 8 TSF Commercial Retail	3.3 ^b 375	21	1,343
Vista Canyon Ranch	75 Single-Family DU 825 Multi-Family DU 300 Multi-Family DU 150 TSF Commercial Retail 250 TSF Commercial Office 150 TSF Medical Office 200 Room Hotel 12-acre Park	3.3 ^b 3.3 ^b 3.3 ^b 375 250 ^g 314 ^h 0.9 ⁱ	400 1,000 478 180	248 2,722 990
MC 04-358	180 Multi-Family DU 10 TSF Commercial Retail	3.3 ^b 375	27	594
TR 61811	167 Single-Family DU	3.3 ^b		551
TR 53419	111 Multi-Family DU	3.3 ^b		366
TR 48892	148 Single-Family DU	3.3 ^b		488
TR 52414 (Golden Valley Ranch)	498 Single-Family DU 619 Multi-Family DU	3.3 ^b 3.3 ^b		1,643 2,043
Town Center Mall Expansion	490 TSF Commercial Retail	375	1,307	
Henry Mayo Newhall Memorial Hospital Master Plan	127 TSF net new Hospital 200 TSF net new Medical Office	1,552 ^h 314 ^h	82 637	
The Masters College Master Plan	600 Students 54 Condominium Units	3.3 ^b		178
Downtown Newhall Specific Plan	75 net new Single-Family DU 650 net new Multi-Family DU 245 TSF net new Comm. Retail 55 TSF net new Comm. Office	3.3 ^b 3.3 ^b 375 250 ^g	653 220	248 2,145

Table 4.R-5 (Continued)

Cumulative Population, Housing, and Employment Growth

Project	Description	Factor	Employees	Residents ^a
North Newhall Specific Plan	13 net new Single-Family DU	3.3 ^b		43
	641 net new Multi-Family DU	3.3 ^b		2115
	17 TSF net new Comm. Retail	375	45	
	150 TSF net new Comm. Office	250 ^g	600	
	345 TSF net new Industrial Park	500 ^g	690	
	1,350 Student Elem. School		86 ^j	
	90 Room Hotel	0.9 ⁱ	81	
Subtotal	18,074 DU		11,499	59,644
Background Growth Factor ^k	4,519 DU	N/A	1,150	14,911
Proposed Project	1,260 Single-Family DU	N/A	62	4,158
Cumulative Total	23,853 DU	N/A	12,711	78,713

DU = Dwelling Unit

TSF = Thousand Square Feet

N/A = Not Applicable

^a Assumes a 100 percent occupancy rate.^b Based on the average household size in the North Los Angeles County Subregion, 2007 and 2017.^c Except as noted elsewhere, employee factors for general commercial/office and community serving uses are based on survey data presented in the Natelson Company Inc., Employment Density Summary Report, prepared for Southern California Association of Governments, October 31, 2001. The factors represent the number of square feet that would generate one employee (e.g., a factor of 500 for commercial means one employee per 500sq.ft. of commercial space).^d Average number of employees based on survey data presented in the ITE Trip Generation Manual, 7th Edition.^e Daryl Zerfus, Austin-Faust and Associates, Inc., "Re: SCVCTM Question No.2," November 19, 2002, as referenced in the Keystone Project Draft Environmental Impact Report, July 2005.^f Based on an employment generation rate of 2.36 employees per thousand square feet. (Source: The Natelson Company Inc., Employment Density Summary Report, prepared for Southern California Association of Governments, October 31, 2001, as referenced in the Keystone Project Draft Environmental Impact Report, July 2005).^g The Natelson Company Inc., Employment Density Summary Report, prepared for Southern California Association of Governments, October 31, 2001.^h Henry Mayo Newhall Memorial Hospital Master Plan Final Program EIR, City of Santa Clarita, May 2007.ⁱ Based on survey data presented in the ITE Trip Generation Manual, 7th Edition.^j Assumes twice the number of employees as the proposed project based on the number of students (i.e., 750 students versus 1,350 students).^k 25 percent of total DUs and total residents and 10 percent of total employment. The percentage of additional background residential and commercial growth is an assumption based on general observations of development trends over time.

Source: PCR Services Corporation, May 2009, based on the Traffic Impact Analysis, Austin-Faust Associates, Inc., October 2008.

“background” increase is included in the summation of the population, housing and employment increases on Table 4.R-5 and added to the total projected household and population increase in the study area.

b. Cumulative Impact Analysis

(1) Consistency with Growth Projections

Table 4.R-2 on page 4.R-11 shows the SCAG RTP forecasted population, household, and employment growth. The actual growth projected for the proposed project and the related projects is shown on Table 4.R-5 pages 4.R-19 through 4.R-21). The cumulative growth of the proposed project, related projects, and background growth, as a component of SCAG’s 2008 projected growth is presented in Table 4.R-6, Cumulative Population, Housing and Employment Impacts, on page 4.R-23.

As shown in Table 4.R-6, the increase in households as a result of cumulative growth is expected to be approximately 23,853 between 2007 and 2017. Compared with the SCAG-projected increase of 22,784 housing units in the Local Area, cumulative growth represents approximately 104.69 percent of the SCAG-projected housing unit growth. At the Subregional level, cumulative growth represents approximately 30.11 percent of SCAG’s 2007 to 2017 growth projection of 79,223 housing units while, at the Regional level, cumulative growth represents approximately 7.90 percent of SCAG’s 2007 to 2017 growth projection of 301,821 housing units.

The population increase resulting from cumulative growth between 2007 and 2017 would be approximately 78,713. Compared with the SCAG-projected population increase of 68,853 in the Local Area, cumulative growth represents 114.32 percent of the SCAG-projected growth. At the Subregional level, cumulative growth accounts for approximately 30.80 percent of SCAG’s 2007 to 2017 projected population increase of 255,526; while, at the Regional level, cumulative growth represents approximately 10.56 percent of SCAG’s 2007 to 2017 projected population increase of 744,990.

An increase in employment of 12,711 new permanent jobs due to cumulative growth is expected in the Local Area between 2007 and 2017. Compared with SCAG’s projected employment growth of 18,920 jobs, cumulative growth constitutes 67.18 percent of the SCAG-projected Local Area employment growth. At the Subregional level, cumulative growth represents approximately 25.03 percent of SCAG’s 2007 to 2017 projected employment growth of 50,763; while, at the Regional level, cumulative growth represents approximately 5.12 percent of SCAG’s 2007 to 2017 projected employment growth of 248,243. Construction jobs were not included in the proposed project jobs forecast for 2017 because construction employment is both transient and short term in nature.

Table 4.R-6**Cumulative Population, Housing and Employment Impacts**

	Regional Area	Subregional Area	Local Area
Population			
Cumulative Growth ^a	78,713	78,713	78,713
SCAG 2008 Projected Growth ^b	744,990	255,526	68,853
Cumulative Growth as a Percent of SCAG- Projected Growth	10.56%	30.80%	114.32%
Households			
Cumulative Growth ^a	23,853	23,853	23,853
SCAG 2008 Projected Growth ^b	301,821	79,223	22,784
Cumulative Growth as a Percent of SCAG- Projected Growth	7.90%	30.11%	104.69%
Employment			
Cumulative Growth ^a	12,711	12,711	12,711
SCAG 2008 Projected Growth ^b	248,243	50,763	18,920
Cumulative Growth as a Percent of SCAG- Projected Growth	5.12%	25.03%	67.18%

^a Growth resulting from the proposed project, related project, and background growth. Values are from Table 4.R-5 on page 4.R-19.

^b SCAG 2008 RTP Projected Growth values taken from Table 4.R-2 on page 4.R-11.

Source: PCR Services Corporation, 2008.

At both the Regional and Subregional levels cumulative growth projections are well below the 2007 to 2017 SCAG projections for population, household, and employment growth. As such, the cumulative growth is well within SCAG's adopted regional and sub-regional projections that serve as a basis for policy implementation and future planning of services..

Although cumulative employment growth is below the 2007 to 2017 SCAG projections for the Local Area, Local Area population and household cumulative growth are not. While projected population levels for 2017 could be exceeded for the Santa Clarita Valley Local Area, some of the residential projects listed may not be approved, may be substantially downsized, or may not be constructed and occupied by 2017. Further, local level data is advisory and useful for local planning purposes while subregional level data has been adopted by SCAG for planning of future services. Therefore, given that cumulative population, housing and employment growth would be within SCAG forecasts at the Subregional and Regional levels, and that cumulative population estimates are conservative and may be considered by local agencies in their decision-making, cumulative impacts related to growth would be less than significant.

(2) Consistency with Applicable Plans

The cumulative development would contribute to meeting housing and employment needs that have been identified in needs assessments. This development would support the

various plan policies, goals, and objectives that identify the provision of such development. In so doing, the cumulative development may address the housing needs of some segments of the housing market more than others. However, provision of such housing would not have adverse effects on the future provision of additional housing to meet specialized needs pursuant to the plans.

Therefore, the cumulative development would support many policies and would not substantially interfere with the attainment of other policies. The cumulative development would be compatible with local and regional housing policies. Cumulative impacts would be less than significant.

6. LEVEL OF SIGNIFICANT AFTER MITIGATION

Not applicable; impacts are less than significant.

4.0 ENVIRONMENTAL IMPACT ANALYSIS

S. GLOBAL CLIMATE CHANGE

1. INTRODUCTION

This section evaluates the proposed project's potential direct and cumulative contribution to greenhouse gas emissions and global climate change, along with the potential effects of global climate change on the reliability of water supply for the project. Features of the proposed project and recommended measures to reduce greenhouse gases (GHGs) are also identified. Supporting data and analysis associated with this section are provided in Appendix S-1 of this Draft EIR.

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, data indicate that current global conditions differ from past climate changes in rate and magnitude. According to the Intergovernmental Panel on Climate Change (IPCC), the increase in atmospheric GHGs is the result of human activities, namely fossil fuel combustion, land use changes and agriculture.¹ GHGs are those compounds in the Earth's atmosphere that play a critical role in determining the Earth's surface temperature. Specifically, these gases allow high-frequency solar radiation to enter the Earth's atmosphere, but retain the low frequency energy which is radiated back from the Earth to space, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Increased concentrations of GHGs in the Earth's atmosphere have been linked to global climate change, and such conditions as rising surface temperatures, melting icebergs and snowpack, rising sea levels, and the increased frequency and magnitude of severe weather conditions.

2. EXISTING CONDITIONS

a. Environmental Setting

GHGs include carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Carbon dioxide is the most abundant GHG in the atmosphere. GHGs are the result of

¹ IPCC, *Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007. Available in Appendix K.*

both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions.

Global. Based on a 2007 study prepared by the IPCC, the global mean concentration of CO₂ has risen considerably since the Industrial Revolution. Scientists estimate that the global mean concentration of CO₂ was approximately 280 parts per million (ppm) 250 years ago. The estimate for 2004 was 379 ppm. Furthermore, according to the IPCC, global GHG emissions were estimated to have increased by 70 percent between 1970 and 2004. From 1990 to 2004, however, industrialized countries' GHG emissions decreased three percent, from 18.6 to 17.9 billion tons CO₂e.^{2,3}

National. A 2007 United States Environmental Protection Agency (USEPA) study of trends in GHG emissions estimated that between 1990 and 2005, United States GHG emissions rose by over 16 percent, from 6.2 billion tons of CO₂e emitted in 1990 to 7.3 billion tons in 2005. CO₂ is the largest constituent of GHGs emitted in the United States, and the majority of these emissions originate from the burning of fossil fuels.⁴

State. According to the 2007 Air Resources Board Draft GHG Inventory,⁵ California's net GHG emissions increased 13 percent between 1990 and 2004, from 442 to 499 million metric tons of CO₂e. California represents less than seven percent of US GHG emissions. According to the California Energy Commission (CEC), fossil fuel consumption in California represents approximately 81 percent of GHG emission, and transportation represents approximately 41 percent of all GHG emissions.⁶

b. Regulatory Framework

International. The United Nations Framework Convention on Climate Change (UNFCCC) is the international environmental treaty dealing with climate change, which was developed at the Earth Summit in Rio de Janeiro, Brazil, in 1992. Since the treaty went into effect in 1994, parties to the UNFCCC have met annually in Conferences of the Parties to assess

² UNFCCC, *National GHG Inventory Data for the Period 1990-2004 and Status of Reporting*, 2006.

³ IPCC: *Summary for Policymakers. In: Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment*, 2007. Available in Appendix K.

⁴ USEPA, *Inventory of US GHG Emissions and Sinks: 1990-2005, Chapter 2: Trends in GHG Emissions*, 2007. Available in Appendix K.

⁵ CARB, *Draft Updated California Greenhouse Gas Emissions Estimates: Summary Table*, 2007. Available in Appendix K.

⁶ California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*, 2006. Available in Appendix K.

progress in dealing with climate change. The Kyoto Protocol, an amendment to this treaty, was adopted by the third Conference of the Parties (COP-3) in 1997 in Kyoto and came into force in 2005. The goal of the Kyoto Protocol is to “stabilize GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” As of September 2007, the Protocol had been signed and ratified by 175 parties. The United States government, though a signatory, has not ratified the Protocol. The United States held that the Protocol, although non-binding, would be economically crippling, and opposed the exemption granted to China and other developing countries. Under the protocol, participating industrialized countries must reduce their GHG emissions by a collective average of five percent below their 1990 levels by 2012. However, the Protocol lacks a strong enforcement mechanism. The Protocol will expire in 2012.

National. There has been activity at the federal level with respect to the regulation of GHGs. In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO₂ and other greenhouse gases as pollutants under the federal Clean Air Act (CAA). To date, the EPA has not developed a regulatory program for greenhouse gas emissions, nor has it been mandated to do so.

State. In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the State. In September 2002, Governor Gray Davis signed Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve “the maximum feasible reduction of greenhouse gases” emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. It should be noted that setting emission standards on automobiles is solely the responsibility of the federal EPA. The federal CAA allows states to set state-specific emission standards on automobiles if they first obtain a waiver from the USEPA. The USEPA has not yet ruled on California’s request for a waiver, possibly delaying the California Air Resources Board’s (CARB’s) proposed implementation schedule for setting emission standards on automobiles to help reduce GHGs.

In June 2005, Governor Schwarzenegger signed Executive Order S-3-05, which established GHG emissions targets for the state, as well as a process to ensure the targets are met. As a result of this executive order, the California Climate Action Team (CAT), led by the Secretary of the California EPA, was formed. The CAT published its report in March 2006, in which it laid out several recommendations and strategies for reducing GHG emissions and reaching the targets established in the executive order.

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as AB32, into law. AB32 commits the State to achieving the following:

- 2000 GHG emission levels by 2010 (a reduction of 11 percent below business as usual);⁷
- 1990 levels by 2020 (25 percent below business as usual);
- 80 percent below 1990 levels by 2050.

To achieve these goals, AB32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce Statewide GHG emissions from stationary sources, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. The following schedule outlines the CARB actions mandated by AB32:

- By January 1, 2008, CARB adopts regulations for mandatory (GHG) emissions reporting, defines 1990 emissions baseline for California (including emissions from imported power), and adopts it as the 2020 statewide cap.⁸
- By January 1, 2009, CARB adopts plan to effect GHG reductions from significant sources of via regulations, market mechanisms and other actions.⁹
- During 2009, CARB drafts rule language to implement its plan and holds a series of public workshop on each measure (including market mechanisms).
- By January 1, 2010, early action measures will take effect.
- During 2010, CARB, after workshops and public hearings, conducts series of rulemakings to adopt GHG regulations including rules governing market mechanisms.
- By January 1, 2011, CARB completes major rulemakings for reducing GHGs, including market mechanisms. CARB may revise and adopt new rules after January 1, 2011 to achieve the 2020 goal.

⁷ “Business as usual” refers to a scenario in which no GHG reduction measures are implemented.

⁸ CARB has adopted 427 million metric tonnes of carbon dioxide equivalent (MMTCO_{2e}) as the total statewide greenhouse gas 1990 emissions level and the 2020 emissions limit. See <http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm> (last visited 8/14/2008).

⁹ CARB released the *Climate Change Proposed Scoping Plan* in October 2008, which details the strategies that the State will use to reduce GHG emissions. The Plan was approved at the Board hearing in December 2008.

- By January 1, 2012, GHG rules and market mechanisms adopted by CARB take effect and become legally enforceable.
- December 31, 2020 is the deadline for achieving 2020 GHG emissions cap.

A companion bill to AB32, Senate Bill (SB) 1368, requires the California Public Utilities Commission (PUC) and CEC to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the State. CARB's list of discrete early action measures that can be adopted and implemented before January 1, 2010 was approved on June 21, 2007, and focuses on major Statewide contributing sources and industries, not on individual development projects or practices. These early action measures are: (1) a low-carbon fuel standard; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills. Recently, the CARB released emissions inventory estimates for 1990 through 2004.

An additional bill related to AB32, SB 97, requires the California Office of Planning and Research (OPR), by July 1, 2009, to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions, as required by the California Environmental Quality Act (CEQA), including but not limited to, effects associated with transportation or energy consumption. The Resources Agency will then be required to certify and adopt the guidelines by January 1, 2010, and to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to AB32.¹⁰ The OPR released a technical advisory on addressing climate change through CEQA Review on June 19, 2008. This guidance document outlines suggested components to CEQA disclosure: quantification of GHG emissions from a project's construction and operation, determination of significance of the project's impact to climate change, and if the project is found to be significant, the identification of suitable alternatives and mitigation measures.

In June 2006, the California Department of Water Resources (DWR) published a Technical Memorandum Report entitled *Progress on Incorporating Climate Change into Planning and Management of California's Water Resources* in response to Executive Order S-3-05.¹¹ The Climate Change Report describes progress made in addressing climate change issues in existing water resources planning, management tools, and methodologies. While certain potential effects of climate change are presented, all of the results are identified in the Climate Change Report as preliminary. The results incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Policy

¹⁰ Senate Bill No. 97, Chapter 185, approved by Governor Schwarzenegger and filed with the Secretary of State, August 24, 2007.

¹¹ California Department of Water Resources, *Progress on Incorporating Climate Change into Planning and Management of California's Water Resources*, Technical Memorandum Report, July 2006.

implications of climate change and recommendations to respond to future demands for water are identified as beyond the scope of the Climate Change Report. The Climate Change Report acknowledges that there are substantial uncertainties regarding the effects of global warming on SWP supplies and recommends additional analysis to reduce this uncertainty.

The Climate Change Report covers a wide range of topics addressing climate change and its potential impact on California's water resources. These include the following:

- Causes of climate change and potential threat to California's water resources, and measures that could be taken to adapt to or mitigate the effects of climate change.
- Background and approach used for the climate change analyses and the climate change scenarios used in the Report.
- Potential impacts of the selected climate change scenarios on SWP and Central Valley Project operations. Results presented include changes in reservoir inflows, delivery reliability, and annual average carryover storage. It also discusses the interaction of various regulatory and operational conflicts such as water allocations, flood control, in-stream flow requirements, and water quality requirements. The Report also presents the implications for possible changes to operations that could mitigate the effects of climate change. However, these operational changes are left for future work.
- Potential impacts to Delta water quality and water levels, including effects of modified Delta inflows and exports on compliance with water quality standards and the implications of sea level rise.
- Implications of global warming for managing floods.
- Potential increases in crop water use due to global warming, and application of analysis tools to assess changes in estimated net irrigation requirements for crops.

In addition, the Climate Change Report includes directions for further work to incorporate climate change into California's water resources management. This includes probability estimates of potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts.

In October 2008, DWR issued *Managing an Uncertain Future, Climate Change Adaptation Strategies for California's Water*. This report was developed in the process of updating the *California Water Plan* and as part of the California Resource Agency's draft statewide *Climate Adaptation Plan*. This report recommends a series of adaptation strategies for

state and local water managers that are intended to improve their ability to handle change. Some of the recommendations can be adopted immediately using existing resources and authority, while most will need additional discussion and development and will require new resources, sustained financial investment, and collaboration. The strategies include:

- Provide sustainable funding for statewide and integrated regional water management.
- Fully develop the potential of Integrated Regional Water Management.
- Aggressively increase water use efficiency.
- Practice and promote integrated flood management.
- Enhance and sustain ecosystems.
- Expand water storage and conjunctive management of surface and groundwater resources.
- Fix Delta water supply, quality, and ecosystem conditions.
- Preserve, upgrade, and increase monitoring, data analysis, and management.
- Plan for and adapt to sea level rise.
- Identify and fund focused climate change impacts and adaptation research and analysis.

Local. Recognizing the overlap between land use and GHG emissions, the Los Angeles County Board of Supervisors adopted a set of green building program ordinances in November, 2008 that cover low impact development (LID) standards, drought-tolerant landscaping requirements, and green building development standards.

The LID ordinance states: “LID encourages site sustainability and smart growth in a manner that respects and preserves the characteristics of the County’s watersheds, drainage paths, water supplies, and natural resources.”¹² LID reduces the impact from a proposed

¹² *Title 12, Chapter 12.84, Low Impact Development Standards, of the Los Angeles County Code.*
http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf.

development by utilizing softscape and hardscape surface features to retain, detain, store, change the timing of, or filter storm water and urban runoff across a development site.¹³

The drought-tolerant landscaping ordinance is designed to “help conserve water resources by requiring landscaping that is appropriate to the region’s climate and to the nature of a project’s use.”¹⁴ The ordinance applies to all projects regardless of size, and requires that 75 percent of projects’ total landscaped areas contain drought-tolerant plants. The ordinance limits the amount of turf allowed on a project site to 25 percent of the total landscaped area, or 5,000 square feet. All turf in projects’ total landscaped area must be water-efficient. In addition, landscaped areas must be organized by “hydrozones in accordance with their respective water, cultural (soil, climate, sun and light), and maintenance requirements.”

The green building ordinance is intended to encourage building practices that conserve water, energy and natural resources; divert waste from landfills; minimize impacts to existing infrastructure; and promote a healthier environment.¹⁵ Implementation of this ordinance would reduce energy demand in new buildings, and thus GHG emissions from new projects. For residential projects with five or more dwelling units, such as the proposed project, the ordinance requires that structures be built to the new Green Building Standards, which are summarized below.

- **Energy Conservation:** Buildings must reduce energy demand by at least 15% below Title 24 (2005 Update).
- **Outdoor Water Conservation:** A smart irrigation controller must be installed for any landscaped area of the project.
- **Indoor Water Conservation:** All tank-type toilets installed must be high efficiency with a maximum 1.28 gallons per flush.
- **Resource Conservation:** At least 65 percent of construction waste (by weight) must be recycled.

¹³ Although the project incorporates some of these features, LACDRP has determined that the proposed project is exempt from the LID Standards Ordinance. A copy of the correspondence received from LACDRP and related County policy for determining whether a project is exempt is provided in Appendix C-4, LID Standards Ordinance Exemption Determination.

¹⁴ Title 21, Chapter 22.52, Part 21, Drought Tolerant Landscaping, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf.

¹⁵ Title 22, Chapter 22.52, Part 20, Green Building, of the Los Angeles County Code. http://planning.lacounty.gov/assets/upl/project/green_20080507-green-building-program-ordinances.pdf.

- **Tree Planting:** A minimum of two 15-gallon trees must be planted and maintained for each single-family residence lot. At least one of the trees must be listed on the drought-tolerant approved plant list.

In addition, the project must achieve certification from one of the following green building programs: California Green Builder (CGB), developed by California Building Industry Association, Green Point Rated (GPR), designed by Build it Green™, or Leadership in Energy and Environmental Design (LEED), sponsored by the US Green Building Council. Alternatively, the project can achieve the equivalency of one of these certifications, as determined by the Los Angeles County Department of Public Works.

3. PROJECT IMPACTS

a. Thresholds of Significance

The CEQA Guidelines, Section 15064.7, define a threshold of significance as an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures.¹⁶ CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, neither the South Coast Air Quality Management District (SCAQMD), the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino Counties, nor the County of Los Angeles, the lead agency for the proposed project, have yet established significance thresholds for GHG emissions.^{17,18} The regulations required to meet the State goals under AB32 are still under development, expected to be finalized by January 1, 2008, and implemented no later than January 1, 2010. Furthermore, pursuant to SB 97, guidelines to be prepared by OPR for addressing greenhouse gas emissions under CEQA will not be adopted until January 1, 2010. Accordingly, at this time there is no formal guidance under CEQA and no available standards by which the approval of a real estate development project can be judged to support or hinder attainment of the State's goals relating to GHG abatement. Furthermore, it is

¹⁶ *Climate Change and CEQA, Presentation to the Climate Action Team, Cynthia Bryant, Director, Governor's Office of Planning and Research, September 19, 2007.*

¹⁷ *Personal Communication, AQMD Legal Offices, October 4, 2007.*

¹⁸ *Personal Communication, Los Angeles County Department of Regional Planning, Impact Analysis Section, August 28, 2007.*

difficult to predict the specific impact of one project's incremental contribution to the global effects of GHG emissions due to a variety of factors, including the complex and long term nature of such effects and the global scale of climate change.¹⁹

Similarly, CEQA provides no formal guidance regarding how to evaluate the significance of climate change on the availability of water resources, and there is considerable uncertainty regarding what the impacts would be. This section discloses those uncertainties and uses the best available information to disclose impacts.

b. Methodology

(1) Air Quality

As indicated above, at this time there is no formal guidance for addressing GHGs pursuant to CEQA and there are no standards yet available from regulating agencies that provide a basis for determining the significance of impacts associated with global climate change. Although no quantitative or qualitative thresholds of significance have been developed for airborne emissions of GHGs, the California Climate Action Registry (CCAR) has prepared a protocol for calculating and reporting GHG emissions from a number of general and industry-specific activities. This guidance has been used to address GHG emissions from the project. For purposes of this analysis, it is considered reasonable and is consistent with criteria pollutant calculations, to consider only the GHG emissions resulting from the incremental increase in usage of on-road mobile vehicles, electricity, and natural gas upon implementation of the project as project-related. In addition, since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are usually calculated on an annual basis.

On-site construction equipment emissions were calculated using the OFFROAD2007 model. The OFFROAD2007 model, which was created by the CARB, accounts for Los Angeles County specific construction equipment in its emission inventory. The output values used in this analysis were adjusted to be project-specific, based on usage rates, type of fuel, horsepower, and construction schedule. These values were then applied to the construction phasing assumptions used in our criteria pollutant analysis to generate GHG emissions values for each construction year. Mobile source emission methodology for on-road construction emissions, associated with worker commute and delivery of materials, utilizes a vehicle miles traveled (VMT) rate calculated by URBEMIS2007 to generate values for annual emissions. Emission factors are

¹⁹ *Ibid.* OPR indicates in the *Climate Change and CEQA Presentation to the Climate Action Team* that complex questions must be answered before a consistent, effective, and workable process can be developed for evaluating climate change under CEQA. Some of the questions cited include: What constitutes a new GHG emission? What is the appropriate baseline for calculating new emissions? What makes a project's GHG emissions significant? Is the effect of climate change too speculative to be considered a significant environmental impact? How much mitigation is enough to reduce the impact so it is not significant?

derived from the EMFAC2007 model using light duty automobile (LDA) factors for worker commute and heavy duty truck (HDT) factors for deliveries and off-site soil hauling.

Mobile source emission calculations associated with operation of the proposed project utilize a projection of annual VMT, derived from the Traffic Impact Analysis provided in Appendix F of this EIR. These values account for the daily and seasonal variations in trip frequency and length associated with residents traveling to and from work and other activities that may require a commute. Net emission values were calculated based on the incremental increases from existing conditions to proposed project buildout conditions. Mobile source calculations also utilize EMFAC2007 to generate emission factors for CO₂ and CH₄. These emission factors are then applied to the annual VMT, which is based on information provided in the Traffic Impact Analysis. It should be noted that greenhouse gas reduction factors from *Alternative Compliance Strategies*, contained in AB1493, were not applied in the EMFAC2007 software. Therefore, such emissions are likely overstated as emission factors for fleet mixes containing post 2009 vehicles would not emulate reductions that would otherwise go into effect as a result of AB1493.

The consumption of fossil fuels to generate electricity and to provide heating and water creates GHG emissions. Future fuel consumption rates are estimated based on the square footage of residential dwelling units and the estimated square footage for the elementary school proposed on the site, as well as the predicted water supply needs of the proposed project. Natural gas and electricity usage factors derived from the SCAQMD *CEQA Air Quality Handbook* are then used with the square footage numbers to project fuel consumption rates. Energy rates associated with the proposed project's future water conveyance were calculated using factors derived from the CEC.²⁰ GHG emission factors from the CCAR protocol are then applied to the respective usage rates, to calculate annual greenhouse gas emissions in metric tons. It is difficult to identify the specific generating source of electricity particularly since Southern California Edison also imports power during peak demand periods. Thus, the emission factors used in this analysis represent a State-wide average of known power producing facilities, utilizing various technologies and emission control strategies, and do not take into account the emissions profile for the proposed project.

Not all GHGs exhibit the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the equivalent mass of CO₂, denoted as CO₂e. Mass emissions are calculated by converting pollutant specific emissions to CO₂e emissions by applying the proper global warming potential (GWP) value.²¹ These GWP ratios are available

²⁰ California Energy Commission, *Refining Estimates of Water-Related Energy Use in California, 2006*.

²¹ CO₂e was developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its *Second Assessment Report (SAR) 1996*.

from the USEPA and published in the California Climate Action Registry General Reporting Protocol. By applying the GWP ratios, project related CO₂e emissions can be tabulated in metric tons per year. The CO₂e values are calculated for all four construction years as well as existing and project buildout conditions in order to generate a net change in GHG emissions for construction and operation.

(2) Water Resources

Although there is now broad scientific consensus that the earth's atmosphere has warmed over the last century and will likely continue to warm in the future, there is substantial uncertainty as to how this warming will quantitatively affect future water supplies, including SWP supplies. DWR, as the owner and operator of the SWP and the agency with a statewide perspective and relevant technical expertise, addresses the need to consider global climate change as part of long-term planning for the management of California's water resources in *Bulletin 160: California Water Plan Update – 2005*. DWR's *State Water Project Delivery Reliability Report 2005* also addresses the need to incorporate some of the uncertainties of global warming with regard to planning and operation of the SWP. DWR's *State Water Project Delivery Reliability Report 2007* includes estimates of the potential reductions to SWP delivery reliability due to future climate changes. These estimates and the overall anticipated impacts of global climate change on water supply when considering the proposed project are discussed below as part of the cumulative impact analysis.

c. Emission Estimates

As further described in Chapter 2 of this Draft EIR, Project Description, the proposed project would develop approximately 620 acres of a 2,173-acre site with 1,270 single-family residential lots, along with an 11-acre school site and approximately 13 acres of public and private parks. Nearly three quarters of the site is proposed to remain as undeveloped natural open space. The analysis of estimated GHG emissions associated with the proposed project is provided below.

(1) Air Quality

(a) Construction

Emissions of GHGs were calculated for each year of project construction. Results are presented on Table 4.S-1 on page 4.S-13. Also included in Table 4.S-1 is the CARB's estimated 2004 State-wide inventory, the latest year for which data are available. As shown, the net increase in temporary GHG emissions from on-road mobile source emissions and on site construction equipment relative to the 2004 state-wide levels ranges from 0.00017 percent in

Table 4.S-1

Construction Greenhouse Gas Emissions

Emission Source	CO ₂ e ^c (Metric Tons)								
	2008	2009	2010	2011	2012	2013	2014	2015	2016
On Road Mobile Sources ^a	116	426	642	4,335	4,380	4,308	4,308	4,308	4,308
On Site Construction Equipment ^b	2,453	7,355	192	2,586	2,719	742	742	742	742
Total^c	2,569	7,781	834	6,921	7,099	5,051	5,051	5,050	5,050
2004 Statewide Total ^d	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	0.00054%	0.00162%	0.00017%	0.00144%	0.00148%	0.00105%	0.00105%	0.00105%	0.00105%

^a Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007. On Road Mobile Source emissions are based primarily on worker trips. These emissions increase in 2011 because building construction, which begins December 2010 and ends December 2016, requires a substantially larger number of workers than the previous construction phases, (i.e., grading and paving). Grading occurs in two phases over 30 months (Phase I begins October 2008 for a 12 month duration and Phase II begins October 2011 for a 6 month duration through 2012); paving also occurs in two phases (Phase I begins October 2009 for a six month period and Phase II begins May 2012 for a three month duration).

^b On site construction equipment values were derived using OFFROAD2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

^c Totals may not add up exactly due to rounding.

^d Statewide totals were derived from the CARB Draft California GHG Inventory, 2007.

^e All CO₂e factors were derived using the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

Source: PCR Services Corporation, 2008.

2010 to 0.00162 percent in 2009. As described above, this GHG analysis was performed in accordance with existing non-GHG specific SCAQMD and CARB guidance.

(b) Operation

Emissions of GHGs were calculated for existing and projected future uses with implementation of the proposed project. Results are presented on Table 4.S-2 on page 4.S-15. Also included is the CARB's estimated 2004 State-wide inventory, the latest year for which data are available. As shown, the net increase in GHG emissions from vehicle, electrical, and natural gas usage associated with the proposed project is approximately 0.0073 percent of the 2004 emission level.

(c) Concurrent Construction and Operational Activity Impacts

Emissions of GHGs were calculated for the projected concurrence of construction and operational emissions from the proposed project for the years 2011 through 2016. Results are presented on Table 4.S-3 on page 4.S-16. Also included is the CARB's estimated 2004 Statewide inventory, for comparison. As shown, the net increase in GHG emissions from concurrent construction and operations associated with the proposed project ranges from 0.00248 percent in 2011 to 0.00760 percent in 2016 of the 2004 emission level.

Actual project emissions will be lower than the estimates presented for the operational scenarios above, as the estimates do not account for the emissions reduction requirements associated with AB1493, SB 1368, AB32, Executive Order S-3-5, and regulations that have yet to be created. Assembly Bill 1493 mandates the CARB to create GHG emission reduction rules for cars and light trucks. The new rules are proposed to go into effect in 2009 and will be fully implemented by 2016. According to the CEC, the reductions in emissions will be equivalent to reducing gasoline consumption to a rate of 31 percent of 1990 gasoline consumption (and associated GHG emissions) by 2020. The proposed project is slated for occupancy after these regulations go into effect and therefore a percentage of the cars used by residents of the proposed project will emit lower levels of GHG from VMT than cars currently on the road. When the rules are fully implemented and older cars are replaced with AB 1493 compliant vehicles GHG emissions from the proposed project will be reduced from those levels shown in Table 4.S-2. Similarly, emission standards on the State's power plants under SB 1368 have not been used to predict emissions shown in Table 4.S-2, and will likely result in actual emissions below the levels presented.

It is difficult to estimate what portion of the direct and indirect GHG emissions presented above represent new GHG emissions versus existing displaced emissions. Displaced emissions are those that prior to the project, are created and emitted elsewhere; whereas new GHG

Table 4.S-2

Operational Greenhouse Gas Emissions (2017)

Emission Source	CO ₂ e ^f (Metric Tons)
Project	
On Road Mobile Sources ^a	27,211
Electricity ^b	3,817
Natural gas ^c	1,945
Water conveyance ^d	2,105
Total	35,078
2004 Statewide Total ^e	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	0.0073%

^a Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.1, January 2009.

^b Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^c Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^d Water Conveyance Calculations are based on factors derived from the California Energy Commission, and calculations are part of the electricity calculations in Appendix A.

^e Statewide totals were derived from the CARB Draft California GHG Inventory, 2007.

^f All CO₂e factors were derived using the California Climate Action Registry General Reporting Protocol; Version 3.1, March 2009.

Sources: PCR Services Corporation, 2009.

emissions are those that do not and would not exist without implementation of the project, creating an incremental increase in emissions. This project would provide housing to accommodate the projected increase in demand for housing within the region. It is accepted that those who would occupy the new homes already generate GHG emissions through their current activities, and that any net increase in such emissions with their relocation to the site would depend on the nature of their current activities, such as the distance of their commute, the energy demand associated with their current homes, and other factors. Accordingly, the project's contribution to GHGs presented above is conservative for this reason as well.

Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, it is not possible to predict the specific impact, if any, to global climate change from any one project's relatively small incremental increase in emissions. Thus, the significance of potential impacts from GHG emissions associated with this project alone cannot be clearly defined or determined. Furthermore, there are no significance thresholds or specific reduction targets, and no approved policy or guidance to assist in determining significance at the project level. Additionally, there is currently no generally accepted methodology to determine the extent to which GHG emissions associated with a specific project represent new emissions or existing, displaced emissions. In summary, and pursuant to CEQA Guidelines Section 15145, it is considered too speculative to determine the significance of impacts on global climate change associated with the proposed project's GHG emissions.

Table 4.S-3

Concurrent Construction and Operations Greenhouse Gas Emissions

Emission Source ^{a,b,c,d}	CO ₂ e ^f (Metric Tons)					
	2011	2012	2013	2014	2015	2016
Construction	6,921	7,099	5,051	5,051	5,050	5,050
Operational	4,964	10,367	15,788	21,105	26,907	31,401
Total	11,885	17,466	20,839	26,156	26,907	36,451
2004 Statewide Total ^e	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000	479,740,000
Net Increase as Percentage of 2004 Statewide Inventory	0.00248%	0.00364%	0.00434%	0.00545%	0.00666%	0.00760%

^a Mobile source values were derived using EMFAC2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 3.1, January 2009.

^b On-site construction equipment values were derived using OFFROAD2007 in addition to the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

^c Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^d Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

^e Statewide totals were derived from the CARB Draft California GHG Inventory, 2007.

^f All CO₂e factors were derived using the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007.

Source: PCR Services Corporation, 2009.

As indicated in the analysis above, the estimate of project GHG emissions is very conservative, with the net increase in GHG emissions from concurrent construction and operations from the project by 2016 estimated to represent 0.00781 percent of 2004 Statewide total emissions. Regarding the conservative nature of the analysis, it should be noted that a large percentage of the operational GHG emissions associated with the proposed project would not represent new emissions as the future occupants of the project already generate emissions through their current activities, and further, the emissions estimate does not reflect improvements in technology and other reductions in GHG emissions from vehicles and other sources that will occur pursuant to State regulations, such as AB1493, SB 1368, AB32, and Executive Order S-3-5, as well as regulations that have yet to be created. Nonetheless, it is accepted that reducing GHG emissions is an important priority and that all reasonable efforts should be taken at the project level, the State level, Nationally and Globally. Accordingly, features of the proposed project and other recommended measures that help reduce GHG emissions while also supporting consistency with the goals of California's AB32 are presented in subsection 5 below.

4. CUMULATIVE IMPACTS

a. Air Quality

California emitted nearly 500 million tons of CO₂e per year in 2004, the latest year for which data is available.²² California's GHG emissions account for less than seven percent of total GHG emissions in the US.²³ However, GHGs have long atmospheric lifetimes, accumulate over time, and do not become concentrated around their point of emission. According to the IPCC, global climate change has resulted in eleven of the last twelve years ranking among the 12 warmest years on record. The frequencies of heat waves and hot days and nights have increased. The average global oceanic temperature has increased, and oceans are absorbing the heat added to the climate systems. Glaciers and ice caps have declined, and precipitation patterns have changed. In addition, the frequency of heavy precipitation events has increased, as has the intensity of hurricanes.²⁴

Global climate change is projected to continue, with a 0.2° Celsius per decade warming trend in a business-as-usual scenario. Climate projections for California hold that on an annual-mean basis, surface air temperatures will increase by two to three degrees Celsius per year.²⁵ Hot extremes, heat waves, and heavy precipitation are likely to increase in frequency. The continuation of ice sheet and snow cover decrease, as well as thermal expansion will contribute to a rise in global average sea level.²⁶ Decrease in snowpack in the Sierra Nevada would be particularly problematic for California and cause water shortages, because it stores about half of California's water supply. The frequency of wildfires around the state will increase, especially as warming becomes more pronounced. Rising winter temperatures throughout the state would make the environment more hospitable for pathogen- carrying pests. In addition, the number of days meteorologically conducive to pollution formation may rise along with global background ozone, both of which would make it difficult to achieve attainment status in high ozone prone areas. Finally, California coasts would be susceptible to global sea level rise.²⁷ Although there are complex physical, chemical, and atmospheric mechanisms involved in global climate change, and it is difficult to predict the specific consequences of "business as usual," there is growing

²² CARB, *Draft Updated California Greenhouse Gas Emissions Estimates: Summary Table, 2007*. Available in Appendix K.

²³ USEPA, *The US Inventory of Greenhouse Gas Emissions and Sinks: Fast Facts 2007*. Available in Appendix K.

²⁴ IPCC, *Summary for Policymakers*.

²⁵ IPCC, *Regional Climate Projections*. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007*. Available in Appendix K.

²⁶ *Ibid.*

²⁷ *California Climate Action Team Report, 2006*.

consensus within the scientific community that GHG emissions and associated global warming is a high priority environmental issue that needs to be addressed. Accordingly, and even in light of new regulations and efforts underway to reduce GHG emissions, increases in GHG emissions associated with past, present and future related projects in the region and beyond are considered cumulatively significant. Regarding the contribution of the project's emissions to cumulative impacts, it should be restated that it is not possible to predict the specific impact to global climate change from one project's increase in emissions. It should also be acknowledged that project emissions, even at a State-wide level represent a very small increment, 0.00747 percent of 2004 State-wide total emissions, based on the very conservative analysis described above that does not account for relevant project features and mitigation measures, the large percentage of estimated emissions that would not truly represent new emissions, or other reductions in GHG emissions from vehicles and other sources that will occur pursuant to existing State regulations. Nonetheless, it is conservatively concluded that the proposed project's GHG emissions would represent a cumulatively considerable incremental contribution to significant cumulative impacts associated with global climate change.

As outlined in Subsection 5 below, the proposed project incorporates several objectives and features that address GHG emissions. Furthermore, global climate change measures are also being recommended, and other sections in this Draft EIR provide mitigation measures that would further reduce such emissions. It should also be noted that related projects in the State and other development in the nation and beyond are beginning to respond to this issue through new regulations and policy priorities.

b. Water Resources

As indicated above, there are complex physical, chemical, and atmospheric mechanisms involved in global climate change that make it difficult to predict what the effects of global climate change will be, particularly at a state or local level. Due to this unpredictability, the secondary effects that global climate change may have on water supplies for a given region is even more difficult to predict. Nonetheless, based on the information provided in the DWR Climate Change Report, Table 4.S-4, Potential Effects of Climate Change on California's Water Resources and Expected Consequences, on page 4.S-19 provides a summary of the potential future effects of global climate change on California's water resources and the expected consequences of those effects.

The 2005 SWP Delivery Reliability Report also addressed the need to incorporate some of the uncertainties of global warming with regard to planning and operation of the SWP:

Until the impacts of climate change on precipitation and runoff patterns in California are better quantified, future weather patterns are usually assumed to be similar to those in the past, especially where there is a significant historical rainfall record.

Table 4.S-4**Potential Effects of Climate Change on California's Water Resources and Expected Consequences**

Effect	Expected Consequence(s)
Reduction of the State's Average Annual Snowpack	Potential loss of 5 million acre-feet or more of average annual water storage in the State's snowpack Increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply
Changes in the Timing, Intensity, Location, Amount, Variability of Precipitation	Potential increased storm intensity and increased potential for flooding Possible increased potential for droughts
Long-term Changes in Watershed Vegetation and Increased Incidence of Wildfires	Changes in the intensity and timing of runoff Possible increased incidence of flooding and increased sedimentation
Sea Level Rise	Inundation of coastal marshes and estuaries; Increased salinity intrusion into the Sacramento-San Joaquin River Delta; Increased potential for Delta levee failure; Increased potential for salinity intrusion into coastal aquifers (groundwater); Increased potential for flooding near the mouths of rivers due to backwater effects.
Increased Water Temperatures	Possible critical effects on listed and endangered aquatic species; Increased environmental water demand for temperature control; Possible increased problems with foreign invasive species in aquatic ecosystems; Potential adverse changes in water quality, including the reduction of dissolved oxygen levels.
Changes in Urban and Agricultural Water Demand	Changes in demand patters and evapotranspiration rates

Source: California Department of Water Resources, Technical Memorandum Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources in response to the Executive Order S-3-05, 2006.

The State Water Project analyses contained in this report are based upon 73 years of historical records (1922-1994) for rainfall and runoff that have been adjusted to reflect the current and future levels of development in the source areas by analyzing land use patterns and projecting future land and water use.

These series of data are then used to forecast the amount of water available to the SWP under current and future conditions.

The 2007 SWP Delivery Reliability Report recognizes climate change as a source of uncertainty, but notes that some changes have already occurred, stating that:

Current literature suggests that global warming is likely to significantly affect the hydrologic cycle, changing California's precipitation pattern and amount from that shown by the record. In fact, there is evidence that some changes have already occurred, such as an earlier beginning of snowmelt in the Sierra, an increase in winter runoff as a fraction of the total runoff, and an increase in winter flooding frequency. More variability in rainfall, wetter at times and drier at other times, would place more stress on the reliability of existing flood management and water supply systems, such as the SWP²⁸.

The 2007 SWP Delivery Reliability Report shows diminished SWP deliveries compared to the 2005 report based on the current method of moving water through the Delta and assumed near-term effects of climate change. Estimate for 2007 show total annual SWP deliveries decreasing in 93 percent of the years based on the historical data used in the analysis. When compared to the future estimates in the 2005 report, total annual deliveries for 2027 show even greater decreases in most years if no actions are taken to address the factors causing the decreased reliability.

The assumption that past rainfall-runoff patterns will be repeated in the future has an inherent uncertainty, especially given the evolving information on the potential effects of global climate change.²⁹

DWR states in its California Climate Change Activities update, California's Climate Action Programs (http://www.climatechange.ca.gov/climate_action_team/factsheets/2007-03_CLIMATE_ACTIVITIES_FS.PDF):

The Department of Water Resources (DWR) is working to help increase water use efficiency, conservation, and ground and surface water storage facilities to better manage flood risks and maintain a reliable water supply into the future. Changes in precipitation, temperature, sea level and the hydrologic cycle affect the severity of winter storms and our ability to manage water supply during dry periods. By 2050, up to 40 percent of the Sierra snowpack may disappear, resulting in

²⁸ California Department of Water Resources, *State Water Project Delivery Reliability Report 2007*, August 2008.

²⁹ California Department of Water Resources), *State Water Project Delivery Reliability Report 2005*, April 2006.

decreased runoff that will impact water supply for urban, agricultural and environmental uses.

The 2007 SWP Delivery Reliability Report included an evaluation of SWP deliveries under four different future climate change scenarios. All four of the climate change scenarios analyzed project a general warming trend for California. Two of the four scenarios project modestly drier climates for California, while two project a minor precipitation increase.

While the projections incorporate assumptions about climate change, they do not account for sea level rise or the expected accompanying increase in Delta salinity because the tools to evaluate this impact of climate change have not yet been completed. Future sea level rise associated with climate change could increase the salinity in the Delta as higher ocean tides push saline water farther inland. If Delta water quality standards remain the same, SWP pumping could become more restricted, at least under some hydrologic conditions. Climate change could also have an effect on the demand for imported water supplies in the SWP contractors' local regions. Increases in temperatures may result in greater local water demands and potential reductions in the availability of local water supplies.

With the completion of the 2007 SWP Delivery Reliability Report, local water agencies such as CLWA and the Local Purveyors are better able to determine to what extent their supplies will be affected by global climate change. However, it is anticipated that climate change science and the ability to project changes and system responses to climate change will continue to carry significant uncertainty for some time.

The 2005 UWMP, Volume 1, Chapter 4 of the California Water Plan, "Preparing for an Uncertain Future," lists some potential impacts of global warming, based on more than a decade of scientific studies on the subject:

- May produce hydrologic conditions, variability, and extremes that are different from what current water systems were designed to manage
- May occur too rapidly to allow sufficient time and information to permit managers to respond appropriately
- May require special efforts or plans to protect against surprises or uncertainties

Also discussed in CLWA's 2005 UWMP, should global warming increase over time, it may cause a number of changes impacting future water supplies, including changes in Sierra snowpack patterns (the source of the SWP's water supply in Lake Oroville), runoff patterns, sea level, rainfall intensity, and statewide water demand. Changes related to groundwater recharge and availability may also occur.

CLWA has incorporated the updated SWP delivery reliability information presented in the 2007 SWP Delivery Reliability Report, which includes the assessment of climate change, into its water supply planning. In addition to imported water, CLWA's portfolio includes local supplies including groundwater and recycled supplies. CLWA and the Local Purveyors have commenced the process of updating the groundwater basin yield analysis and intend to analyze, to the extent possible, the potential climate change impacts on groundwater resources.³⁰ The results of the updated groundwater basin yield study will be factored in upon completion, including results from the analyses of additional goals included in that study (i.e., to further assess increased utilization, augmentation and optimal distribution of the basin's yield, and assess groundwater recharge opportunities) along with potential impacts from climate change.³¹ It is not anticipated that the results from the analysis will identify a substantial adverse change in the hydrology of the local groundwater basin as a result of potential climate change impacts. Negative impacts, if any, may tend to be offset by additional yield available as a result of the work related to the aforementioned additional goals included in the study.³² CLWA and the Local Purveyors will continue to update their water supply planning as needed.

Generally, little work has been done on the effects of climate change on specific groundwater basins, groundwater quality or groundwater recharge characteristics.³³ Changes in rainfall and changes in the timing of the groundwater recharge season would result in changes in recharge. Warmer temperatures could lead to higher evaporation or shorter rainfall seasons, which could mean that soil deficits would persist for longer time periods, shortening recharge seasons. Warmer, wetter winters would increase the amount of runoff available for groundwater recharge. This additional winter runoff, however, may be occurring at a time when some basins are being recharged at their maximum capacity. Reductions in spring runoff and higher evapotranspiration, on the other hand, could reduce the amount of water available for recharge. Demand increases may also occur as a result of climate change due to potential increased irrigation demand in a longer growing season and increased urban demand with more heat waves and dry spells. As a result, increased drawdown of local groundwater resources to meet increased demand could occur.³⁴ However, the extent to which climate will change and the impact of that change on groundwater are uncertain and dependent on overall water management in the region.

³⁰ Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

³¹ Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

³² Ford, Jeff, *Water Resources Planner, Castaic Lake Water Agency, 2008.*

³³ Kiparsky, M. and P.H. Gleick, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, Oakland, CA: Pacific Institute for Studies in Development, Environment, and Security, July 2003 (Revised August 2005).

³⁴ Association of Metropolitan Water Agencies, *Implications of Climate Change for Urban Water Utilities*, December 2007. Retrieved from:
http://www.amwa.net/galleries/climate-change/AMWA_Climate_Change_Paper_12.13.07.pdf.

The importance of conservation and maintaining a reliable water supply in the context of climate change is recognized by DWR and water planners. Conservation efforts assist in adapting to reduced or more varied water supplies.³⁵ In an assessment of urban water use,³⁶ it has been shown that water conservation measures such as education and modern plumbing standards, etc., can be extremely effective at mitigating the effects of climate change on regional water supplies. CLWA has enhanced the long-term reliability of the total mix of water supplies currently available to meet the needs of the Santa Clarita Valley, including the project, through the use, for example, of transfers and groundwater banking programs. In addition, in 2001, CLWA signed a Memorandum of Understanding Regarding Urban Water Conservation in California (MOU). By signing the MOU, CLWA became a member of the California Urban Water Conservation Council (CUWCC) and pledged to implement all cost-effective Best Management Practices (BMPs) for water conservation. CLWA has estimated that conservation measures within the service area can reduce total water demands by about ten percent of the urban portion of total demand. CLWA and the Local Purveyors also developed a long-term program related to conservation, i.e., the Santa Clarita Valley Water Use Efficiency Strategic Plan (refer to Section 4.I, Water Resources of the Draft EIR regarding other conservation actions³⁷). Moreover, mitigation measures related to water conservation including requiring appliances such as showerheads and faucets to comply with efficiency standards; requiring low flush toilets; using irrigation systems that prevent the waste of water; emphasizing drought-tolerant vegetation; and informing residential occupants of the benefits of low-water-using landscaping, have been recommended for this project, as presented in Section 4.I, Water Resources.

5. RELEVANT PROJECT OBJECTIVES, FEATURES, AND MITIGATION MEASURES

a. Relevant Project Objectives

As further described in Chapter 2.0, Project Description, of this Draft EIR, certain objectives and characteristics of the proposed project would aid in reducing its GHG emissions. The project would be developed in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, bus lines, and major employment centers. The project would create a pedestrian and bicyclist-friendly environment that encourages access

³⁵ *In addition, the less water that is used, the less water that needs to be pumped and treated. According to the California Energy Commission, conserving one acre-foot of water reduces greenhouse gas emissions by approximately one metric ton (<http://www.climatechange.water.ca.gov/docs/062207ARB.pdf>).*

³⁶ *Kiparsky, M. and P.H. Gleick, Climate Change and California Water Resources: A Survey and Summary of the Literature, Oakland, CA: Pacific Institute for Studies in Development, Environment, and Security, July 2003 (Revised August 2005).*

³⁷ *Santa Clarita Valley Family of Water Suppliers, 2009. Santa Clarita Valley Water Use Efficiency Strategic Plan.*

between neighborhoods, parks, a public elementary school, and offsite areas through paseos, hiking trails, and bike lanes. The project would also facilitate the extension of existing bus service along Skyline Ranch Road. The project would promote water conservation through use of drought-tolerant, fire-retardant, and native plants. The specific objectives presented in Chapter 2.0, Project Description, which help support reduced GHG emissions are listed below:

(1) Land Use Planning Objectives

- Develop in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers.
- Provide sites for a public elementary school and a public park to serve residents of the project and others in nearby communities.
- Create a pedestrian friendly environment which encourages pedestrian access between neighborhoods, parks, and a public elementary school.

(2) Mobility Objectives

- Provide a major regional roadway improvement that will also serve the site, consistent with the alignment being proposed in the County's Draft Highway Plan.
- Provide a safe, walkable community, through the use of an enhanced landscaped pedestrian route segregated from vehicle traffic, and through innovative traffic calming techniques, which may include roundabouts, designed to slow traffic while providing continual traffic flow.

(3) Park and Recreation Objective

- Provide on-site recreational opportunities, including an improved public park and private passive neighborhood and pocket parks convenient and accessible to residents.
- Support extension of the County Trail System by dedicating an easement in the northern portion of the site to the County from Vasquez Canyon Road and terminus of the existing Mint Canyon Trail to the Plum Canyon Fire Road and southwesterly to a lookout point (approximately 2.43 miles).

(4) Resource Conservation Objectives

- Avoid development in regionally significant biotic resource areas located on Cruzan Mesa by designating a 166-acre portion of the site a Non-Development/Continuing Use Area.
- Preserve other significant biotic resources in the northern portion of the site through establishment of one or more voluntary conservation easements, land dedications, or land set asides over a 1,378-acre area to be known as the Skyline Ranch Conservation Area (SRCA).
- Promote water conservation through use of drought-tolerant, fire-retardant, and native plants.
- Promote energy reduction, sustainable building practices, health enhancement, and water conservation into housing design, construction, and operation to reduce greenhouse gas emissions, while also reducing the operating and maintenance cost of housing.

b. Project Features

In addition to the above objectives and characteristics of the proposed project that serve to reduce GHG emissions, and the green building features required by the Los Angeles County Green Building Ordinance, the project applicant, Pardee Homes, has proposed that the project would be CGB certified and they would also offer an optional program, called LIVINGSMART[®], under which homebuyers may elect to have their new homes designed and built to standards more environmentally sensitive, energy conscious and healthier than traditional non-custom homes. Specifically, and as further described below, the LIVINGSMART[®] program focuses on the four primary resource areas of energy reduction, sustainable building practices, health enhancement, and water conservation.

ENERGYSMART[™] Features. Chosen for their ability to reduce energy consumption, features and options include:

- SPECTRALLY SELECTIVE, LOW E GLASS - Minimizes fabric fade and reduces energy loss.
- SEALED DUCT SYSTEM - Reduces wasted energy by eliminating air leaks into non-living spaces.

- PHOTOVOLTAIC CELLS FOR SOLAR ELECTRIC POWER - Harvest sunlight to generate electricity for your home.
- FLUORESCENT LIGHTING - Uses 66 percent less heat and lasts up to 10 times longer than incandescent.
- ENERGY STAR® APPLIANCES - Use 10 to 50 percent less energy, depending on the product.
- THIRD-PARTY ENERGY INSPECTION - ComfortWise certifies that a home exceeds federal code by 30 percent.

EARTHSMART™ Features. Selected because they conserve resources or use recycled or sustainable materials, features and options include:

- ENGINEERED AND CERTIFIED WOOD - Grown and harvested in a way that protects forests long-term.
- TANKLESS WATER HEATER - Heats only the amount of water needed to the desired temperature.
- CELLULOSE ATTIC INSULATION - Made from recycled newspaper and sprayed in for superior sealing with little waste.
- FLOORING FROM SUSTAINABLE AND RECYCLED MATERIALS - Uses material like bamboo, cork and carpet from recycled soda bottles.

HEALTHSMART™ Features. Chosen to support healthier indoor air and water quality, features and options include:

- LOW VOC PAINT - Is virtually non-toxic, with little odor and no ozone-depleting chemicals.
- CENTRAL VACUUM SYSTEM - Contributes to indoor air quality by drawing dust-laden air to an outdoor canister.
- REVERSE OSMOSIS WATER TREATMENT SYSTEM - Reduces up to 99 percent of impurities found in tap water.

WATERSMART™ Features. Designed to minimize water consumption, features and options include:

- ENERGY STAR CLOTHES AND DISHWASHERS - Conserve water, as much as 50 percent, in addition to saving energy.
- WATER-SAVING FAUCETS AND FIXTURES - Can cut water usage by half while maintaining desired water pressure.
- DROUGHT-TOLERANT LANDSCAPING - Uses native plants that require a fraction of the water needed to maintain a lawn.
- MULTI-PROGRAMMABLE IRRIGATION CLOCKS - Ensure that yards are watered according to their needs, eliminating waste and over watering.

Although GHG emissions associated with housing represent less than seven percent of Statewide GHG emissions, the consumption of fossil fuels for electricity production and other utility needs (heating, hot water, etc.) is a substantial source of air pollutant emissions. Options such as the ENERGYSMART™ features, all of which aim to lower electricity and natural gas use, result in lower emissions of GHGs than “business as usual” development built to the minimum Title 24 energy codes. In addition, energy production used for water conveyance and treatment constitutes a major category of GHG emissions within California. Thus, the WATERSMART™ features, designed to conserve water, would also result in a decrease of GHG emissions. Since it is difficult to predict the rate at which homebuyers will adopt these principles and elect to have homes built with the GHG-reducing features, calculations used to project operational emissions presented in Table 4.S-2 conservatively assume no participation in the LIVINGSMART® program and are most likely an over-estimation of actual emissions.

c. Global Climate Change Measures

Although it is too speculative to determine the significance of project-level impacts, the following global climate change measures are recommended to reduce the proposed project’s GHG emissions, and its contribution to global warming:

GHG Reduction Measure GCC-1: *The builder shall strive to construct at least 10 percent of dwelling units in the proposed project with LIVINGSMART® features so as to achieve a minimum of 25 percent reduction in projected GHG emissions. The builder commits to offer enhanced advertising, education, and, if needed, other incentives to encourage market acceptance of these various energy- and water-conserving options.*

GHG Reduction Measure GCC-2: *The builder shall plant approximately 40 trees per landscaped acre as a means to capture (sequester) carbon dioxide emissions and to provide shade to the buildings, which can decrease the need for air conditioning.*

GHG Reduction Measure GCC-3: *To facilitate the extension of existing bus service to include Skyline Ranch Road, the builder shall work with the Santa Clarita Transit District to design and provide bus turnouts and shelters along Skyline Ranch Road.*

GHG Reduction Measure GCC-4: *In order to increase awareness of green building practices and to promote water and energy conservation, the builder will develop and implement a green educational program. The program will include but not necessarily be limited to a pamphlet that educates and promotes conservation practices that homeowners can implement, with specific guidance on landscaping with drought tolerant plants, use of efficient irrigation systems, compact florescent lighting, and other measures that help lower GHG emissions.*

(1) Relevant EIR Mitigation Measures

The following mitigation measures that address impacts associated with topics evaluated in other sections of this Draft EIR also serve to reduce the estimated GHG emissions associated with the proposed project.

(a) Air Quality

4.H-2(a): *Subdivisions and buildings will be required to exceed Title 24 of the California Code of Regulations (also known as the California Building Standards Code) 2005 requirements by 15 percent.*

4.H-2(b): *Lighting for public streets, parking areas, and recreation areas shall utilize energy efficient light and mechanical, computerized or photo cell switching devices to reduce unnecessary energy usage.*

(b) Water Resources

4.I-1: *All appliances such as showerheads, lavatory faucets and sink faucets shall comply with efficiency standards set forth in Title 20, California Administrative Code Section 1604(f). Title 24 of the California Administrative Code Section 1606(b) prohibits the installation of fixtures unless the manufacturer has certified to the California Energy Conservation compliance with the flow rate standards.*

4.I-2: *Low flush toilets shall be installed as specified in California State Health and Safety Code Section 17921.3 and the County Green Building Ordinance.*

4.I-3: *All common area irrigation areas shall be capable of being operated by a computerized irrigation system which includes an onsite weather station/ET gage capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on*

changes in temperature, solar radiation, relative humidity, rain and wind. In addition, the computerized irrigation system shall be equipped with flow sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. All common area irrigation controllers shall also include a rain sensing automatic shutoff.

4.I-4: *Common area landscaping shall emphasize drought-tolerant vegetation. Plants of similar water use shall be grouped to reduce over-irrigation of low-water-using plants. Those areas not designed with drought-tolerant vegetation shall be gauged to receive irrigation using the minimal requirements.*

4.I-5: *Residential occupants shall be informed as to the benefits of low-water-using landscaping and sources of additional assistance in such.*

6. CONCLUSION

The proposed project, with implementation of the LIVINGSMART® project features, recommended GHG reduction measures, and mitigation measures described above, and by complying with the County Green Building Ordinances would be consistent with the goals of AB32 and the California Climate Action Team. Table 4.S-5 illustrates the Project’s consistency with those recommendations and strategies presented in the CAT report. The project features listed in Table 4.S-5 on page 4.S-30, including measures to promote water conservation, address global climate change concerns and apply directly to CAT strategies for reducing GHG emissions.

As previously indicated and as shown in Table 4.S-3, the project would produce a negligible net increase in Statewide GHG emissions. By incorporating the “LIVINGSMART®” project features (including “WaterSmart™” features to promote water conservation), GHG reduction measures, and mitigation measures described above, the proposed project would address global climate change concerns and lower its GHG emission rates as compared to “business as usual.”

No further feasible mitigation measures exist for decreasing the cumulative impact of climate change. Although these features and measures would meaningfully reduce project GHG emissions, it is conservatively concluded that the project’s contribution to global warming is cumulatively considerable and would remain a significant and unavoidable cumulative impact after implementation of project features, GHG measures, and mitigation measures.

Table 4.S-5

Project's Consistency with Applicable California Climate Action Team Report Strategies

Strategies for Reducing GHG Emissions	Project Consistency
<p>Vehicle Climate Change Standards and Other New Light Duty Vehicle Technology Improvements Reduce GHG emissions from vehicles by conforming to AB1493. AB 1493 mandates that California develop and adopt regulations to accomplish the maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles and light duty trucks. CARB adopted these regulations in 2004; they pertain to passenger vehicles and light duty trucks and phase in during model years 2009 through 2016.</p>	Vehicles traveling to and from the project site would be in compliance with the CARB GHG emissions regulations that pertain to their model years.
<p>Diesel Anti-Idling Reduce GHG emissions from diesel-fueled commercial motor vehicle idling, by reducing idling times and electrifying truck stops.</p>	All construction vehicles would be prohibited from idling in excess of five minutes, both on- and off-site.
<p>Hydrofluorocarbon Reduction Reduce HFC emissions from vehicular and commercial refrigeration systems, by adopting measures to ban the sale of HFCs in small cans, limit the use of higher GWP refrigerants used in commercial and vehicular refrigeration systems, and reduce the level of refrigerant leakage in commercial and vehicular refrigerant systems.</p>	Not applicable.
<p>Transportation Refrigeration Units (TRUs), Off-road Electrification, Port Electrification (ship to shore) TRUs. Reduce GHG emissions from TRUs by mandating electric standby systems in TRUs and electric infrastructure at cold storage facilities.</p> <p><i>Off-road Electrification.</i> Improve emission performance standards for engines, so diesel engines will be replaced with new cleaner certified diesel engines or electric motors.</p> <p><i>Port Electrification.</i> Expand use of shore-side power by requiring vessel modifications and shore-side infrastructure.</p>	Not applicable.
<p>Manure Management Reduce VOCs from confined animal facilities by improving manure management practices, manure handling practices, and exercise lagoon/liquid waste control options.</p>	Not applicable.
<p>Semi Conductor Industry Targets (PFC Emissions) Reduce PFC emissions by developing a model rule for districts to consider adopting.</p>	Not applicable.

Table 4.S-5 (Continued)

Project's Consistency with Applicable California Climate Action Team Report Strategies

Strategies for Reducing GHG Emissions	Project Consistency
<p>Alternative Fuels: Biodiesel Blends and Ethanol Increase the use of alternative fuels that are less GHG-intensive, by adopting regulations to require the use of biodiesel to displace California diesel fuel, increasing the number of flexible fueled vehicles present in California, and increasing the percentage of ethanol used in gasoline.</p>	<p>The fuel used by vehicles traveling to and from the project would be subject to regulations pertaining to the use of biodiesel to displace California diesel fuel, and to the increase in the ethanol percentage used in gasoline.</p> <p>In addition, project residents may choose to purchase flex-fuel vehicles.</p>
<p>Heavy-Duty Vehicle Emission Reduction Measures Reduce GHG emissions from heavy-duty vehicles, by improving vehicle aerodynamics, climate engine-based efficiency, and rolling and inertia resistance, as well as by reducing vehicle weight and educating drivers on how to optimize vehicle operation.</p>	<p>Not applicable.</p>
<p>Reduced Venting and Leaks in Oil and Gas Systems Develop a model rule for Air Pollution Control Districts that entails improving management practices, rather than implementing new technologies.</p>	<p>Not applicable.</p>
<p>Hydrogen Highway Conform to the mission and goals of the California Hydrogen Highway Network (CA H2 Net), a state initiative, to promote the use of hydrogen to diversify the sources of transportation energy, by installing hydrogen infrastructure for use when hydrogen technologies become commercially available.</p>	<p>Not applicable.</p>
<p>Achieve 50 percent Statewide Recycling Goal Achieve California's 50 percent waste diversion mandate (AB 939, Integrated Waste Management Act of 1989) to reduce GHG emissions associated with virgin material extraction. AB 939 required each city or county plan to include an implementation schedule that showed 50 percent diversion of all solid waste by January 1, 2000, through source reduction, recycling, and composting.</p>	<p>AB 939 would apply to the proposed project through the County's regulatory plan.</p>
<p>Landfill Methane Capture Capture methane before it escapes to the atmosphere by installing direct gas use projects or electricity projects with backup flare systems to capture and use methane.</p>	<p>Not applicable.</p>
<p>Zero Waste – High Recycling Reduce GHG emissions associated with virgin material extraction and landfill methane emissions by recovering additional recyclables from landfills and transforming organics/biomass and plastic waste into marketable products.</p>	<p>The proposed project would offer "EarthSmart™" building options, which would include attic insulation made from recycled newspaper and carpet made from recycled plastic bottles.</p>
<p>Forest Management Store more carbon through prudent forest management activities, such as increasing the overall age of trees prior to harvest, dedicating land to older aged trees.</p>	<p>The proposed project would offer "EarthSmart™" building options, which would include the use of engineered and certified wood, harvested responsibly to protect the long-term viability of forests.</p>

Table 4.S-5 (Continued)

Project's Consistency with Applicable California Climate Action Team Report Strategies

Strategies for Reducing GHG Emissions	Project Consistency
<p>Forest Conservation Minimize and/or prevent GHG emissions associated with deforestation by creating incentives to maintain an undeveloped forest landscape.</p>	Not applicable.
<p>Fuels Management/Biomass Reduce GHG emissions from wildfire and increase carbon sequestration by implementing fire management and biomass development projects.</p>	Not applicable.
<p>Urban Forestry Increase carbon sequestration by planting five million trees in urban areas statewide by 2020.</p>	Landscaping for the proposed project would include planting trees that are conducive to sequestering carbon (fast-growing) while remaining drought-resistant.
<p>Afforestation (Planting Trees)/ Reforestation Projects Increase carbon sequestration by implementing projects that restore native tree cover on lands that were previously deforested.</p>	Not applicable.
<p>Water Use Efficiency Implement efficient water management practices and incentives, as saving water saves energy and GHG emissions.</p>	The Green Building Ordinance requires that the project install only efficient tank-type toilets. In addition, the proposed project would offer "WaterSmart™" options that conserve water – and thus energy – through the use of "Energy Star" appliances, water-saving faucets and fixtures, and non-water-intensive landscaping. Water conservation mitigation measures are also provided.
<p>Building Energy Efficiency Standards in Place and in Progress Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates building energy efficiency standards that apply to newly constructed buildings and additions to and alterations to existing buildings. Both the Energy Action Plan and the Integrated Energy Policy Report call for ongoing updating of the standards</p>	Construction of the proposed project would be required to comply exceed the standards of Title 24 (2005 Update) by at least 15 percent, as required by the County Green Building Ordinance.
<p>Appliance Energy Efficiency Standards in Place and in Progress Reduce GHG emissions from electricity by reducing energy demand. The California Energy Commission updates appliance energy efficiency standards that apply to electrical devices or equipment sold in California. Recent policies have established specific goals for updating the standards; new standards are currently in development.</p>	Appliances purchased for the project would be subject to State law and thus comply with the energy efficiency standards that are in effect at the time of manufacture.
<p>Fuel-Efficient Replacement Tires and Inflation Programs Reduce GHG emissions from vehicle fuel consumption by conforming to state legislation mandating a statewide program to encourage the production and use of more fuel efficient tires</p>	Not applicable.

Table 4.S-5 (Continued)

Project's Consistency with Applicable California Climate Action Team Report Strategies

Strategies for Reducing GHG Emissions	Project Consistency
<p>Cement Manufacturing Reduce GHG emissions from energy consumption by improving the energy efficiency of cement operations.</p>	Not applicable.
<p>Municipal Utility Programs Improve municipal utilities' energy efficiency and reduce their GHG emissions by implementing additional energy efficiency programs accelerating their efforts to achieve California's Renewable Portfolio Standard, reducing purchases of carbon-intensive power, and transitioning away from carbon-intensive generation to low-carbon alternatives.</p>	Not applicable.
<p>Combined Heat and Power (CHP) Initiatives Reduce GHGs from fossil fuel consumption in both the commercial and industrial sector by implementing policy instruments and additional programs and incentives that encourage on-site power production to meet both heat and electricity loads.</p>	Not applicable.
<p>Alternative Fuels: non-Petroleum Fuels Increase the use of non-petroleum fuels in California's transportation sector and coordinate with the Energy Commission and the Bio-Energy Interagency Working Group to develop a workable, long-term transportation fuels plan that will result in substantial reductions in the use of petroleum fuel, and to recommend options to optimize the market potential of bio-fuels.</p>	Not applicable.
<p>Measures to Improve Transportation Energy Efficiency Advance cleaner transportation and reduce GHG emissions by providing incentives, enhancing outreach and educational programs to bring a coordinated message of sustainable transportation and root causes of GHG emissions, diversifying the transportation energy infrastructure, and slowing the rate of VMT growth.</p>	The project applicant would commit to offer enhanced advertising, education, and other incentives to encourage market acceptance of energy- and water-conserving options.
<p>Smart Land Use and Intelligent Transportation Apply strategies that integrate transportation and land-use decisions to reduce VMT, such as promoting jobs/housing proximity, high-density residential/ commercial development along transit corridors, and implementing intelligent transportation systems.</p>	The proposed project would provide housing, a school site and parks within a integrated development that would promote pedestrian circulation and reduce VMT. The project also proposes a major transportation improvement and would be located along a transportation corridor (Sierra Highway) and facilitate the extension of existing bus service along Skyline Ranch Road.
<p>Conservation Tillage/ Cover Crops Improve farming water use efficiency and reduce tillage requirements, namely fuel, by practicing conservation tillage and using cover crops.</p>	Not applicable.

Table 4.S-5 (Continued)

Project's Consistency with Applicable California Climate Action Team Report Strategies

Strategies for Reducing GHG Emissions	Project Consistency
<p>Enteric Fermentation Conduct feed adjustments for dairy and beef cattle to reduce methane emissions associated with enteric fermentation.</p>	Not applicable.
<p>Green Buildings Initiative Reduce energy use in public and private buildings to comply with Governor Schwarzenegger's Green Building Executive Order, S-20-04, which mandates a 20 percent reduction in building energy use by 2015.</p>	<p>The proposed project would offer "EnergySmart™" options. Some options would improve heating and cooling efficiency, such as high performance glass windows and enhanced insulation; other options would improve household energy efficiency, such as fluorescent lighting, "Energy Star" appliances, and third-party inspections to verify that the home exceeds federal code.</p>
<p>Accelerated Renewable Portfolio Standard Increase the level of renewable energy in California's resource mix, to be consistent with Governor Schwarzenegger's goal of 33 percent of California's resource mix consisting of renewable energy sources by 2020.</p>	<p>The proposed project would offer home photovoltaic solar electricity systems, which would decrease its dependence on more GHG-intensive grid electricity.</p>
<p>California Solar Initiative Install one million solar roofs on homes and businesses and increase the use of solar thermal systems to offset the growing demand for natural gas and reduce GHG emissions from electricity usage and heating applications.</p>	<p>The proposed project would offer home photovoltaic solar electricity systems, which would decrease its dependence on more GHG-intensive grid electricity.</p>
<p>Investor-Owned Utility (IOU) Programs Reduce IOUs' GHG emissions by implementing energy efficiency programs with aggressive targets and taking GHG emissions into account when making procurement decisions.</p>	Not applicable.

Climate Action Team strategies not listed are not applicable to this project.

Source: PCR Services Corporation, 2008.

With respect to water resources, the 2007 SWP Delivery Reliability Report accounts for anticipated climate change and, based on this information, which is the best that is currently available³⁸, there appears to be an adequate water supply to meet demands within their service

³⁸ As discussed in Section 4I, Water Resources, the assumptions upon which DWR's 2007 SWP Delivery Reliability Report are based have changed given the recent issuance of two Biological Opinions (BO) that have resulted in new limitations on SWP pumping and increased uncertainty with regard to the ability of the SWP to meet its contractual deliveries to CLWA and other SWP Contractors. These BOs factored climate change into their analyses of the SWP and Central Valley Project effects on the covered species; climate change was therefore one of the factors that led to the changes in reservoir operation and limitations on pumping that, when combined, increased uncertainties regarding SWP supplies. The 2007 SWP Delivery Reliability Report remains the most current source of published information regarding the reliability of SWP water supplies, however.

area. Although there is still a great deal of uncertainty with respect to impacts of climate change on future groundwater availability in California, in view of the anticipated results and goals of the updated groundwater basin yield study, the impacts of global climate change on groundwater would not reasonably be expected to be substantial. Due to the diverse portfolio of water supplies available to serve the Santa Clarita Valley, which enhance the long-term reliability of the total mix of water supplies, impacts of global climate change on water supply for the proposed project and related projects are considered to be less than significant. Moreover, the water conservation features and related mitigation measures proposed for the project would further assist in responding to any potential changes in water supply resulting from global climate change.

5.0 ALTERNATIVES

A. INTRODUCTION

CEQA requires that an EIR describe a reasonable range of alternatives to the proposed project, or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This chapter sets forth potential alternatives to the proposed project and evaluates them, as required by CEQA.

Key provisions of the *State CEQA Guidelines* (Section 15126.6) pertaining to the alternatives analysis are summarized below.

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly;
- The no project alternative shall be evaluated along with its impact. The no project analysis shall discuss the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services;
- The range of alternatives required in an EIR is governed by a “rule of reason”; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project;
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR;
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of alternatives discussed in an EIR is governed by the “rule of reason,” mentioned above, that requires the identification of only those alternatives necessary to permit a reasoned choice between the alternatives and the proposed project.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in CEQA Section 15126.6(f)) are site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. An EIR need not consider an alternative if its effects cannot be reasonably identified, its implementation is remote or speculative, or if it would not achieve the basic project objectives.

The alternatives identified below, with the exception of the mandatory No Project Alternative, were selected due to their potential to at least partially meet basic Project objectives, and to lessen or avoid significant environmental effects resulting from implementation of the proposed project. A number of the more significant impacts of the proposed project, such as traffic, air quality and noise, relate to the size of the project, therefore, reducing the size of the project within reason was an important criterion in the selection of alternatives. Reducing impacts on biological resources and the extent of grading and landform alteration were also criteria based on expressed and expected public interest in these issues. The alternatives analyzed in this EIR are discussed below.

No Project Alternative. Section 15126.6(e) of the *State CEQA Guidelines* requires the analysis of a No Project Alternative. This No Project analysis must discuss existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not to be approved based on current plans, site zoning, and consistent with available infrastructure and community services. Because the proposed project is a development project, Section 15126.6(e)(3)(B) of the *State CEQA Guidelines* is directly applicable to the project.

“If the project is... a development project on an identifiable property, the “no project” alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project would result in predictable actions by others, such as the proposal of some other project, this “no project” consequence should be discussed. In certain instances, the “no project” alternative means “no build” wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.”

The alternatives to the proposed project are as follows:

- No Project/No Development Alternative;
- Reasonably Foreseeable On-Site Development Alternative (200 Residential Lots);
- Reduced Project Alternative A (800 Residential Lots); and
- Reduced Project Alternative B (935 Residential Lots).

These alternatives were selected with the goal of reducing and avoiding the identified significant impacts of the project and fostering informed decision-making while still attaining most of the basic objectives of the project. The reduced project alternatives also respond to input received during the circulation period for the EIR Notice of Preparation, particularly a request for an alternative that would avoid impacts on an unnamed drainage on-site.

1. Project Objectives

As discussed in Chapter 2.0, Project Description, the project applicant, Pardee Homes, proposes to develop approximately 622 acres of the site with 1,260 single-family residential lots with pads ranging in size from 5,775 to 7,350 square feet along with a 11-acre elementary school site, approximately 12 acres of public parkland, and approximately 6 acres of private parkland. Approximately 360 acres within the northern portion of the project site have been subdivided into 200 residential lots as part of Recorded Tract Map No. 44967. As part of the proposed project, the approved residential density for this area and other areas of the site that are not proposed to be developed, would be transferred to the southern portion of the project site. This would allow the northern portion of the project site to remain undeveloped and would support the establishment of the 1,355-acre Skyline Ranch Conservation Area (SRCA), and a 166-acre Non-Development/Continuing Use Area. The following project objectives are relevant to the analysis of alternatives as the selected alternatives are, pursuant to the *State CEQA Guidelines*, those that could feasibly attain most of the basic objectives of the project while also avoiding and lessening its significant impacts.

a. Land Use Planning Objectives

- Develop in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers.
- Cluster development within the site to preserve significant biotic resource areas and other natural open space while reducing landform alteration and avoiding a scenic ridgeline.

-
- Provide development and transitional land use patterns that are compatible with surrounding communities and land uses.
 - Increase the supply of housing to serve existing demand and future needs associated with forecasted population growth in the Santa Clarita Valley.
 - Provide sites for a public elementary school and a public park to serve residents of the project and others in nearby communities.
 - Create a pedestrian friendly environment which encourages pedestrian access between neighborhoods, parks and a public elementary school.

b. Mobility Objectives

- Provide a major regional roadway improvement that will also serve the site, consistent with the alignment being proposed in the County's Draft Highway Plan.
- Provide a safe, walkable community, through the use of enhanced landscaped sidewalks and paseos segregated from vehicle traffic.
- Enhance pedestrian safety through the use of innovative traffic calming techniques, which may include roundabouts, designed to slow traffic while providing continual traffic flow.
- Provide bike lanes and an extension of existing bus service along Skyline Ranch Road to facilitate the use of alternative transportation.

c. Park and Recreation Objectives

- Provide on-site recreational opportunities, including an improved public park, private passive neighborhood and pocket parks, and hiking trails convenient and accessible to residents.
- Support extension of the County Trail System (Mint Canyon Trail) by dedicating an easement in the northern portion of the site to the County from Vasquez Canyon Road to the Plum Canyon Fire Road and southwesterly to a lookout point (approximately 2.2 miles).

d. Resource Conservation Objectives

- Avoid development in regionally significant biotic resource areas located on Cruzan Mesa by designating a 166-acre portion of the site as a Non-Development/Continuing Use Area.
- Preserve other significant biotic resources in the northern portion of the site through establishment of one or more voluntary conservation easements, land dedications, or land set asides over a 1,355-acre area to be known as the Skyline Ranch Conservation Area (SRCA).
- Promote water conservation through use of drought-tolerant, fire-retardant, and native plants.
- Promote energy reduction, sustainable building practices, health enhancement, and water conservation into housing design, construction, and operation to reduce greenhouse gas emissions, while also reducing the operating and maintenance costs of housing.
- Provide landscaping along the perimeter of the site with a mix of native, drought-tolerant, low-fuel, and non-invasive plant species to serve as a buffer between improved areas of the site and adjacent natural open space in order to protect sensitive biotic resources.

2. Alternatives Eliminated from Further Consideration

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are feasible and therefore merit in depth consideration, and which are infeasible. Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (*State CEQA Guidelines*, Section 15126.6(f)(3)). This section identifies alternatives considered, but rejected as infeasible, and provides a brief explanation of the reasons for their exclusion. Alternatives may be eliminated from detailed consideration in the EIR if they fail to meet most of the Project objectives, are infeasible, or do not avoid any significant environmental effects (*State CEQA Guidelines*, Section 15126.6(c)). Alternatives considered that failed to meet the basic objectives of the proposed project, or were deemed infeasible, and were thus eliminated from further consideration, are discussed below.

- Alternative Locations: Alternative locations were investigated; however, they were not further evaluated due to the limited number of private properties of comparable size in the Santa Clarita Valley and the questionable feasibility of the applicant assembling a site of similar size within a reasonable time frame. Sites of similar size

that do exist were not considered for further evaluation as they were either proposed for development or would involve conversion of raw undeveloped land such that they would not be expected to avoid or substantially reduce the significant impacts of the project, particularly those related to grading (including air quality effects), and biotic resources.

- Alternative Land Uses: Alternatives that would involve other land uses were investigated; however, such alternatives would not support the basic objective of the project to provide residential housing.
- Reduced Project 600-Residential Lot Development: A reduction in the size of the development by approximately 50 percent was considered to further address air quality, traffic and noise impacts, but was rejected in favor of Reduced Project Alternative A, an 800-Residential Lot Development. Reduced Project Alternative A, which reduces the size of the proposed project by over one third (or approximately 35 percent), was viewed as more in line with the size of the project, and would similarly show proportional reductions in air quality, noise, traffic and other impacts that are driven by the amount of residential development. Consideration of an alternative that would reduce development by 50 percent was not expected to demonstrate avoidance of significant impacts beyond those already avoided by the range of selected alternatives and would not support substantial attainment of the project objectives.
- Alternate Site Configurations: Other configurations for development on the site beyond those considered in detail below were considered, including large lot residential development of approximately 900 units located on approximately 470 acres in the central portion of the site that would be served by a Cruzan Mesa Road segment between Whites Canyon Road and Sierra Highway. This alternative was not pursued in part because this roadway segment has been rejected in favor of the preferred alignment which was conditionally approved as Skyline Ranch Road by the Los Angeles County Department of Public Works on July 19, 2006 and being supported and carried forward by the County as part of their general plan update. This alternative would also require extensive grading and would impact a substantial portion of the site area being proposed by the County for designation as an SEA. Generally, for this and other site configurations it was determined that the most feasible location for development, and the location that would avoid impacts on Cruzan Mesa-Plum Canyon biotic resources and the County's proposed SEA, is in the southern portion of the site. The alternatives evaluated below involve alternate configurations and smaller development sites within this southern area.

3. Analysis Format

In accordance with *State CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less, similar, or greater than the corresponding impacts of the proposed project. Furthermore, each alternative is evaluated to determine the extent to which the project objectives, identified in Chapter 2.0, Project Description, would be attained.

5.0 ALTERNATIVES

B. NO PROJECT/NO DEVELOPMENT ALTERNATIVE

1. DESCRIPTION OF THE ALTERNATIVE

In accordance with the *State CEQA Guidelines*, the No Project Alternative for a development project on an identifiable property consists of the circumstance under which the project does not proceed. Section 15126.6(e)(3)(B) of the Guidelines states that, “in certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained.” For purposes of this analysis, the No Project/No Development Alternative assumes this condition. Accordingly, the No Project/No Development Alternative assumes that no project is approved, and no development occurs within the project site. Thus, the physical condition of the project site would remain as it is today, as primarily undeveloped natural open space. No residential lots, school, or parks would be constructed, and none of the proposed public facilities and infrastructure would be established on the southern portion of the project site. Areas on Cruzan Mesa would continue to be leased by a film production company for use as an outdoor movie set. Accordingly, this No Project/No Development Alternative would support conditions on the project site similar to those described under the Environmental Setting heading for each category analyzed in Chapter 4.0, Environmental Impact Analysis, of this EIR.

2. ENVIRONMENTAL IMPACT CATEGORIES

a. Geotechnical Resources

Under the No Project/No Development Alternative, the proposed project would not be developed, and, as such, site preparation activities, including grading, excavation, and cut and fill operations, would not occur. As a result, and in contrast to the proposed project, there would be no significant impacts and no mitigation required to address the potential for erosion, slope stability and landslides under the No Project/No Development Alternative.

In addition, without the proposed residential development, there would be no potential for significant impacts on residences and structures due to strong ground shaking, liquefaction, dry seismic settlement, and landslides during seismic events.

b. Hydrology and Water Quality

Under the No Project/No Development Alternative, hydrologic functions would not change. Watersheds A through E would remain intact, and the current level of flow rate/volumes, debris discharge, would be unchanged. Therefore, in contrast to the proposed project, there would be no impacts on storm drains, flooding, and water quality, and no need for associated mitigation. Similarly, without development, there would be no impacts associated with erosion, sedimentation, and construction and urban related pollutants.

c. Biological Resources

Under the No Project/No Development Alternative, the project site would not be developed, and no construction activities would occur. As such, there would be no project-related development impacts to plant communities or wildlife species, wildlife movement, jurisdictional waters, oak trees, or other biological resources and no mitigation would be required. Filming activities on Cruzan Mesa, which constitute an existing use of the property, may have some impact on wildlife or vegetation outside of the vernal pools (through site preparation, earthmoving, grading, vegetation removal, etc.); however, filmmaking crews are required to obtain any necessary local, state or federal permits before any such site disturbance occurs. Filmmaking leases pertaining to the project site prohibit the lessees from disturbance activities within the vernal pools and require biological monitoring when appropriate, to ensure that film-making crews avoid disturbance to the vernal pools. In some instances, (i.e., where the impact would require state or federal resource impact permit), these film-making activities may be required to provide biological mitigation for their impacts.

d. Cultural Resources

Under the No Project/No Development Alternative, the proposed project would not be developed, and, as such, there would be no site preparation activities, including grading, excavation, and cut and fill operations. Accordingly, the potential for uncovering unknown subsurface cultural materials and the disturbance of any historical sites and paleontological resources that may potentially exist on site would not occur. In contrast to the proposed project, the No Project/No Development Alternative would have no impacts on cultural resources, and no mitigation measures would be required.

e. Visual Qualities

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. As such, on-site vegetation, natural landforms (e.g., canyons and ridges), and the rural hillside character of the project site would be preserved. No change in

short-range and long-range views from the surrounding areas would occur. The residential neighborhoods to the west and southwest would retain their views of undeveloped rolling hills and ridgelines offered by the project site. Similarly, existing views of a hillside and a small canyon along Sierra Highway would be maintained. In contrast with the proposed project, there would be no impacts on visual qualities, and the project's potentially significant and unavoidable impacts on visual qualities would be avoided.

f. Traffic/Access

Under the No Project/No Development Alternative, the project site would not be developed, and as such, construction and development of the proposed project would not occur. Traffic generated by the project would be avoided. This Alternative would not exacerbate the deficient conditions of several County and City intersections and would not require contribution to the B&T District fees for infrastructure improvements planned to occur within the Santa Clarita Valley. Therefore, no impacts would occur under the No Project/No Development Alternative, and the project's potentially significant and unavoidable impact at the intersection of Via Princessa and Sierra Highway would be avoided. It should be noted however, that construction of Skyline Ranch Road, as proposed by the project, would not occur under the No Project/No Development Alternative. Therefore, this infrastructure improvement, which has been conditionally approved by the County Department of Public Works and shown on the County Highway Plan, if it were to be implemented, would need to be funded overtime through Bridge and Thoroughfare District (B&T) fees and constructed in the future independent of the proposed project.

g. Noise

Under the No Project/No Development Alternative, increased noise levels associated with project construction would not result, and the significant and unavoidable construction impacts associated with the proposed project would be avoided. Since the No Project/No Development Alternative would not generate traffic, significant and unavoidable noise impacts associated with noise levels from off-site operational traffic in and around the project site would also be avoided. Under the No Project/No Development Alternative, the project's potentially significant operational noise impacts from public school and park use would be avoided.

h. Air Quality

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. There would be no project construction and the proposed uses would not be developed. As such, construction-related and operation-related emissions, such as fugitive dust associated with site grading and excavation, construction equipment emissions, and

project-related vehicle emissions would not occur. The No Project/No Development Alternative would not violate any air quality standards, contribute to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The short-term significant regional PM₁₀, PM_{2.5}, CO, NO_x and VOC impacts and localized PM₁₀ and PM_{2.5}, impacts associated with construction of the project would be avoided, and the long-term regional CO, VOC, NO_x, PM₁₀ and PM_{2.5}, impacts associated with mobile and area source emissions from operation of the proposed project would not occur. Therefore, under the No Project/No Development Alternative, there would be no air quality impacts, and the proposed project's potentially significant and unavoidable construction and operational impacts would be avoided.

i. Water Resources

The No Project/No Development Alternative would not result in water consumption since the project site would remain undeveloped. As such, the demand for water would not increase beyond current levels, and no impacts on CLWA and SCWD services would occur. Similarly, since no development, change in land use, or increase in impervious surfaces would occur on the project site, this Alternative would not affect groundwater conditions or recharge. Under the proposed project demand for water resources would increase and overall impervious surface area would increase, but impacts would be less than significant; in contrast, under the No Project/No Development Alternative, there would be no demand placed on water resources, no increase in impervious surface area, and no impacts would occur.

j. Wastewater

The No Project/No Development Alternative would not generate wastewater as the project site would remain undeveloped. As such, no impacts on County Sanitation Districts' services, facilities, and system capacities would occur. Impacts on wastewater services under the proposed project are less than significant due to infrastructure improvements and payment of applicable sewer connection fees. In contrast, under the No Project/No Development Alternative, there would be no impacts and no need for infrastructure improvements.

k. Solid Waste

The No Project/No Development Alternative would not result in solid waste generation since the project site would remain undeveloped. Construction debris and solid waste typical of residential uses would not be generated under this Alternative, and, thus, the need for solid waste services would not increase beyond current levels. As such, no impacts on County Sanitation Districts' services, solid waste collection capacity, and landfill system capacities would occur under the No Project/No Development Alternative. This would be in contrast to the proposed

project where solid waste would be generated, but impacts on landfill capacity would be less than significant.

l. Law Enforcement Services

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. As such, there would be no increased demand for law enforcement services, including the County Sheriff's Department and the California Highway Patrol (CHP). Since the No Project/No Development Alternative would not affect the current level of service/operation by the Sheriff's Department or the CHP, or require the construction, expansion, or reorganization of Sheriff's Department or CHP facilities, no impacts to these services would occur. This is in contrast to the proposed project where, if County and State Funds are not adequately allocated to support increases in law enforcement services over time, the project's impacts could be significant and unavoidable.

m. Fire Services and Hazards

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. As such, there would be no increased demand for Los Angeles County Fire Department (LACoFD) services. Since the No Project/No Development Alternative would not affect the current level of service/operation by LACoFD or require the construction, expansion, or reorganization of LACoFD facilities, no impacts to fire protection services would occur. This would be in contrast with the proposed project where impacts would be less than significant with payment of development fees and implementation of mitigation measures set forth by the LACoFD.

n. Education

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. Accordingly, no new residential development would be introduced to the project site and vicinity. As such, this Alternative would not result in any demand for schools in the area, and, thus, the need for school facilities would not increase beyond current levels. Under the No Project/No Development Alternative, the new elementary school site proposed for Sulphur Springs School District would not be developed. Since the No Project/No Development Alternative would not affect school enrollments and capacities of local schools or require the construction, expansion, or reorganization of school facilities, no impacts to these services would occur. This would be in contrast to the proposed project which would increase enrollment but would have less than significant impacts on schools with payment of school impact fees and the voluntary provision of an 11-acre public elementary school site.

o. Libraries

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. As such, without residential or other development, there would be no increase in demand for library facilities in the area. Since the No Project/No Development Alternative would not affect local libraries or require the construction, expansion, or reorganization of local libraries, no impacts to these services would occur. This would be in contrast to the proposed project which would generate new demand for library facilities but would be less than significant due to requirements for payment of library impact fees.

p. Parks

Under the No Project/No Development Alternative, the project site would remain undeveloped and undisturbed. As such, this Alternative would not result in any demand for parks and recreational facilities in the area, and, thus, the need for such facilities would not increase beyond current levels. Under the No Project/No Development Alternative a trail easement in the northern portion of the site that connects to the regional trail system would not be provided to the County. Since the No Project/No Development Alternative would not affect local parks and recreational facilities or require the construction or expansion of such facilities, no impacts to parks and recreation would occur. This is in contrast to the proposed project where impacts on parks and recreational facilities would be less than significant and more than offset through the provision of a 12-acre (10.6 net acres) fully improved public park site, payment of fees, bike lanes, hiking trails, other private parks, and a dedicated trail easement.

q. Land Use

Under the No Project/No Development Alternative, there would be no change in the existing land use conditions within the project site. Therefore, this Alternative would have no adverse impact regarding existing regulations, and no direct effect on existing land use patterns. At the same time, this Alternative would not contribute to the support of many regional and local policies regarding development at the project site. It would not support policies of SCAG, County General Plan, and Santa Clarita Area Plan that are intended to concentrate clustered development in proximity to existing development via density transfer, accommodate development in areas least likely to have adverse environmental impacts, and improve infrastructure in the area. It would not accommodate projected growth and demand for housing nor support the provision of parks and schools. Policies regarding the quantity and quality of open space would be supported to the extent that the project site would remain undeveloped and left as open space.

Without development on the project site, the existing land use relationships in the project area would not be affected, and this Alternative would have no direct impacts on the distribution of development within and/or adjacent to existing communities and neighborhoods. However, the existing demand for housing in the project area would remain, and there would be pressures for development at other locations. Further, there could be future new proposals on the project site.

To the extent that the demand for development at the project site is not accommodated, demand might be met through development in areas that are more outlying and/or less contributory to the policies that encourage development adjacent to existing development and infrastructure. As with the proposed project, impacts under the No Project/No Development Alternative would be less than significant. The No Project/No Development Alternative would generate less impact with regard to policies and land use patterns vis-à-vis the provision of open space but would generate greater impact with regard to policies and land use patterns vis-à-vis the regional form of development.¹

r. Population, Housing, and Employment

The No Project/No Development Alternative would not introduce a new residential development to the project site and vicinity and, thus, would not result in any increase in population, demand for housing, or on-site employment. Similar to the project, no impacts associated with population, housing, and employment would occur.

s. Global Climate Change

The No Project/No Development Alternative would not generate greenhouse gas (GHG) emissions associated with construction and operational activities (i.e., vehicle emissions and energy use). In addition, this Alternative would not result in additional water demand. Although the significance of the proposed project's impacts on global climate change are too speculative to determine, it was conservatively concluded that even with implementation of project features, GHG measures, and mitigation measures, the proposed project's GHG emissions would represent a cumulatively considerable increased contribution to cumulative impacts associated with global climate change. Therefore, under the No Project/No Development Alternative, no impacts on global climate change would occur and a significant and unavoidable cumulative impact identified for the proposed project would be avoided.

¹ *In this case, the term "greater" is used to reflect the fact that the Alternative is "worse" than the proposed project, rather than that the absolute impacts are greater.*

3. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

A comparative summary of the environmental impacts associated with the No Project/No Development Alternative with the environmental impacts anticipated under the proposed project is provided in Table 5-1 on page 5-61. This Alternative would not result in any environmental impacts. However, the No Project/No Development Alternative would not attain any of the basic objectives of the project and would not attain the applicant's underlying purpose of developing the project site with a planned residential community.

5.0 ALTERNATIVES
C. REASONABLY FORESEEABLE
ON-SITE DEVELOPMENT ALTERNATIVE

1. DESCRIPTION OF THE ALTERNATIVE

In accordance with *State CEQA Guidelines* Section 15126.6(e)(2), this Alternative represents “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” In addition, in accordance with *State CEQA Guidelines* Section 15126.6(e)(3)(B), this Alternative represents “predictable actions..., such as some other project” if disapproval of the project under consideration were to occur.

Consequently, the Reasonably Foreseeable On-Site Development Alternative involves development of Recorded Tract Map No. 44967, a 200-lot subdivision on 360 acres in the northern portion of the site, as shown in Figure 5.C-1 on page 5-17. The area of site disturbance is estimated to be 189 acres. Site access would be from Vasquez Canyon Road to Mystery Mesa Drive.

2. ENVIRONMENTAL IMPACT CATEGORIES

a. Geotechnical Resources

Under the Reasonably Foreseeable On-Site Development Alternative, 200 residential homes would be developed on the northern portion of the project site. As such, site preparation activities, including grading, excavation, and cut and fill operations, would be conducted. Approximately 2.35 million cubic yards of earth would be disturbed on approximately 189 acres during site preparation, which could result in soil erosion and modification of prominent topographic features that characterize the northern portion of the project site. However, compared to the amount of earth disturbance that would occur as a result of the proposed project (i.e., approximately 20.8 million cubic yards on 622 acres), grading related impacts on geotechnical resources would be less under this Alternative.

As with the proposed project, residential development under this Alternative would be exposed to strong seismic ground shaking in the event of an earthquake which could expose residents to ground shaking-related hazards. However, the development footprint on the northern portion of the site does not contain liquefiable materials and largely avoids areas

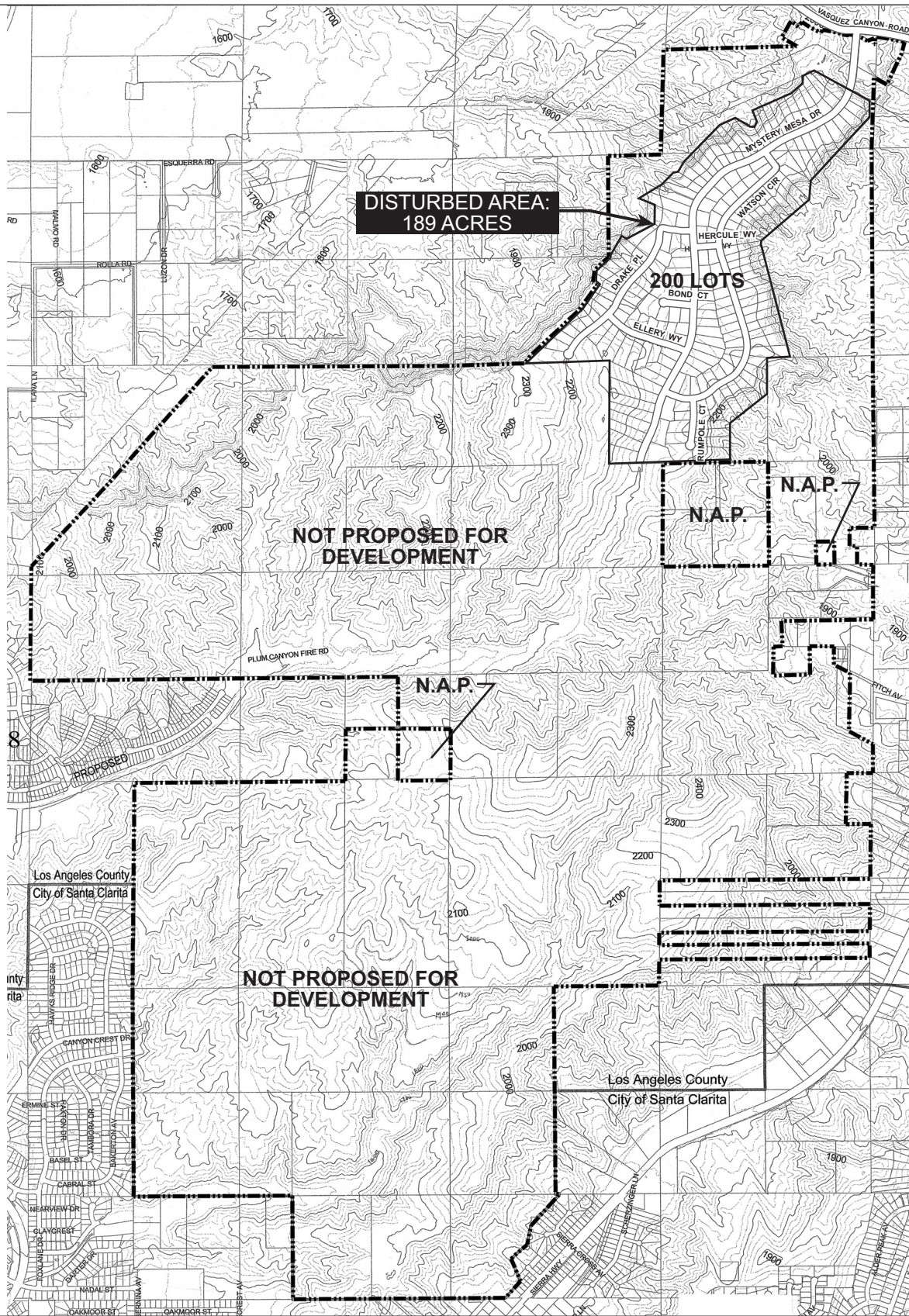


Figure 5.C-1
 No Project/Reasonable Foreseeable
 On-Site Development Alternative

identified as having potential for landslides and, as such, would lessen the proposed project's potentially significant impacts related to liquefaction and landslides.

b. Hydrology and Water Quality

Similar to the proposed project, the installation of desilting basins and a storm drain system under the Reasonably Feasible On-Site Development Alternative would potentially decrease flow rates and debris volumes as compared to existing conditions. However, the increase in impervious surfaces as a result of the development of this Alternative would potentially increase the flow volume from the site. This alternative would have ample acreage south of the site (as shown on Figure 5.C-1) to construct retention/detention basins or an adequately sized flood control channel that would discharge into Plum Canyon. This infrastructure would potentially reduce the volume of runoff discharged from the site or confine it in a flood control system to reduce the risk of flooding. Risk of flooding under this Alternative would be reduced compared to the proposed project, since no development would occur within a floodplain. However, similar to the proposed project, impacts on hydrology would be mitigated to a less than significant level.

Development of the 200-lot subdivision on the northern portion of the site would shift the water quality impacts to watersheds in and around Cruzan Mesa and Plum Canyon. Similar to the proposed project, grading activities on the northern portion of the project site would have the potential for downstream impacts associated with erosion and sedimentation. As with the proposed project, this Alternative would be required to develop an Erosion Control Plan (ECP) and apply for coverage under the Statewide National Pollutants Discharge Elimination System (NPDES) General Construction Activities Storm Water Permit (NPDES No. CAS000002). Coverage under the General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) as a guideline to implement best management practices (BMPs) to control pollutants.

Once developed, the new urban landscape would generate urban-related pollutants such as grease, oil, fertilizers, and phosphates. Therefore, the project would need to apply for coverage under the NPDES Permit and waste discharge requirements of the Regional Water Quality Control Board (RWQCB) under the General Municipal Separate Storm Sewer System (MS4) Permit, which requires the development of a Stormwater Quality Management Plan (SQMP) and Standard Urban Storm Water Mitigation Plan (SUSMP). Compliance with required permits and implementation of the SWPPP, SQMP, and SUSMP would ensure that impacts related to water quality are reduced to less than significant levels. Thus, as with the proposed project, after mitigation, impacts on water quality would be less than significant. Due to the considerable reduction in the number of residential units to be developed, impacts on water quality would be less under this Alternative than for the proposed project.

c. Biological Resources

Under the Reasonably Foreseeable On-Site Development Alternative, five of the six vernal pools on-site would be potentially impacted or eliminated. These include the vernal pool complex in the central portion of Cruzan Mesa, which consists of two large shallow pools and three smaller man-made pools in the southern portion of the mesa. All of these vernal pools support two federally-listed plant species, the spreading navarretia (*Navarretia fossalis*) and California Orcutt grass (*Orcuttia californica*); one federally-listed invertebrate species, the vernal pool fairy shrimp (*Branchinecta lynchi*); and one special status species not currently listed as threatened or endangered, the western spadefoot (*Spea hammondi*).

In addition to impacts to sensitive species within the vernal pools, the vernal pools themselves are regulated by the RWQCB and would require Waste Discharge Requirements (WDRs) under the Porter-Cologne Water Quality Control Act.

Although no impacts would occur in the southern portion of the site, impacts would occur in a sensitive area of Cruzan Mesa, with significant impacts to sensitive plant species, sensitive wildlife species, and jurisdictional areas. The project under this Alternative would require the preparation of a Habitat Conservation Plan to receive a permit under Section 10 of the Federal Endangered Species Act and Section 2081 of the California Endangered Species Act.

A permit would not likely be issued by the USFWS or CDFG unless and until a “no jeopardy” opinion was issued by the USFWS and appropriate mitigation had been established. The agencies likely would first request that the project be redesigned to avoid the vernal pools to the maximum extent practicable, avoid the listed species to the maximum extent possible and provide a substantial buffer to protect the vernal pool resources long term. If avoidance were not feasible, the agencies may allow partial take and require mitigation for impacts at a ratio of at least 3:1, but there would likely be strict opposition to take within this area. Although the nature and extent of mitigation for impacts in the northern portion of the site and Cruzan Mesa area is not clear, this Alternative would have the potential for more severe impacts on sensitive biotic resources than the proposed project. In contrast to the proposed project, development would occur within a proposed SEA and in proximity to areas that include regionally significant vernal pools and three federally-listed species.

Under this Alternative, no impacts would occur in the southern portion of the site, thereby avoiding some impacts to sensitive plant communities, such as coastal sage scrub, coastal sage-chaparral scrub, sycamore woodland (which includes nine cottonwoods and 96 western sycamores), and holly-leaved cherry scrub, and populations of the special status slender mariposa lily (a California Native Plant Society [CNPS] List 1B species).

d. Cultural Resources

Under the Reasonably Foreseeable On-Site Development Alternative, site preparation activities, including grading, excavation, and cut and fill operations, on the northern portion of the project site would be conducted. Accordingly, there is potential for uncovering unknown subsurface archaeological and paleontological resources. However, due to the reduction in the area of disturbance resulting from this Alternative compared to the proposed project (i.e., 360 acres versus 622 acres), impacts on cultural resources would be less under this Alternative.

e. Visual Qualities

Under the Reasonably Foreseeable On-Site Development Alternative, the southern portion of the project site would remain undeveloped and undisturbed. Alternatively, the northeasternmost portion of the project site (Cruzan Mesa) would be developed with a 200-lot subdivision, as shown in Figure 5.C-1. Cruzan Mesa lies atop of an eroded mesa between Mint and Bouquet canyons with elevations ranging from 2,000 feet to 2,100 feet above mean sea level. Consequently, the development area under this Alternative would be visible from the east, north, and west. However, these areas remain mostly undeveloped and rural with scattered single-family homes, multi-family residential developments, and ranches to the east. Views of the development area would be limited to these uses to the east along Sierra Highway and Vasquez Canyon Road and to motorists traveling on Vasquez Canyon Road. Nevertheless, these uses may potentially experience a change in views that may contrast with an existing vista, where short- and long-range views encompass undeveloped mesa and hillside, to views of rooftops or building façades, depending on the setbacks provided by the residential development. As such, although the Reasonable Foreseeable On-Site Development Alternative would avoid the significant and unavoidable impacts of the proposed project on those residences located west of the project site that are oriented to the east, this Alternative would have potentially significant and unavoidable impacts on those uses to the east with views of Cruzan Mesa. Overall, impacts on visual qualities under the Reasonable Foreseeable On-Site Development Alternative would be somewhat similar to, but less than, the proposed project.

f. Traffic/Access

The Reasonably Foreseeable On-Site Development Alternative would generate approximately 1,914 average daily trips (ADTs), which represent approximately 15 percent of the proposed project's ADTs. While this Alternative would reduce the impacts of the proposed project to the study area roadway system as a whole, the single access point onto Vasquez Canyon Road would result in an impact to Vasquez Canyon Road that would not occur with the proposed project since no project-generated traffic is anticipated to use Vasquez Canyon Road. Based on the volume of peak hour traffic to be generated by this Alternative, no significant impacts to off-site intersections, including those along Vasquez Canyon, would be expected.

Therefore, impacts on traffic would be less under this Alternative than for the proposed project. In contrast to the proposed project, this alternative would not provide a major highway improvement connecting Whites Canyon Road to Sierra Highway, a benefit of the proposed project. Without this highway improvement as part of the project, the County's ability to complete such a connection as proposed under its existing and Draft Highway Plans would be compromised.

g. Noise

Under the Reasonably Foreseeable On-Site Development Alternative, worst-case construction-period noise levels would remain similar to those identified for the proposed project. However, construction equipment would be located at a greater distance from sensitive land uses. The same equipment mix would be used for construction (e.g., graders, pavers, electrified and pneumatic power tools, etc.), but the duration of construction activities (related noise impacts) would be considerably shorter than that for the proposed project (i.e., construction of 200 units versus 1,260 units). As discussed above, the immediate vicinity of the development area under this Alternative remains mostly undeveloped and rural with scattered single-family homes, multi-family residential developments, and ranches to the east. In addition to having fewer sensitive receptors around the construction site, the sensitive uses are located at a sufficient distance (both vertically and horizontally) to reduce noise impacts to less than significant levels. Moreover, the local topography (e.g., ridges and hillside) would serve as barriers to sensitive receptors to attenuate noise levels from the construction site. As such, although worst-case, on-site, construction-period noise levels would be similar (e.g., number and type of construction equipment on a peak day) to those identified for the proposed project, the noise attenuation afforded by the distance of the sensitive receptors from the construction site under this Alternative would avoid significant impacts associated with the proposed project.

However, as with the proposed project, sensitive receptors along the truck route, particularly those near the intersection of Sierra Highway and Vasquez Canyon Road, would experience temporary and instantaneous noise levels up to 91 dBA at 50 feet from the roadway, which would exceed thresholds of significance and result in a significant impact, although of lesser magnitude (i.e., shorter duration) than the proposed project.

As discussed above, this Alternative would generate approximately 15 percent of the traffic volumes estimated for the proposed project. Accordingly, the increases in noise levels along the analyzed roadway segment that would result from this Alternative would be less than those estimated for the proposed project based on the volume of peak hour traffic to be generated by this Alternative. However, as with the proposed project, increases in noise levels at noise-sensitive uses along those roadway segments affected by project traffic that are already considered unacceptable under the City and State Guidelines (particularly those along Sierra Highway) would also be considered significant under this Alternative. Therefore, although noise

impacts would be less under this Alternative than those identified for the proposed project, the project's potentially significant and unavoidable impact on noise-sensitive receptors along Sierra Highway would not be avoided but substantially lessened.

h. Air Quality

Under the Reasonably Foreseeable On-Site Development Alternative, the southern portion of the project site would remain undeveloped and undisturbed, while the Cruzan Mesa area of the northern portion of the project site would be developed with the previously approved 200-lot subdivision. Worst-case construction emissions would remain similar to those identified for the proposed project. The same equipment mix would be used for construction (e.g., graders, pavers, electrified and pneumatic power tools, etc.) and the number of acres disturbed per day would be similar, but the duration of construction activities (and related air quality impacts) would be considerably shorter than that for the proposed project (i.e., construction of 200 units versus 1,260 units). As such, construction-related and operation-related emissions, such as fugitive dust associated with site grading and excavation, construction equipment emissions, and project-related vehicle emissions would also occur. As with the proposed project, this Alternative would result in short-term significant regional PM₁₀, PM_{2.5}, CO, NO_x and VOC impacts and localized PM₁₀ and PM_{2.5} impacts associated with construction of the project, and long-term regional VOC impact from area sources during project operation in the wintertime. Although air quality impacts would be considerably less under this Alternative than those identified for the proposed project, potentially significant and unavoidable air quality impacts would not be avoided.

i. Water Resources

The Reasonably Foreseeable On-Site Development Alternative would result in an 84 percent reduction in development when compared to the proposed project. The demand for water would increase beyond current levels although at a considerably lower rate than the proposed project. This Alternative would increase water use by approximately 160 AFY.² As with the proposed project, water demand for this Alternative would not exceed SCWD's supply capacity and would be less than significant. This Alternative would require the extension of the existing 14-inch water line located along Sierra Highway north to Vasquez Canyon Road (approximately 1.5 miles) to serve the undeveloped northern portion of the property. Due to the considerable reduction in the number of residential units to be developed, impacts on water resources would be less under this Alternative than for the proposed project. Although this Alternative would require a greater extension of existing infrastructure compared to the proposed

² Based on a water use factor of 0.80 AFY per unit.

project, this would not be considered a significant impact, since this would occur within existing roadways and excavation would be limited.

As with the proposed project, the overall increase in impervious surfaces associated with the Reasonably Foreseeable On-Site Development Alternative would not result in a significant reduction in groundwater recharge. Therefore, similar to the proposed project, this Alternative would not interfere substantially with groundwater recharge, and impacts would be less than significant.

j. Wastewater

As mentioned above, the Reasonably Foreseeable On-Site Development Alternative would result in an approximately 84 percent reduction in residential development when compared to the proposed project. Accordingly, the wastewater generated by the project under this Alternative would be considerably less than the quantity estimated for the proposed project. Although the existing 18-inch trunk sewer would need to be extended from its current terminus on Bouquet Canyon Road (approximately 2 miles west from the development proposed under this Alternative), the CSD trunk sewer, and the SCVJSS wastewater treatment system have adequate existing capacity to absorb the proposed project's estimated wastewater flows. Therefore, it is anticipated that the wastewater generated by the project under this Alternative could be adequately accommodated as well. As with the proposed project, impacts on wastewater disposal associated with this Alternative would be less than significant. Due to the considerable reduction in the number of residential units to be developed, impacts on wastewater services and facilities would be less under this Alternative than for the proposed project.

k. Solid Waste

The amount of construction waste to be generated by the project under the Reasonably Foreseeable On-Site Development Alternative would be substantially less than that of the proposed project due to the considerable reduction in the number of residential units to be developed. Since it has been determined that County landfills have sufficient capacity to accommodate the disposal of solid waste during construction and operation of the proposed project, it is anticipated that solid waste generated by the project under this Alternative could be adequately accommodated as well. As with the proposed project, impacts on solid waste disposal associated with this Alternative would be less than significant. Due to the considerable reduction in the number of residential units to be developed, impacts on solid waste services and facilities would be less under this Alternative than those identified for the proposed project.

I. Law Enforcement Services

Similar to the proposed project, the Reasonably Foreseeable On-Site Development Alternative would not expose project residents to high levels of public safety risks associated with law enforcement services and, as such, impacts would be less than significant. Based on the estimated on-site population of 660 residents under this Alternative, the project would require less than one new deputy to be consistent with the Sheriff station's ideal officer to population ratio of one deputy per 1,000 residents. As with the proposed project, project residents would increase emergency calls and the demand for other law enforcement services in the Santa Clarita Valley, which could overextend existing personnel and support resources. While general fund revenues have historically supported adequate levels of law enforcement services in the area, if sufficient funding for Sheriff's services is not maintained by the County, a potentially significant and unavoidable impact could also occur under this Alternative. However, although the project's potentially significant and unavoidable impacts would not be avoided, due to the considerable reduction in the number of residential units to be developed, impacts on law enforcement services and facilities would be less under this Alternative than those identified for the proposed project.

m. Fire Services and Hazards

Under the Reasonably Foreseeable On-Site Development Alternative, a 200-lot subdivision would be introduced to the project site and vicinity. As with the proposed project, this Alternative would increase demand for LACoFD services. However, similar to the proposed project, payment of developer impact fees and implementation of the same mitigation measures identified in Section 4.M, Fire Services and Hazards, would reduce impacts on fire protection services to less than significant levels.

Similar to the proposed project, the project under this Alternative would be located within a Very High Fire Hazard Severity Zone (VHFHSZ). However, the 200-lot subdivision would be subject to the requirements for a VHFHSZ set forth in the Los Angeles County Fire Code. The same mitigation measures identified in Section 4.M, Fire Services and Hazards, are proposed to reduce fire hazards and impacts on fire protection services to less than significant levels.

Due to the considerable reduction in the number of residential units to be developed, impacts on fire protection services and facilities would be less under this Alternative than the proposed project.

n. Education

Under the Reasonably Foreseeable On-Site Development Alternative, a 200-lot subdivision would be introduced to the project site and vicinity. Based on the student generation rates presented in Table 4.N-2 in Section 4.N, Education, this Alternative would generate 72 elementary school students within the Sulphur Springs School District and 25 junior high school students and 48 senior high school students within the William S. Hart Union High School District. This would result in 799 students fewer than generated by the proposed project. As with the proposed project, the payment of fees under the provisions of Government Code Section 65995 et seq. would provide full and complete school facilities mitigation. Although there would be a considerable reduction in school enrollment under this Alternative, the size of the development would not feasibly support the provision of an elementary school site. Therefore, the benefit afforded by the provision of a school site under the proposed project would not be realized, and impacts to local elementary schools would be alleviated through payment of mitigation fees only.

o. Libraries

Under the Reasonably Foreseeable On-Site Development Alternative, a 200-lot subdivision would be developed. Based on the County's service guidelines of 2.75 items per capita and 0.5 square foot of facility per capita and based on the estimated on-site population of 660 residents under this Alternative, this Alternative would generate demand for 1,815 library items and 330 square feet of library space. However, as the Canyon Country Jo Anne Darcy Library currently has a deficit of library space and materials, it is anticipated that the library demand generated under this Alternative would not be adequately accommodated and would contribute to the library falling below its service guidelines. However, as with the proposed project, this Alternative would be required to pay Library impact fees pursuant to County Code requirements. Thus, as with the proposed project, impacts on library services and facilities associated with this Alternative would be less than significant. Due to the considerable reduction in the number of residential units to be developed, impacts on libraries would be less under this Alternative than those identified for the proposed project.

p. Parks

Under the Reasonably Foreseeable On-Site Development Alternative, a 200-lot subdivision would be developed and would preclude the extension of an approved County Trail System within this area, as depicted on the Santa Clarita Valley Area Plan Trails Map. The Los Angeles County Code requires that new subdivisions dedicate on-site park space and/or the payment of in-lieu fees to meet the recreational demands of its residents. Although this Alternative would not provide any park space or trail easement, impacts on parks would be less than significant with payment of required park land dedication fees. As with the proposed

project, impacts on parks and recreation associated with this Alternative would be less than significant.

q. Land Use

Under the Reasonably Foreseeable On-Site Development Alternative, the currently approved 200-unit subdivision would be constructed in the northern portion of the project site. This development has been approved, and the Alternative would be consistent with existing entitlements. This alternative would bring less development to the project site than the proposed project. Development would occur in a somewhat isolated pocket, amidst open space areas, and non-contiguous with existing development.

This Alternative would minimally contribute to the support of many regional and local policies regarding development at the project site. It would not fully support policies of SCAG, County General Plan, and Santa Clarita Area Plan that are intended to concentrate clustered development in proximity to existing development via density transfer, accommodate development in areas least likely to have adverse environmental impacts, improve infrastructure in the area, and direct growth away from environmentally sensitive areas. It would not be as supportive of accommodating projected growth and demand for housing as the proposed project. Without provision of sites for parks and a school, this Alternative, as compared to the proposed project, would not support land use policy that encourages services that are convenient to and timed to serve new residents. Policies regarding the quantity of open space would be supported to the extent that the southern portion of the project site would remain undeveloped, but open space policies that encourage the preservation of higher quality/unique open space features would be adversely affected.

This Alternative would provide an isolated housing development in an area with a rural character. The development would not affect the distribution of development within and/or adjacent to existing communities and neighborhoods. The southern portion of the project site would remain available for future development. Additional housing could occur on the southern portion of the project site in the future. Such housing would not be able to provide the same density transfer benefits of the proposed project. On the other hand, to the extent that the demand for development at the project site is not accommodated, demand might be met through development in areas that are even more outlying and/or less contributory to the policies that encourage development adjacent to existing development and infrastructure.

As with the proposed project, impacts under the Reasonably Foreseeable On-Site Development Alternative would be less than significant. The Reasonably Foreseeable On-Site Development Alternative would offer fewer opportunities than the proposed project to satisfy policies and land use patterns.

r. Population, Housing, and Employment

The Reasonably Foreseeable On-Site Development Alternative is forecast to result in a projected on-site population increase of 660 residents. This represents a total of less than 0.1 percent, less than 0.3 percent, and less than 1 percent of the total population growth and housing projected by SCAG for the Regional Area, the North Los Angeles County Subregion, and the Local Area, respectively, during the 2007 to 2017 period. As with the proposed project, this growth is a relatively small component of the expected growth projected by SCAG for these three geographical areas. As a result, the population and housing impacts of the project under this Alternative would not cause population growth or accelerate development in an undeveloped area that exceeds projected/planned levels.

The Reasonably Foreseeable On-Site Development Alternative is not anticipated to provide on-site employment since development of a school or parks is not proposed under this Alternative. Therefore, no impacts associated with employment would occur.

s. Global Climate Change

Under the Reasonably Foreseeable On-Site Development Alternative, construction and vehicle emissions that contribute to GHGs would be reduced as well as energy and water demand compared to the proposed project. Although impacts on global climate change would be reduced under this Alternative, it is conservatively concluded that significant and unavoidable cumulative impacts associated with the proposed project would also occur under this Alternative.

3. IMPACT SUMMARY

A comparative summary of the environmental impacts associated with the Reasonably Foreseeable On-Site Development Alternative with the environmental impacts anticipated under the proposed project is provided in Table 5-1 on page 5-61.

In summary and as shown in Table 5-1, the Reasonably Foreseeable On-Site Development Alternative would avoid the proposed project's significant impacts (prior to mitigation) associated with liquefaction and dry seismic settlement, and traffic.

This Alternative would have somewhat similar impacts on seismic ground shaking, soils, landslides, hydrology and water quality, visual quality, noise, air quality, water resources, wastewater and solid waste disposal, law enforcement and fire services, education, libraries, parks, and population and housing when compared to the proposed project although the magnitude of these impacts would be considerably reduced due to the reduction in the number of

residential lots to be developed under this Alternative (i.e., 200 units versus 1,260 units). For education and parks, this Alternative would not provide benefits associated with the provision of a fully improved public park and a public elementary school on site and convenient to residents. This Alternative would also preclude the extension of an approved planned as part of the County Trail System within this portion of the project site. As with the proposed project, impacts on all of these issues would be less than significant with implementation of mitigation measures, with the exception of visual quality, noise, air quality, and law enforcement services, where impacts would remain significant and unavoidable. Cumulative impacts on global climate change would also remain significant and unavoidable under this Alternative.

Regarding impacts on biological resources, the acreage that would be disturbed and developed would be substantially reduced from 622 acres on the southern portion to 360 acres on the northern portion of the site, and direct impacts on an unnamed drainage would be avoided. However, development of this Alternative would have significant impacts on vernal pools and the vernal pool watershed located in the Cruzan Mesa and Plum Canyon areas. Sensitive biological resources in these areas, including the vernal pools, two Federally-listed plant species, and one Federally-listed invertebrate (vernal pool fairy shrimp), are of regional significance. Furthermore, this development area falls within a County-proposed Cruzan Mesa Vernal Pool Significant Ecological Area. Due to greater sensitivity of biological resources in this area, the impacts that would occur under this Alternative would be more significant and would outweigh the reduction in impacts associated with size of the area of habitat disturbance and impacts to the unnamed drainage that would occur with the proposed project.

In addition, land use policies would be less consistent under this Alternative since development would occur in a more open/rural area that is remote from more concentrated development in areas to the south. This Alternative would not include a public park, a trail easement, a public elementary school or the major highway improvement involving the Whites Canyon Extension to Sierra Highway. Without this latter improvement, the County's ability to complete such a connection as proposed under its existing and Draft Highway Plans could be compromised. Furthermore, as mentioned above, this Alternative would not avoid the most environmentally sensitive areas (the Cruzan Mesa vernal pool areas) on the project site. For these reasons, this Alternative would conflict with numerous related land use plans and policies. Impacts would be greater than the proposed project in terms of consistency with land use plans and policies, and the physical pattern of proposed land use. Although these land use impacts would be greater than the proposed project, they would still be less than significant.

This Alternative would require a greater extension of water and sewer lines to serve this portion of the site, compared to the proposed project which would develop a portion of the site that is adjacent to existing infrastructure. However, the extension of these lines under this Alternative would not be considered a significant impact since excavation would be limited to existing roadways.

This Alternative would not have impacts on employment since the project would not include a public park or elementary school, which would generate employment under the proposed project.

4. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

The Reasonably Foreseeable On-Site Development Alternative would meet some of the underlying objectives of the project but would not realize the other objectives related to land use planning, mobility, park and recreation, and resource conservation.

Although this Alternative would provide a residential development that would be compatible with the surrounding community and land uses, and would increase housing supply to serve existing demand and future needs associated with forecasted growth in the Santa Clarita Valley, development would occur in a more open/rural area remote from more concentrated development in areas to the south. Consequently, placing the 200-lot residential development in a somewhat isolated pocket of land on the northern portion of the site would not be proximal to existing infrastructure. Furthermore, development at this location would not encourage pedestrian activities or the use of alternative modes of transportation as there are no public amenities or convenient connections to nearby neighborhoods or regional transportation corridors proposed under this Alternative. Counter to the land use planning and resource conservation objectives, this Alternative would place the residential development in regionally significant ecological areas while resulting in landform alteration, particularly of Cruzan Mesa. In addition, this Alternative would not include a public park to provide needed park space on site and in the project area nor support the extension of the County Trail System. As such, the park and recreation objectives would not be met.

This Alternative would not include the major highway improvement involving the Whites Canyon Extension to Sierra Highway proposed by the project. Without this improvement, the County's ability to complete such a connection as proposed under its existing and Draft Highway Plans could be compromised and, as such, would not fulfill this particular mobility objective. Without this highway extension through the site, a street system with convenient connections to adjoining regional transportation routes would not be provided.

As indicated above, the Reasonably Foreseeable On-Site Development Alternative would not meet several key project objectives and would not fulfill others to a degree approaching that of the proposed project.

5.0 ALTERNATIVES
D. REDUCED PROJECT A:
800-RESIDENTIAL LOT ALTERNATIVE

1. DESCRIPTION OF THE ALTERNATIVE

The Reduced Project Alternative A would include development of both the recorded 200-lot tract map in the northern portion of the site and a reduced residential development in the southern portion of the site. The southern component would include a 600-lot single-family residential development on approximately 300 acres, as shown in Figure 5.D-1 on page 5-31. The total area of site disturbance is estimated to be 536 acres (189 acres associated with the 200-lot tract map and 347 acres associated with the 600-lot development and the roadway linking the two residential developments). Due to the reduction in the size of the southern development, no elementary school site or improved public park is proposed, and there would be no extension of Whites Canyon Road to Sierra Highway. Access would be provided through the construction of a roadway that would connect to Whites Canyon Road at the western boundary of the site and then run east and north, linking both residential developments before connecting with Vasquez Canyon Road at the northern boundary of the site.

2. ENVIRONMENTAL IMPACT CATEGORIES

a. Geotechnical Resources

Under the Reduced Project Alternative A, a total of 536 acres would be disturbed to accommodate the two residential developments on the northeasternmost portion of the project site (Cruzan Mesa) and a portion of the southern half of the site. Similar to the proposed project, site preparation activities, including grading, excavation, and cut and fill operations, would be conducted. Approximately 2.35 million cubic yards of earth would be disturbed on the northern 189 acres and approximately 8.55 million cubic yards on the southern portion during site preparation, which could result in soil erosion and modification of prominent topographic features that characterize the project site. However, compared to the amount of earth disturbance that would occur as a result of the proposed project (i.e., approximately 20.8 million cubic yards on 622 acres), grading related impacts geotechnical resources would be less under this Alternative.

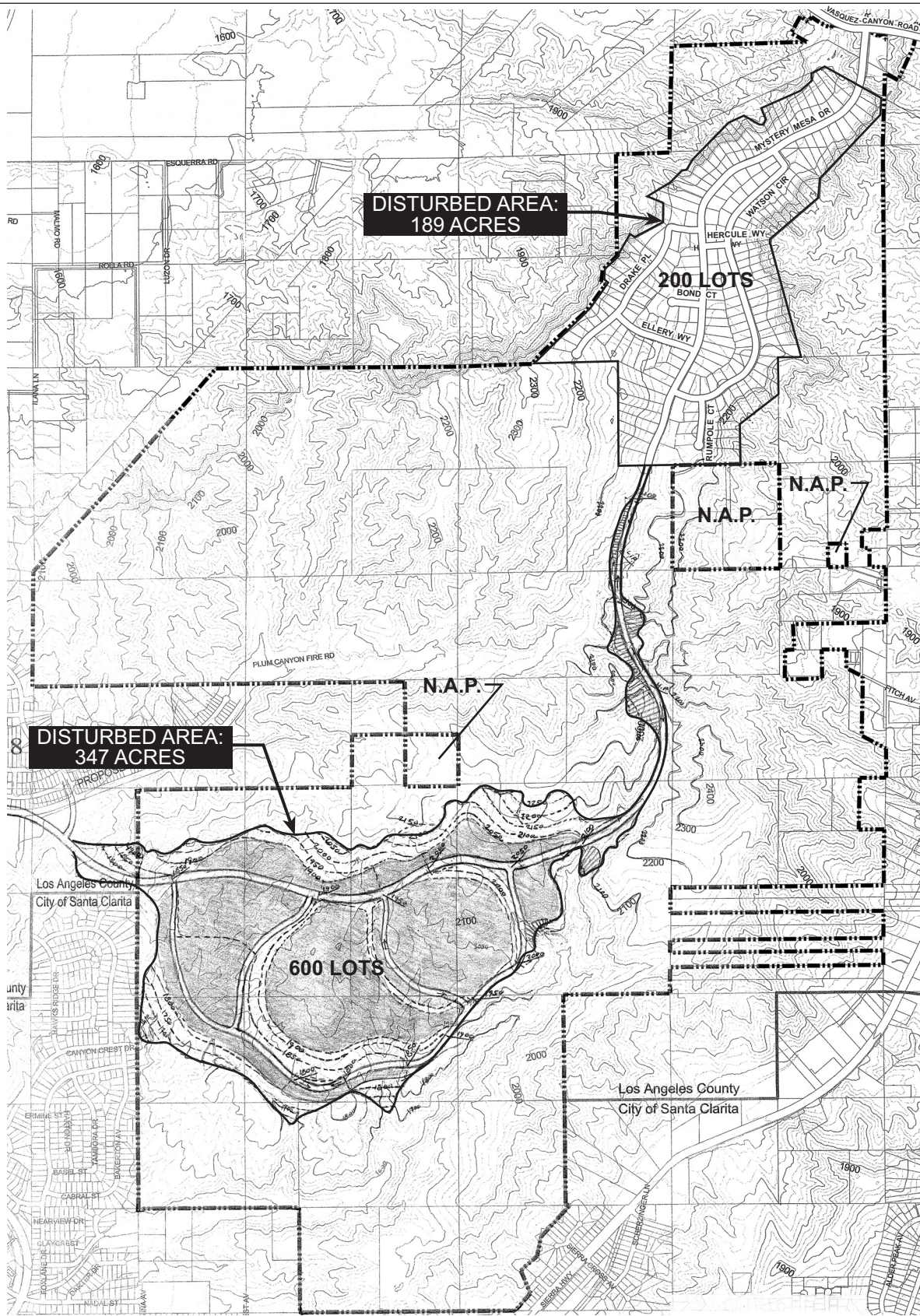


Figure 5.D-1
Reduced Project Alternative A

Source: Sikand Engineering, 2005

As with the proposed project, the residential would be exposed to strong seismic ground shaking, liquefaction, and landslides in the event of an earthquake, potentially exposing residents to these hazards. However, similar to the proposed project, compliance with Uniform Building Code and County of Los Angeles standards, and implementation of the mitigation measures identified in Section 4.A, Geotechnical Resources, would reduce impacts associated with seismic ground shaking, liquefaction, landslides, slope stability, and soil erosion, to less than significant levels.

b. Hydrology and Water Quality

Under the Reduced Project Alternative A, the 200-lot development Reasonably Foreseeable On-Site Development Alternative would be combined with an additional 600 lots in the southern portion of the site. The upper 200-lot area would mitigate hydrology impacts related to runoff rates and volumes through installation of storm drains, desilting/retention basins, and flood control structures. Similar hydrology infrastructure would be implemented into the southern portion of the project for the 600-lot area. Unlike the proposed project, this Alternative would affect only a portion of Watersheds A, B3, and C and would affect a greater portion of Watershed E. Watershed D, located within a floodplain would be undeveloped. The implementation of storm drain/flood control infrastructure would reduce flow rates and debris volumes, similar to the proposed project, but flow volumes would be increased due to the developed areas. Appropriately sized retention/detention basins and flood control structures could be developed along the southwestern edge of the site to reduce or retain the amount of runoff discharged. Therefore, as with the proposed project, it is anticipated that this Alternative would reduce the flow rates and flow volumes to less than significant levels. Since development within the floodplain area along Sierra Highway would be avoided under this Alternative, flooding impacts would be less than identified for the proposed project prior to mitigation.

As with the proposed project, an ECP would be required due to the extensive amount of grading and earthmoving activities. This Alternative would require the same permits, water quality plans, and BMPs as the proposed project. Compliance with required permits and implementation of the SWPPP, SQMP, and SUSMP would ensure that impacts related to water quality under this Alternative are reduced to less than significant levels. Thus, as with the proposed project, after mitigation, impacts on water quality would be less than significant. Due to the reduction in the number of residential units to be developed, impacts on water quality would be slightly less under this Alternative than the proposed project.

c. Biological Resources

Under the Reduced Project Alternative A, a total of 189 acres of impacts would occur in the Cruzan Mesa portion of the site, as described previously in the Reasonably Foreseeable On-Site Development Alternative. Five of the six vernal pools onsite would be impacted if

permitted by appropriate agencies, which support two federally-listed plant species, the spreading navarretia and California Orcutt grass; one federally-listed invertebrate species, the vernal pool fairy shrimp; and one special status species not currently listed as threatened or endangered, the western spadefoot.

In addition to impacts to sensitive species within the vernal pools, the vernal pools themselves are regulated by the RWQCB and would require WDRs under the Porter-Cologne Water Quality Control Act. In addition, the project under this Alternative would require the preparation of a Habitat Conservation Plan to receive a permit under Section 10 of the Federal Endangered Species Act and Section 2081 of the California Endangered Species Act for impacts to listed plant and wildlife species.

Impacts within the southern development area would impact waters of the U.S. that are regulated by the ACOE and jurisdictional streambeds regulated by the CDFG. Impacts in this area would require a permit under Section 404 of the Clean Water Act (CWA) from the ACOE, a Streambed Alteration Agreement from the CDFG in accordance with Section 1602 of the California Fish and Game Code, and water quality certification from the RWQCB under Section 401 of the CWA.

A total of 347 acres of non-native grassland, coastal sage scrub, and coastal sage-chaparral scrub would be impacted in the southern portion of the site; however, the holly-leaved cherry scrub and sycamore woodland in the unnamed drainage (which includes nine cottonwoods and 96 western sycamores) would be avoided.

The proposed road connecting the two development areas would impact additional habitat consisting of coastal sage-chaparral scrub, coastal sage scrub, and chaparral. In addition, small portions of the Plum Canyon drainage system would be impacted which supports ACOE and CDFG jurisdictional areas. Populations of the special status slender mariposa lily would also be impacted by the road.

Although impacts would be reduced in the southern portion of the site, impacts would be added in a sensitive area of the Cruzan Mesa with significant impacts to sensitive plant species, sensitive wildlife species, and jurisdictional areas. Mitigation for impacts to vernal pools and listed species would be the same as described above for the Reasonably Foreseeable On-Site Development Alternative. Therefore, when considering the significant impacts that would occur in the northern portion of the site, particularly the sensitive area of Cruzan Mesa, along with 347 acres on the southern portion of the site, this Alternative would have a greater impact than the proposed project.

d. Cultural Resources

Under the Reduced Project Alternative A, site preparation activities, including grading, excavation, and cut and fill operations, on both the northern and southern portions of the project site would be conducted. Accordingly, there is potential for uncovering unknown subsurface archaeological and paleontological resources. However, due to the reduction in the area of disturbance resulting from this Alternative compared to the proposed project (i.e., 536 acres versus 622 acres), impacts on cultural resources would be slightly less under this Alternative.

e. Visual Qualities

Under Reduced Project Alternative A, the proposed project would be scaled back to limit development of 600 lots to less than 350 acres with the northeasternmost portion of the site developed with a 200-lot subdivision, as shown in Figure 5.D-1 on page 5-31.

The reduced development on the southern portion of the project site would generally have similar impacts on visual quality as identified for the proposed project. Under this Alternative, development of 600 residential lots would cause changes in visual conditions on the project site during construction and completion of the project. The proposed project would be scaled back to limit development to an area of less than 350 acres. As with the proposed project, construction activities related to project development would temporarily introduce heavy equipment and construction workers to the project site, and the overall grading operation, which would remove native vegetation and alter the natural land form, would substantially degrade the visual quality of the project site. Similar to the proposed project, impacts on visual quality during construction, while temporary, would be significant and unavoidable.

However, since Reduced Project Alternative A would limit development to the northern portion of the southern half of the project site, the potential visual effects of the project along Sierra Highway and from the neighborhood to the southwest would be avoided. The residential neighborhood located immediately west of the development area (north of Canyon Crest Drive) under this Alternative would experience the same changes in views as the proposed project. As with the proposed project, grading and development would level the existing topography to accommodate the residential homes proposed under this Alternative. Consequently, views of the ridgelines would be eliminated or interrupted by the proposed homes. Similar to the proposed project, this change in views would contrast with an existing vista where long-range views encompass undeveloped rolling hills and ridgelines. As such, even with the reduced development, the project would substantially degrade a long-range scenic vista from areas along and north of Canyon Crest Road. As with the proposed project, this change in views is considered a significant impact.

As discussed in Section 5.C, Reasonably Foreseeable On-Site Development Alternative, the development area under this Alternative, which would occupy almost all of Cruzan Mesa, would be visible from the east, north, and west. However, these areas remain mostly undeveloped and rural with scattered single-family homes, multi-family residential developments, and ranches to the east. Views of the development area would be limited to these uses to the east along Sierra Highway and Vasquez Canyon Road and to motorists traveling on Vasquez Canyon Road. Nevertheless, these uses may potentially experience a change in views that may contrast with an existing vista, where short- and long-range views encompass undeveloped mesa and hillside, to views of rooftops or building façades, depending on the setbacks provided by the residential development. Therefore, the development on the northeasternmost portion of the project site would create potentially significant and unavoidable impacts on those uses to the east with views of Cruzan Mesa. As such, when considering the impacts that would occur with a reduced project in the southern portion of the site with visual impacts that would occur in the northern portion of the site, this Alternative would have a greater impact than the proposed project.

f. Traffic/Access

The Reduced Project Alternative A would generate approximately 7,656 ADTs, which represent a reduction of approximately 42 percent in the ADTs generated by the proposed project. Unlike the proposed project, this Alternative would not have direct access to Sierra Highway, and, therefore, the impacts to Sierra Highway would be considerably less than those anticipated for the proposed project. Consequently, this Alternative would add approximately twice as much traffic onto Whites Canyon Road than would the proposed project due to the primary point of access being onto Whites Canyon Road. Subsequently, impacts to Whites Canyon Road and to Plum Canyon Road would be greater than those of the proposed project. The impacts to Vasquez Canyon Road would be similar to but somewhat greater than those anticipated for the Reasonably Foreseeable On-Site Development. However, overall, this Alternative would have fewer impacts to County and City intersections than the proposed project. In contrast to the proposed project, this Alternative would not provide a major highway improvement connecting Whites Canyon Road to Sierra Highway, a benefit of the proposed project. Without this highway improvement as part of the project, the County's ability to complete such a connection as proposed under its existing and Draft Highway Plans could be compromised.

g. Noise

Under the Reduced Project Alternative A, worst-case construction-period noise levels would remain similar to those identified for the proposed project. The same equipment mix would be used for construction (e.g., graders, pavers, electrified and pneumatic power tools, etc.), but the duration of construction activities (and related noise impacts) would be

considerably shorter than that for the proposed project (i.e., construction of a total of 800 units versus 1,260 units). As discussed above, the immediate vicinity of the northern portion of the development area under this Alternative remains mostly undeveloped and rural with scattered single-family homes, multi-family residential developments, and ranches to the east. In addition to having fewer sensitive receptors around the northern portion of the site during construction, the sensitive uses are located at a sufficient distance (both vertically and horizontally) to reduce noise impacts at this location to less than significant levels. Moreover, the local topography (e.g., ridges and hillside) would serve as barriers to sensitive receptors to attenuate noise levels from the construction of the northern portion of the site. As such, although worst-case on-site construction-period noise levels would be similar to those identified for the proposed project, the noise attenuation afforded by the distance of the sensitive receptors from the northern portion of the project site during construction results in a reduction in noise impacts to the sensitive receptors in the area. Construction noise impacts associated with development of the lower portion of the site on residential uses located west of the site along Falcon Crest Drive would be significant and unavoidable like the proposed project. However impacts on noise sensitive receptors along Bakerton Avenue during construction would be reduced and construction noise impacts on sensitive receptors north of Beneda Lane near the southernmost property line would be avoided.

As with the proposed project, sensitive receptors along the truck route, particularly those near the intersection of Sierra Highway and Vasquez Canyon Road and Plum Canyon Road/Whites Canyon Road leading towards Skyline Ranch Road, would experience temporary and instantaneous noise levels up to 91 dBA at 50 feet from the roadway, which would exceed thresholds of significance and result in a significant impact.

As discussed above, this Alternative would reduce traffic volumes estimated for the proposed project by approximately 42 percent. Accordingly, the increases in noise levels along the analyzed roadway segment that would result from this Alternative would be less than those estimated for the proposed project based on the traffic volume to be generated by this Alternative. However, as with the proposed project, increases in noise levels at noise-sensitive uses along those roadway segments affected by project traffic that are already considered unacceptable under the City and State Guidelines (particularly those along Sierra Highway) would also be considered significant under this Alternative. Therefore, although noise impacts would be less under this Alternative than those identified for the proposed project, the project's potentially significant and unavoidable impact on noise-sensitive receptors along Sierra Highway would not be avoided.

h. Air Quality

Under the Reduced Project Alternative A, worst-case construction emissions would remain similar to those identified for the proposed project. The same equipment mix would be

used for construction (e.g., graders, pavers, electrified and pneumatic power tools, etc.), but the duration of construction activities (and related air quality impacts) would be considerably shorter than that for the proposed project (i.e., construction of 800 units versus 1,260 units). As such, construction-related and operation-related emissions, such as fugitive dust associated with site grading and excavation, construction equipment emissions, and project-related vehicle emissions would also occur. As with the proposed project, this Alternative would result in short-term significant regional PM₁₀, PM_{2.5}, CO, NO_x and VOC impacts and localized PM₁₀ and PM_{2.5} impacts associated with construction of the project and long-term regional CO, VOC, NO_x, and PM₁₀ impacts from area sources during project operation. Although air quality impacts would be less under this Alternative than those identified for the proposed project, the project's potentially significant and unavoidable air quality impacts would not be avoided.

i. Water Resources

The Reduced Project Alternative A would reduce development by approximately 37 percent compared to the proposed project. The demand for water would increase beyond current levels although at a lower rate than the proposed project. This Alternative would increase water use by approximately 640 AFY.³ As with the proposed project, water demand for this Alternative would not exceed SCWD's supply capacity and would be less than significant. This Alternative would require the extension of the existing 14-inch water line, located along Sierra Highway, north to Vasquez Canyon Road (approximately 1.5 miles) to serve the undeveloped northern portion of the property. Due to the reduction in the number of residential units to be developed, impacts on water resources would be less under this Alternative than those identified for the proposed project. Although this Alternative would require a greater extension of existing infrastructure, compared to the proposed project, this would not be considered a significant impact, since the extension of the water line would occur within existing roadways.

As with the proposed project, the overall increase in impervious surfaces associated with the Reduced Project Alternative A would not result in a significant reduction in groundwater recharge. Therefore, similar to the proposed project, this Alternative would not interfere substantially with groundwater recharge, and impacts would be less than significant.

j. Wastewater

As mentioned above, the Reduced Project Alternative A would result in over 37 percent reduction in development when compared to the proposed project. Accordingly, the wastewater generated by the project under this Alternative would be less than the quantity estimated for the proposed project. Since the existing 18-inch trunk sewer would need to be extended from its

³ Based on a water use factor of 0.80 AFY per unit.

current terminus on Bouquet Canyon Road (approximately 2 miles west from the northern portion of the site), the CSD trunk sewer, and the SCVJSS wastewater treatment system have adequate existing capacity to absorb the proposed project's estimated wastewater flows. Therefore, it is anticipated that the wastewater generated by the project under this Alternative could be adequately accommodated as well. As with the proposed project, impacts on wastewater disposal associated with this Alternative would be less than significant. Due to the reduction in the number of residential units to be developed, impacts on wastewater services and facilities would be less under this Alternative than those identified for the proposed project.

k. Solid Waste

The amount of construction waste to be generated by the project under the Reduced Project Alternative A would be less than that of the proposed project due to the reduction in the number of residential units to be developed. Since it has been determined that County landfills have sufficient capacity to accommodate the disposal of solid waste during construction and operation of the proposed project, it is anticipated that solid waste generated by the project under this Alternative could be adequately accommodated as well. As with the proposed project, impacts on solid waste disposal associated with this Alternative would be less than significant. However, due to the reduction in the number of residential units to be developed, impacts on solid waste services and facilities would be less under this Alternative than those identified for the proposed project.

l. Law Enforcement Services

Similar to the proposed project, the project under the Reduced Project Alternative A would not expose project residents to a high level of public safety risk associated with law enforcement services and, as such, impacts would be less than significant. Based on the estimated on-site population of 2,640 residents under this Alternative, the project would require less than three new deputies to be consistent with the Sheriff station's ideal officer to population ratio of one deputy per 1,000 residents. As with the proposed project, project residents would increase emergency calls and the demand for other law enforcement services in the Santa Clarita Valley, which could overextend existing personnel and support resources. While general fund revenues have historically supported adequate levels of law enforcement services in the area, if sufficient funding for Sheriff's services is not maintained by the County, a potentially significant and unavoidable impact could also occur under this Alternative. Due to the reduction in the number of residential units to be developed, impacts on law enforcement services and facilities would be slightly less under this Alternative than the proposed project.

m. Fire Services and Hazards

As with the proposed project, this Alternative would increase demand for LACoFD services. Similar to the proposed project, payment of development impact fees to support fire protection services, and implementation of the mitigation measures identified in Section 4.M, Fire Services and Hazards, would be adequate to reduce impacts on fire protection services to less than significant levels.

Similar to the proposed project, the project under this Alternative would be located within a VHFHSZ. However, both residential developments, totaling 800 lots, would be subject to the requirements for a VHFHSZ set forth in the Los Angeles County Fire Code. The same mitigation measures identified in Section 4.M, Fire Services and Hazards, are proposed to reduce fire hazards and impacts on fire protection services to less than significant levels.

Due to the reduction in the number of residential units to be developed, impacts on fire protection services and facilities would be less under this Alternative than the proposed project.

n. Education

Under the Reduced Project Alternative A, two residential developments, totaling 800 lots, would be introduced to the project site and vicinity. Based on the student generation rates presented in Table 4.N-2 in Section 4.N, Education, this Alternative would generate approximately 317 elementary school students within the Sulphur Springs School District and Saugus Union School District and 102 junior high school students and 191 senior high school students within the William S. Hart Union High School District. This would result in 334 students fewer than the proposed project. As with the proposed project, the payment of fees under the provisions of Government Code Section 65995 et seq. is deemed to provide full and complete school facilities mitigation. Due to the reduction in the number of residential units to be developed, impacts on school enrollment and capacities would be slightly less under this Alternative than those identified for the proposed project. Although there would be a reduction in school enrollment under this Alternative, the size of the individual developments and the distance separating the two areas is such that provision of an elementary school site is not expected.⁴ Therefore, the benefit afforded by the provision of a school site under the proposed project would not be realized, and impacts to local schools would be alleviated through payment of mitigation fees only.

⁴ *Elementary schools are normally or ideally sited within walking distance of the residents they serve.*

o. Libraries

Under the Reduced Project Alternative A, two residential developments, totaling 800 lots, would be developed. Based on the County's service guidelines of 2.75 items per capita and 0.5 square foot of facility per capita and based on the estimated on-site population of 2,640 residents, this Alternative would generate demand for 7,260 library items and 1,320 square feet of library space. However, as the Canyon Country Jo Anne Darcy Library currently has a deficit of library space and materials, it is anticipated that the library demand generated under this Alternative would not be adequately accommodated and would contribute to the library falling below its service guidelines. However, as with the proposed project, this Alternative would be required to pay Library impact fees pursuant to County Code requirements. Thus, as with the proposed project, impacts on library services and facilities associated with this Alternative would be less than significant. However, due to the reduction in the number of residential units to be developed, impacts on libraries would be slightly less under this Alternative than the proposed project.

p. Parks

Under the Reduced Project Alternative A, two residential developments, totaling 800 lots, would be developed. The 200-lot development in the northern portion of the site would preclude the extension of an approved County Trail System, as shown on the Santa Clarita Valley Area Plan Trails Map. The Los Angeles County Code requires that new subdivisions dedicate on-site park space and/or the payment of in-lieu fees to meet the recreational demands of its residents. Although this Alternative would not provide any park space or trail easement, it is anticipated that the future demand for local parks would be off-set by the payment of in-lieu fees to meet the recreational demands of the project, and as such, impacts on parks would be considered less than significant. As with the proposed project, impacts on parks and recreation associated with this Alternative would be less than significant. However, in contrast to the proposed project, the Alternative would not provide an improved public park site or trail easement which would provide benefits beyond those required by County Code.

q. Land Use

Under the Reduced Project Alternative A, the currently approved 200-unit subdivision would be constructed in the northern portion of the project site. This development has been approved, and the Alternative would be consistent with the existing entitlements for that site. The southern portion of the site would be developed with a 600-lot development, providing for a total of 800 units. This alternative would bring less development to the project site than the proposed project. Development would occur in a non-contiguous manner with a somewhat isolated pocket development, amidst a more open/rural area, and a component that would be

contiguous with existing development to the south. This alternative would not include the public park, trail easement, school, or extension of Whites Canyon Road to Sierra Highway.

This Alternative would support regional and local policies regarding development at the project site, but to a lesser extent than the proposed project. It would not fully support policies of SCAG, County General Plan, and Santa Clarita Area Plan that are intended to concentrate clustered development in proximity to existing development via density transfer, accommodate development in areas least likely to have adverse environmental impacts, improve infrastructure in the area, and direct growth away from environmentally sensitive areas. It would not be as supportive of accommodating projected growth and demand for housing as the proposed project. It would not support the provision of parks and schools convenient to and timed to serve new residents. Policies regarding the preservation of open space would be less supported.

As with the proposed project, this Alternative would develop the southern portion of the site with a continuation of the existing development pattern to the south with a discontinuous northern development in a more isolated, somewhat rural area. The development would not affect the distribution of development within and/or adjacent to existing communities and neighborhoods. As this Alternative includes less development than the proposed project, unmet demand for housing might be met through development in more outlying areas. It could also lead to attempts to locate development within the more rugged, central portion of the project site with more potential impacts regarding hillside/slope issues.

As with the proposed project, impacts under the Reduced Project Alternative A would be less than significant. However, the Reduced Project Alternative A would offer less implementation than the proposed project of land use policies and patterns.

r. Population, Housing, and Employment

The Reduced Project Alternative A is forecast to result in a projected on-site population increase of 2,640 residents. This represents a total of less than 0.4 percent, 1.0 percent, and 3.8 percent of the total population growth and housing projected by SCAG for the Regional Area, the North Los Angeles County Subregion, and the Local Area, respectively, during the 2007 to 2017 period. As with the proposed project, this growth is a relatively small component of the expected growth projected by SCAG for these three geographical areas. In addition, the addition of 800 housing units represent a total of less than 0.3 percent, 1.0 percent, and 3.5 percent of the total housing unit growth projected by SCAG for the Regional Area, the North Los Angeles County Subregion, and the Local Area, respectively, during the same period. As a result, the population and housing impacts of the project under this Alternative would not cause population growth or accelerate development in an undeveloped area that exceeds projected/planned levels.

The Reduced Project Alternative A is not anticipated to provide on-site employment since development of a school or parks is not proposed under this Alternative. Therefore, no impacts associated with employment would occur.

s. Global Climate Change

Under the Reduced Project Alternative A, construction and vehicle emissions that contribute to GHGs would be reduced as well as energy and water demand compared to the proposed project. Although impacts on global climate change would be reduced under this Alternative, it is conservatively concluded that this Alternative would still result in similar significant and unavoidable cumulative impacts associated with the proposed project.

3. IMPACT SUMMARY

A comparative summary of the environmental impacts associated with the Reduced Project Alternative A with the environmental impacts anticipated under the proposed project is provided in Table 5-1 on page 5-61.

In summary, and as shown in Table 5-1, Reduced Project Alternative A would have similar impacts on geology, hydrology/water quality, and cultural resources compared to the proposed project. The magnitude of these impacts would, however, be reduced due to an approximate 70-acre reduction in the area of site disturbance and a 46 percent reduction in grading volumes. As with the proposed project, impacts on geology, hydrology/water quality, and cultural resources under Reduced Project Alternative A would be less than significant with implementation of mitigation measures.

Regarding impacts on biological resources, the acreage that would be disturbed and converted to development would be reduced, and direct impacts to an unnamed drainage would be avoided. However, under Reduced Project Alternative A, the 200-lot development associated with recorded Tract Map No. 44967, would result in direct impacts on vernal pools and the vernal pool watershed located in the Cruzan Mesa and Plum Canyon areas. Sensitive biological resources in these areas, including vernal pools, two Federally-listed plant species, and one Federally-listed invertebrate (vernal pool fairy shrimp), are of regional significance. Furthermore, this development area falls within a County-proposed Cruzan Mesa Vernal Pool Significant Ecological Area. Due to greater sensitivity of biological resources in this area, the impacts that would occur would be more significant and would off-set the reduction in impacts that would occur in the southern portion of the site due to avoidance of the unnamed drainage and a 70-acre reduction in the area of habitat disturbance.

Impacts on visual quality under Reduced Project Alternative A would be greater than the proposed project, even with the reduction in grading and area of disturbance. This is due to new impacts that would occur in the northern portion of the site, which would add to impacts that would still be substantial in the southern portion of the site. As with the proposed project, even with mitigation, impacts on visual qualities would remain significant and unavoidable.

Impacts associated with land use would be similar under Reduced Project Alternative A when compared to the proposed project. However, development would occur in a non-contiguous manner with a somewhat isolated pocket of development in the northern portion of the site, in a more rural area that is remote from more concentrated development in areas to the south. Furthermore, this Alternative would not include a public park, trail easement, a public school or the major highway improvement proposed by the project and contemplated by the County in its Highway Plan update. Furthermore, under Reduced Project Alternative A, development would be clustered in two areas but would not avoid the site's most environmentally sensitive areas (the Cruzan Mesa vernal pool areas). For these reasons, this Alternative would conflict with numerous related land use plans and policies. Impacts would be greater than the proposed project in terms of consistency with land use plans and policies, and the physical pattern of proposed land use. Although these land use impacts would be greater than the proposed project, they would still be considered less than significant.

As with the proposed project, impacts on population, housing and employment would be less than significant, with project growth well within SCAG forecasts for the area. In regard to public services and utilities, the approximate 37 percent reduction in residential development would generally result in a corresponding reduction in demand for such services. While reduced, impacts on services and utilities would be similar to the proposed project and less than significant for water resources, wastewater and solid waste disposal, libraries, parks, and education. However, this Alternative would require a greater extension of water and sewer line to serve the northern portion of the site, compared to the proposed project. In addition, for parks and education, Reduced Project Alternative A would not provide benefits associated with the provision of a fully improved public park and a public elementary school site, both located with the neighborhood they would serve, nor facilitate the extension of an approved County Trail System in the northern portion of the site. Fire services under the Alternative would be less than significant after mitigation, and demand for law enforcement services could be significant and unavoidable in the event adequate State and County funding is not made available over time.

Traffic impacts would be reduced compared to the proposed project and would similarly be less than significant with implementation of mitigation measures. However, under Reduced Project Alternative A, the major highway improvement connecting Whites Canyon Road to Sierra Highway, which would be supportive of County plans to connect these roadways, would not be provided. As such, this Alternative would add twice as much traffic onto Whites Canyon Road than would the proposed project due to the primary point of access being limited to Whites

Canyon Road only. For both noise and air quality, the duration of construction and the amount of traffic generated under Reduced Project Alternative A would be reduced along with associated impacts. However, similar to the proposed project, construction and operational impacts on air quality and noise would remain significant and unavoidable. Although vehicle emissions and energy and water demand would be reduced under this Alternative, cumulative impacts on global climate change would remain significant and unavoidable.

4. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

As further described below, Reduced Project Alternative A would attain some of the basic objectives of the project, although not to the same extent as the proposed project, while a number of project objectives would not be fulfilled.

Reduced Project Alternative A would meet the basic project objective under land use to provide a residential development that would increase housing supply to serve existing demand and future needs associated with growth in the Santa Clarita Valley. With development occurring in both the northern and southern portions of the project site, other land use objectives that promote clustered development in proximity to existing infrastructure and development, and the avoidance of environmentally sensitive resources (vernal pools) would not be met.

This Alternative would not include the major highway improvement involving the Whites Canyon Extension to Sierra Highway proposed by the project and contemplated by the County in its Highway Plan update and, as such, would not fulfill this particular mobility objective. The other mobility objective to provide a safe, walkable community would be fulfilled.

Although the project's demand for parks would be addressed through payment of development impact fees to expand such services, without a park on site and the provision of a trail easement, the park and recreation objectives of the project that emphasize locating parks that are convenient and accessible to residents and extending the County Trail System, would not be fulfilled.

5.0 ALTERNATIVES
E. REDUCED PROJECT B:
935-RESIDENTIAL LOT ALTERNATIVE

1. DESCRIPTION OF THE ALTERNATIVE

Reduced Project Alternative B would involve a 935-lot single-family residential development on 397 acres in the southwestern portion of the site, as shown in Figure 5.E-1 on page 5-46. This Alternative represents an approximately 26 percent reduction in residential development and the area subject to grading. A 7.5-acre public park site and a 7.5-acre public school site would be provided, proportionately reduced in size from the proposed project. Project access would be provided with a loop road that would connect to Whites Canyon Road at the western boundary of the site and by a connection to Bakerton Avenue in the existing residential neighborhood immediately west of the project site. In contrast to the proposed project, the Reduce Project B Alternative would not provide a Highway connecting Whites Canyon Road to Sierra Highway. This change in site access would avoid impacts on the unnamed drainage on the southern portion of the site.

2. ENVIRONMENTAL IMPACT CATEGORIES

a. Geotechnical Resources

Under the Reduced Project Alternative B, a total of 397 acres would be disturbed to accommodate the reduced project development on the southern portion of the project site. Similar to the proposed project, site preparation activities, including grading, excavation, and cut and fill operations, would be conducted. Approximately 10 million cubic yards of earth would be disturbed within the development footprint during site preparation, which could result in major soil erosion and destruction or modification of distinct and prominent topographic features that characterize the southern portion of the project site. However, compared to the amount of earth disturbance that would occur as a result of the proposed project (i.e., approximately 20.8 million cubic yards on 622 acres), grading related impacts on geotechnical resources would be less under this Alternative.

As with the proposed project, residential development under this Alternative would be exposed to strong seismic ground shaking, liquefaction, and landslides in the event of an earthquake, which could expose residents to these. However, similar to the proposed project, compliance with the Uniform Building Code and County of Los Angeles standards, along with

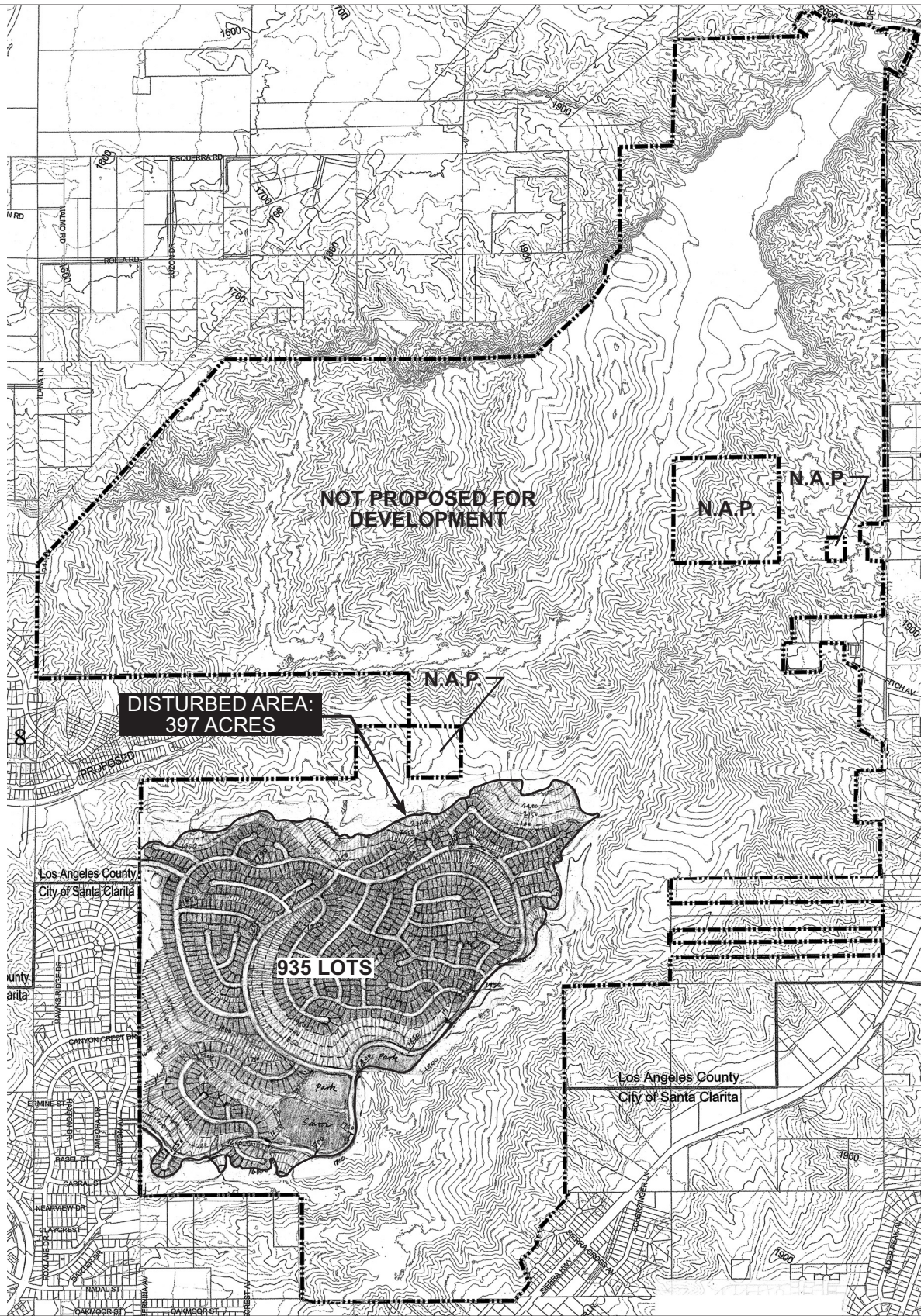


Figure 5.E-1
Reduced Project Alternative B

implementation of the mitigation measures identified in Section 4.A, Geotechnical Resources, would reduce impacts associated with liquefaction, landslides, slope stability, and soil erosion, to less than significant levels.

b. Hydrology and Water Quality

The Reduced Project Alternative B represents a 26-percent reduction in the size of the proposed project (935 lots) with a somewhat greater reduction in the area subject to disturbance and grading. Reduced Project B would affect Watersheds A (a smaller portion), B1, B2, B3, and C. Watersheds D and E would not be affected by this Alternative. For this Alternative, hydrology impacts related to runoff rates and volume would be mitigated through installation of storm drains and desilting/retention basins, similar to the proposed project. As Watershed D would not be developed, the potential flooding impacts that have the potential to occur under the proposed project would not occur under this Alternative. As with the proposed project, an ECP would be required due to the extensive amount of grading and earthmoving activities. Water quality for this Alternative would require the same permits, water quality plans, and BMPs as the proposed project. Mitigation measures and compliance with required permits, which would include implementation of a SWPPP, SQMP, and SUSMP would ensure that impacts related to water quality under this Alternative are reduced to less than significant levels. Thus, as with the proposed project, impacts on water quality would be less than significant after mitigation. However, due to the reduction in the number of residential units to be developed, impacts on water quality would be slightly less under this Alternative than those identified for the proposed project.

c. Biological Resources

Under the Reduced Project Alternative B, a total of 397 acres of non-native grassland, coastal sage scrub, and coastal sage-chaparral scrub would be impacted in the southern portion of the site. The unnamed drainage in the southern portion of the site would be avoided. This would reduce impacts to ACOE and CDFG jurisdictional areas within the unnamed drainage and avoid the holly-leaved cherry scrub and sycamore woodland (which includes nine cottonwoods and 96 western sycamores) in the unnamed drainage. Therefore, impacts on biological resources would be less under this Alternative than with the proposed project.

Under this Alternative, no impacts would occur on Cruzan Mesa; therefore, no impacts would occur to the vernal pools, spreading navarretia, California Orcutt grass, vernal pool fairy shrimp, or slender mariposa lily.

d. Cultural Resources

Under the Reduced Project Alternative B, site preparation activities, including grading, excavation, and cut and fill operations, on the southern portion of the project site would be conducted. Accordingly, there is potential for uncovering unknown subsurface archaeological and paleontological resources. However, due to the reduction in the area of disturbance resulting from this Alternative compared to the proposed project (i.e., 397 acres versus 622 acres), impacts on cultural resources would be less under this Alternative.

e. Visual Qualities

Under the Reduced Project Alternative B, development of 935 residential lots would cause changes in visual conditions on the project site during construction and with completion of the project. The proposed project would be scaled back to limit development to approximately 397 acres. As with the proposed project, construction activities related to project development would temporarily introduce heavy equipment and construction workers to the project site, and the overall grading operation, which would remove native vegetation and alter the natural land form, would substantially degrade the visual quality of the project site. Similar to the proposed project, impacts on visual quality during construction, while temporary, would be significant and unavoidable.

Since the Reduced Project Alternative B would eliminate the portion of the proposed project that connect Whites Canyon Road to Sierra Highway, potential visual effects of the project along Sierra Highway would be avoided. However, as with the proposed project, the residential neighborhoods located immediately west of the development area in the vicinity of Canyon Crest Drive would experience changes in views similar to the proposed project. Grading and development would level the existing topography to accommodate the residential homes proposed under this Alternative. Consequently, views of the ridgelines would be eliminated or interrupted by the proposed homes. Similar to the proposed project, this change in views would contrast with an existing vista where long-range views encompass undeveloped rolling hills and ridgelines. As such, even with the reduced development, the project would substantially degrade a long-range scenic vista from areas along and north of Canyon Crest Road. As with the proposed project, this change in views is considered a significant impact.

Overall, although visual impacts would be less under this Alternative than the proposed project, it would still have significant and unavoidable impacts on short- and long-range views.

f. Traffic/Access

The Reduced Project Alternative B would generate approximately 9,772 total ADTs, including the elementary school, and a net of 8,130 ADTs added to the off-site roadways. This represents a 26 percent reduction in the off-site ADTs generated by the proposed project. Unlike the proposed project, this Alternative would not have direct access to Sierra Highway and, therefore, impacts to Sierra Highway would be considerably less than those anticipated for the proposed project, if not eliminated altogether. The impacts to Vasquez Canyon Road would be less than would occur under the No Project/Reasonably Foreseeable On-Site Development Alternative or Reduced Project Alternative A. However, this Alternative would add approximately 40 percent more traffic onto Whites Canyon Road compared to the proposed project due to Whites Canyon Road being the only point of access. As a result, impacts to Whites Canyon Road and to Plum Canyon Road would be greater than those of the proposed project. Overall, although traffic volumes would be less under this Alternative than those identified for the proposed project, this Alternative would have a similar impact as would the proposed project but it would result in new traffic impacts to neighborhood residential streets (i.e., Bakerton Avenue immediately west of the development area where the southern portion of the development could be accessed) within the City that would not occur with the proposed project. Additionally, without a major highway improvement connecting Whites Canyon Road to Sierra Highway, the County's ability to complete such a connection as proposed under its Draft Highway Plans could be compromised.

g. Noise

Under the Reduced Project Alternative B, worst-case construction-period noise levels would remain similar to those identified for the proposed project. The same equipment mix would be used for construction (e.g., graders, pavers, electrified and pneumatic power tools, etc.), but the duration of construction activities (and related noise impacts) would be slightly shorter than that for the proposed project (i.e., construction of a total of 935 units versus 1,260 units). As with the proposed project, movement of construction equipment would expose sensitive receptors along the truck routes (i.e., residences located along Plum Canyon Road/Whites Canyon Road leading towards the project site) to noise levels that would exceed County and City thresholds and, as such, noise impacts would be considered significant and unavoidable. Construction impacts on the residential developments immediately west of the development area would be similar to those identified for the proposed project and would be considered significant and unavoidable. However, since no development would occur on the southeastern portion of the development area, noise impacts on the sensitive receptors located north of Beneda Lane near the southernmost property line would be avoided.

As discussed above, this Alternative would generate a 26-percent reduction in traffic volumes estimated for the proposed project. Accordingly, increases in noise levels along the

analyzed roadway segment associated with this Alternative would be less than the proposed project based on the volume of traffic generated. Unlike the proposed project, this Alternative would not have direct access to Sierra Highway and, therefore, noise impacts along Sierra Highway would be considerably less than the proposed project, if not eliminated altogether. As a result, significant unavoidable noise impacts at noise-sensitive uses along Sierra Highway associated with the proposed project may be avoided under this Alternative since little to no increase in traffic noise due to project traffic is anticipated to occur. However, noise levels at noise sensitive uses along Plum Canyon Road and Whites Canyon Road would be greater under this Alternative and could result in significant unavoidable impacts compared to the proposed project.

Overall, this Alternative would have less noise impacts on sensitive receptors in the project vicinity than the proposed project.

h. Air Quality

Under the Reduced Project Alternative B, worst-case construction emissions would remain similar to those identified for the proposed project. The same equipment mix would be used for construction (e.g., graders, pavers, electrified and pneumatic power tools, etc.), but the duration of construction activities (and related air quality impacts) would be considerably shorter than that for the proposed project (i.e., construction of 935 units versus 1,260 units). As such, construction-related and operation-related emissions, such as fugitive dust associated with site grading and excavation, construction equipment emissions, and project-related vehicle emissions would also occur. As with the proposed project, this Alternative would result in short-term significant regional PM₁₀, PM_{2.5}, CO, NO_x, and VOC impacts and localized PM₁₀ and PM_{2.5} impacts associated with construction of the project and long-term regional CO, VOC, NO_x, PM₁₀, and PM_{2.5}, impacts from area sources during project operation. Although air quality impacts would be less under this Alternative than the proposed project, it would similarly result in significant and unavoidable air quality impacts for both construction and operation.

i. Water Resources

The Reduced Project Alternative B would result in a 26-percent reduction in development when compared to the proposed project. The demand for water would increase beyond current levels although at a lower rate than the proposed project. This Alternative would increase water use by approximately 748 AFY.⁵ As with the proposed project, water demand for this Alternative would not exceed SCWD's supply capacity and infrastructure and would be less than

⁵ Based on a water use factor of 0.80 AFY per unit.

significant. However, due to the reduction in the number of residential units to be developed, impacts on water resources would be less under this Alternative than the proposed project.

As with the proposed project, the overall increase in impervious surfaces associated with the Reduced Project Alternative B would not result in a significant reduction in groundwater recharge. Therefore, similar to the proposed project, this Alternative would not interfere substantially with groundwater recharge, and impacts would be less than significant.

j. Wastewater

As mentioned above, the Reduced Project Alternative B would result in a 26-percent reduction in development when compared to the proposed project. Accordingly, the wastewater generated by the project under this Alternative would be less than the quantity estimated for the proposed project. Since the Sierra Highway sewer line, the CSD trunk sewer line, and the SCVJSS wastewater treatment system have adequate existing capacity to absorb the proposed project's estimated wastewater flows, it is anticipated that the wastewater generated by the project under this Alternative could be adequately accommodated as well. Similar to the proposed project, the existing sewer lines located in Sierra Highway and currently serving adjacent development to the west could be extended to serve this Alternative. As with the proposed project, with project improvements and payment of sewer connection fees impacts on wastewater disposal associated with this Alternative would be less than significant. However, due to the reduction in the number of residential units to be developed, impacts on wastewater services and facilities would be less under this Alternative than those identified for the proposed project.

k. Solid Waste

The amount of construction waste to be generated by the project under the Reduced Project Alternative B would be less than the proposed project due to the reduction in residential units. Since it has been determined that County landfills have sufficient capacity to accommodate the disposal of solid waste during construction and operation of the proposed project, it is anticipated that solid waste generated by the project under this Alternative could be adequately accommodated. As with the proposed project, impacts on solid waste disposal under this Alternative would be less than significant. However, due to the reduction in residential units, impacts associated with solid waste would be less under this Alternative than the proposed project.

l. Law Enforcement Services

Similar to the proposed project, Reduced Project Alternative B would not expose project residents to a high level of public safety risk associated with law enforcement services and, as such, impacts would be less than significant. Based on the estimated on-site population of 3,086 residents under this Alternative, the project would require three new deputies to be consistent with the Sheriff station's ideal officer to population ratio of one deputy per 1,000 residents. As with the proposed project, project residents would increase emergency calls and the demand for other law enforcement services in the Santa Clarita Valley, which could overextend existing personnel and support resources. While general fund revenues have historically supported adequate levels of law enforcement services in the area, if sufficient funding for Sheriff's services is not maintained by the County, a potentially significant and unavoidable impact could also occur under this Alternative. Due to the reduction in residential units, impacts on law enforcement services and facilities would be slightly less under this Alternative than the proposed project.

m. Fire Services and Hazards

As with the proposed project, this Alternative would increase demand for LACoFD services. Similar to the proposed project, payment of development impact fees to support fire protection services, and implementation of the mitigation measures identified in Section 4.M, Fire Services and Hazards, would be adequate to reduce impacts on fire protection services to less than significant levels.

Similar to the proposed project, the project under this Alternative would be located within a Very High Fire Hazard Severity Zone (VHFHSZ). However, the reduced project would be subject to the requirements for a VHFHSZ set forth in the Los Angeles County Fire Code. The same mitigation measures identified in Section 4.M, Fire Services and Hazards, are proposed to reduce fire hazards and impacts on fire protection services to less than significant levels.

Due to the reduction in the number of residential units, impacts on fire protection services and facilities would be less under this Alternative than the proposed project.

n. Education

Under the Reduced Project Alternative B, a 935-lot residential development would be introduced to the project site and vicinity. Based on the student generation rates presented in Table 4.N-2 in Section 4.N, Education, this Alternative would generate approximately 405 elementary school students within the Sulphur Springs School District and Saugus Union School District and 119 junior high school students and 223 senior high school students within

the William S. Hart Union High School District. This would result in 197 students fewer than the proposed project. As with the proposed project, the payment of fees under the provisions of Government Code Section 65995 et seq. is deemed to provide full and complete school facilities mitigation. Due to the reduction in residential units, impacts on school enrollment and capacities would be slightly less under this Alternative than the proposed project.

o. Libraries

Under the Reduced Project Alternative B, a 935-lot residential development would be developed. Based on the County's service guidelines of 2.75 items per capita and 0.5 square foot of facility per capita and based on the estimated on-site population of 3,086 residents under this Alternative, this Alternative would generate demand for 8,487 library items and 1,543 square feet of library space. However, as the Canyon Country Jo Anne Darcy Library currently has a deficit of library space and materials, it is anticipated that the library demand generated under this Alternative would not be adequately accommodated and would contribute to the library falling below its service guidelines. However, as with the proposed project, this Alternative would be required to pay Library impact fees pursuant to County Code requirements. Thus, as with the proposed project, impacts on library services and facilities associated with this Alternative would be less than significant. However, due to the reduction in the number of residential units to be developed, impacts on libraries would be slightly less under this Alternative than the proposed project.

p. Parks

Under the Reduced Project Alternative B, a 935-lot residential development with a 7.5-acre park would be developed. However, no trail easement in the northern portion of the site is proposed. The Los Angeles County Code requires that new subdivisions dedicate on-site park space and/or the payment of in-lieu fees to meet the recreational demands of its residents. It is expected that the 7.5-acre public park would receive full credit but might not meet the LACC park acreage requirement (nine acres for a project that would result in a population increase of 3,086). However, it is anticipated that the future demand for parks would be off-set by the park and if necessary, payment of in-lieu fees. Compliance with County Code requirements for dedication of park land and/or payment of in-lieu fees would reduce impacts on parks to a less than significant level. As with the proposed project, impacts on parks and recreation associated with this Alternative would be less than significant.

q. Land Use

Under Reduced Project Alternative B, the residential development on the project site would be reduced by approximately 26 percent with commensurate reductions in park and school

space. The smaller project would lessen impacts on topics such as air quality, public services, utilities, biotic resources, etc., but from a land use perspective, it would be somewhat similar to the proposed project, by providing a development within the same general land area that extends the existing development pattern from the south, northward.

This Alternative, like the proposed project, would support many regional and local policies regarding development at the project site, but not so fully. It would support policies of SCAG, County General Plan, and Santa Clarita Area Plan that are intended to concentrate clustered development in proximity to existing development via density transfer, accommodate development in areas least likely to have adverse environmental impacts, improve infrastructure in the area, and direct growth away from environmentally sensitive areas. It would not be as supportive as the proposed project of accommodating projected growth and demand for housing. To the extent that demand is unmet, future development could occur in more outlying areas, or there could be pressures to locate development within the more rugged, central portion of the project site, or more environmentally sensitive northern portion of the site, which would have density rights, that have not been transferred.

As with the proposed project, this Alternative would develop the southern portion of the site with a continuation of the existing development patterns to the south. The development would not affect the distribution of development within and/or adjacent to existing communities and neighborhoods.

As with the proposed project, impacts under the Reduced Project Alternative B would be less than significant. However, the Reduced Project Alternative B would fulfill policies related to land use to a somewhat lesser extent than the proposed project.

r. Population, Housing, and Employment

The Reduced Project Alternative B is forecast to result in a projected on-site population increase of 3,086 residents. This represents a total of 0.4 percent, 1.2 percent, and 4.5 percent of the total population growth and housing projected by SCAG for the Regional Area, the North Los Angeles County Subregion, and the Local Area, respectively, during the 2007–2017 period. As with the proposed project, this growth is a relatively small component of the expected growth projected by SCAG for these three geographical areas. In addition, the addition of 935 housing units represent a total of 0.3 percent, 1.2 percent, and 4.1 percent of the total housing unit growth projected by SCAG for the Regional Area, the North Los Angeles County Subregion, and the Local Area, respectively, during the same period. As a result, the population and housing impacts of the project under this Alternative would not cause population growth or accelerate development in an undeveloped area that exceeds projected/planned levels.

The Reduced Project Alternative B is anticipated to result in a total employment increase of 41 new jobs from the development of the 7.5-acre school and 7.5-acre park. The school is projected to result in an increase of 32 jobs, while the park would support a small number of employees for various maintenance and operation activities. The employment opportunities generated by the project under this Alternative represent a negligible percentage of the SCAG employment growth forecast for the Regional, Subregional, and Local areas. As with the proposed project, the employment impacts of the project under this Alternative would not cause employment growth or accelerate development in an undeveloped area that exceeds projected/planned levels and, thus, would be less than significant.

s. Global Climate Change

Under the Reduced Project Alternative B, construction and vehicle emissions that contribute to GHGs would be reduced as well as energy and water demand compared to the proposed project. Although this Alternative would reduce impacts on global climate change compared to the proposed project, it is conservatively concluded that this Alternative would still result in similar significant and unavoidable cumulative impacts.

3. IMPACT SUMMARY

A comparative summary of the environmental impacts associated with the Reduced Project Alternative B with the environmental impacts anticipated under the proposed project is provided in Table 5-1 on page 5-61.

In summary and as shown in Table 5-1, the Reduced Project Alternative B would have similar impacts on geotechnical resources, hydrology and water quality, visual quality, noise, air quality, water resources, wastewater and solid waste disposal, law enforcement and fire services, education, libraries, parks, population, housing and employment and global climate change when compared to the proposed project although the magnitude of these impacts would be reduced due to a 26 percent reduction in the number of residential lots (i.e., 935 units versus 1,260 units). As with the proposed project, impacts on all of these issues would be less than significant with implementation of mitigation measures, with the exception of visual quality, noise, air quality, and law enforcement services, where impacts would remain significant and unavoidable. In addition, under this Alternative a trail easement would not be provided.

The Reduced Project Alternative B would have less impact on biological resources due to the reduction in area of disturbance and the avoidance of impacts to the unnamed drainage in the southern portion of the site.

This Alternative would not include the major highway improvement involving the Whites Canyon Extension to Sierra Highway proposed by the project and shown on the County's Draft Highway Plan. Consequently, this Alternative would add approximately 40 percent more traffic onto Whites Canyon Road compared to the proposed project due to Whites Canyon Road being the only point of access. As a result, impacts to Whites Canyon Road and to Plum Canyon Road would be greater than those of the proposed project. Although traffic volumes would be less under this Alternative than those identified for the proposed project, this Alternative would have a greater impact than the proposed project since it would result in new traffic impacts to neighborhood residential streets (i.e., Bakerton Avenue immediately west of the development area where the southern portion of the development could be accessed) within the City that would not occur with the proposed project.

In addition, land use opportunities would be less under this Alternative since it would not be as supportive as the proposed project of accommodating projected growth and demand for housing. Consequently, to the extent that demand is unmet, future development could occur in more outlying areas. Although these land use impacts would be different than the proposed project, they would still be considered less than significant.

4. RELATIONSHIP OF THE ALTERNATIVE TO PROJECT OBJECTIVES

In summary, the Reduced Project Alternative B would attain most of the basic objectives of the project although not to the same extent as the proposed project.

As with the proposed project, but to a lesser extent, Alternative B would meet all of the land use planning and resource conservation objectives of the project. This Alternative would provide a residential development that would increase housing supply to accommodate regional growth in a location that is adjacent to existing and planned infrastructure, urban services, transportation corridors, and major employment centers and would be compatible with surrounding communities and land uses. It would cluster development within the site to preserve regionally significant ecological areas and other natural open space while reducing the landform alteration that would occur with the proposed project to fulfill key land use planning and resource conservation objectives of the project. Although this Alternative would provide a public park, it would not support the extension of the County Trails System, and therefore would only partially meet the park and recreation objectives of the proposed project.

This Alternative would not include the major highway improvement involving the Whites Canyon Extension to Sierra Highway proposed by the project and shown on the County's Draft Highway Plan and, as such, would not fulfill this particular mobility objective. Without this highway extension through the site, a street system with convenient connections to adjoining regional transportation routes would not be provided. Because Alternative B would reduce the

size of the project by approximately 26 percent, it would not increase the supply of housing to serve existing and future needs in the Santa Clarita Valley to the same degree as the proposed project.

As indicated above, Reduced Project Alternative B would not meet some of the key mobility objectives or fulfill other objectives to the same degree as the proposed project.

5.0 ALTERNATIVES
F. COMPARISON OF ALTERNATIVES AND IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Section 15126(d) of the *State CEQA Guidelines* indicates that an analysis of alternatives to the proposed project shall identify one alternative to the project as the environmentally superior alternative. Furthermore, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify the environmentally superior alternative from among the other alternatives. Table 5-1 on page 5-61 provides a summary matrix that compares the impacts associated with the project with the impacts of each of the proposed alternatives.

Of the alternatives analyzed in this EIR, the No Project/No Development Alternative would involve no change to the environment and is, therefore, considered environmentally superior overall. However, the No Project/No Development Alternative would not allow for development of the site and would not achieve any of the project objectives. This Alternative would not preclude future development of the site with another planned residential project.

In accordance with the *State CEQA Guidelines* requirement to identify an environmentally superior alternative other than the No Project Alternative, a comparative evaluation of the remaining alternatives is presented below.

Although the Reasonably Foreseeable On-Site Development Alternative would considerably reduce the number of residential lots and area of disturbance, it would create greater impacts, particularly on biological resources, because of the placement of the developments location within a highly sensitive resource area supporting vernal pools, two federally-listed plant species, and one federally-listed invertebrate species. Furthermore, it would be less supportive of land use policies and patterns than the proposed project due to a site location remote from more concentrated development and infrastructure to the south, and conflicts with both land use and biotic resource related policies. In contrast to the other development alternatives, this Alternative would, however, avoid significant impacts (prior to mitigation) associated with liquefaction and traffic.

The Reduced Project Alternative A includes the Reasonably Foreseeable On-Site Development Alternative and a reduced residential development on the southern portion of the project site. As such, this Alternative would have the same impacts identified for the Reasonably Foreseeable On-Site Development Alternative and additional impacts associated with the reduced residential development on the southern portion of the project site. Similar to the Reasonably Foreseeable On-Site Development Alternative, this Alternative would create greater

impacts, particularly on biological resources and visual quality, than the proposed project because of the northern development within a highly sensitive resource area supporting listed species and the visual alteration of Cruzan Mesa. It would also offer less opportunities to implement land use policies and patterns due to a site location remote from more concentrated development and infrastructure to the south.

Among the three development Alternatives, Reduced Project Alternative B would reduce all of the project-related impacts, with the exception of traffic impacts related to residential neighborhood streets and land use impacts related to the implementation of open space and regional development policies. Compared to the other two development Alternatives, the Reduced Project Alternative B would avoid development on the northern portion of the project site and preserve or otherwise leave undeveloped regionally significant biological resources located on Cruzan Mesa and other important biotic resources in the northern portion of the site. It would also avoid direct impacts to the unnamed drainage in the southern portion of the site.

The comparison of Alternatives indicates that the Reduced Project Alternative B would be environmentally superior as it would reduce almost all of the project-related impacts, including biological resource impacts associated with grading of the unnamed drainage in the southern portion of the site. Although the magnitude of impacts for most environmental issues would be reduced compared to the proposed project, Reduced Project Alternative B would still have the same, albeit reduced, significant and unavoidable impacts. Even with a 26 percent reduction in project size and other design changes, there would still be significant and unavoidable impacts associated with visual impacts due to grading/landform alteration, traffic, construction and operational air quality and noise, solid waste, law enforcement, and global climate change. Even with a notably smaller project, these impacts are difficult to avoid or fully mitigate. For example, the topography of the site is such that unless important biological resources in the northern (more level) portion of the site are impacted, grading to support residential development will have significant impacts on landform and views. Furthermore, even a more substantial reduction in the size of the project than provided with Alternative B would still result in significant impacts associated with both construction and operational air and noise, due to the nature of these impacts.

However, as previously discussed, by reducing the size of the project by approximately 26 percent, Reduced Project Alternative B would not fulfill certain objectives to the same degree as the proposed project. For example, due to the reduction in the amount of residential development, the Alternative would not increase the supply of housing to serve existing and future needs in the Santa Clarita Valley to the same degree as the proposed project. This Alternative would also not fulfill park and recreation objectives to the same extent as the proposed project, since no trail easement would be provided to support the extension of the County Trail System. Additionally, Reduced Project Alternative B would not fulfill the mobility objective of providing for the major highway improvement involving the Whites Canyon

Extension to Sierra Highway, as proposed by the project and conditionally approved and shown on the County's Draft Highway Plan. Without this highway improvement as part of the project, the County's ability to complete such a connection could be compromised, as it would not be substantially funded by the project and its implementation, if it were to occur, could be significantly delayed.

Table 5-1**Comparison of Impacts of the Alternatives with Impacts of the Proposed Project**

Issue Area	Proposed Project Impacts	No Project/ No Development Alternative	Reasonably Foreseeable On-Site Development Alternative	Reduced Project Alternative A	Reduced Project Alternative B
Geotechnical Resources					
Seismic Ground Shaking	Less than significant	Less (no impact; project impact avoided)	Similar (less than significant)	Similar (less than significant)	Similar (less than significant)
Liquefaction/Dry Seismic Settlement	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (no impact; project impact avoided)	Similar (less than significant with mitigation)	Similar (less than significant with mitigation)
Landslides	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Similar (less than significant with mitigation)	Similar (less than significant with mitigation)
Soils	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (less than significant with mitigation)
Hydrology and Water Quality					
Hydrology	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (significant unavoidable)
Water Quality (Construction)	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (less than significant with mitigation)
Water Quality (Operation)	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (less than significant with mitigation)
Biological Resources	Less than significant with mitigation	Less (no impact; project impact avoided)	Greater (significant unavoidable)	Greater (significant unavoidable)	Less (less than significant with mitigation)

Table 5-1 (Continued)

Comparison of Impacts of the Alternatives with Impacts of the Proposed Project

Issue Area	Proposed Project Impacts	No Project/ No Development Alternative	Reasonably Foreseeable On-Site Development Alternative	Reduced Project Alternative A	Reduced Project Alternative B
Cultural and Paleontological Resources					
Archaeological Resources	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (less than significant with mitigation)
Native American Resources	No impact	Similar (no impact)	Similar (no impact)	Similar (no impact)	Similar (no impact)
Paleontological Resources	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (less than significant with mitigation)
Visual Qualities					
Construction	Significant unavoidable	Less (no impact; project impact avoided)	Less (significant unavoidable)	Greater (significant unavoidable)	Less (significant unavoidable)
Visual	Significant unavoidable	Less (no impact; project impact avoided)	Less (significant unavoidable)	Greater (significant unavoidable)	Less (significant unavoidable)
Light and Glare	Less than significant	Less (no impact)	Less (less than significant)	Greater (less than significant)	Less (less than significant)
Traffic/Access					
County/City Intersections	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant; project impact avoided)	Less (less than significant with mitigation)	Greater (less than significant with mitigation)
Freeway (Highway 14)	Cumulatively significant unavoidable	Less (no impact)	Less (cumulatively significant unavoidable)	Less (cumulatively significant unavoidable)	Less (cumulatively significant unavoidable)
Noise					
Construction	Significant unavoidable	Less (no impact; project impact avoided)	Less (less than significant)	Less (significant unavoidable)	Less (significant unavoidable)
Operation	Significant unavoidable	Less (no impact; project impact avoided)	Less (significant unavoidable)	Less (significant unavoidable)	Less (significant unavoidable)

Table 5-1 (Continued)**Comparison of Impacts of the Alternatives with Impacts of the Proposed Project**

Issue Area	Proposed Project Impacts	No Project/ No Development Alternative	Reasonably Foreseeable On-Site Development Alternative	Reduced Project Alternative A	Reduced Project Alternative B
Air Quality					
Construction	Significant unavoidable	Less (no impact; project impact avoided)	Less (significant unavoidable)	Less (significant unavoidable)	Less (significant unavoidable)
Operation	Significant unavoidable	Less (no impact; project impact avoided)	Less (significant unavoidable)	Less (significant unavoidable)	Less (significant unavoidable)
Water Resources	Less than significant	Less (no impact)	Less (less than significant)	Less (less than significant)	Less (less than significant)
Wastewater Disposal	Less than significant	Less (no impact)	Less (less than significant)	Less (less than significant)	Less (less than significant)
Solid Waste Disposal	Less than significant	Less (no impact)	Less (less than significant)	Less (less than significant)	Less (less than significant)
Law Enforcement Services	Significant unavoidable	Less (no impact; project impact avoided)	Less (significant unavoidable)	Less (significant unavoidable)	Less (significant unavoidable)
Fire Services and Hazards	Less than significant with mitigation	Less (no impact; project impact avoided)	Less (less than significant with mitigation)	Less (less than significant with mitigation)	Less (less than significant with mitigation)
Education	Less than significant	Less (no impact)	Less (less than significant)	Less (less than significant)	Less (less than significant)
Libraries	Less than significant	Less (no impact)	Less (less than significant)	Less (less than significant)	Less (less than significant)
Parks	Less than significant	Less (no impact)	Similar (less than significant)	Similar (less than significant)	Similar (less than significant)
Land Use					
Open Space Policies	Less than significant	Less (no impact)	Greater (less than significant)	Greater (less than significant)	Similar (less than significant)
Regional Development	Less than significant	Greater (less than significant)	Greater (less than significant)	Greater (less than significant)	Greater (less than significant)

Table 5-1 (Continued)

Comparison of Impacts of the Alternatives with Impacts of the Proposed Project

Issue Area	Proposed Project Impacts	No Project/ No Development Alternative	Reasonably Foreseeable On-Site Development Alternative	Reduced Project Alternative A	Reduced Project Alternative B
Population, Housing and Employment					
Population and Housing	Less than significant	Less (no impact)	Less (less than significant)	Less (less than significant)	Less (less than significant)
Employment	Less than significant	Less (no impact)	Less (no impact)	Less (no impact)	Less (less than significant)
Global Climate Change	Cumulatively significant and unavoidable	Less (no impact)	Less (cumulatively significant unavoidable)	Less (cumulatively significant unavoidable)	Less (cumulatively significant unavoidable)

6.0 OTHER CEQA CONSIDERATIONS

This chapter presents the evaluation of other types of environmental impacts required by CEQA that are not covered within the other chapters of this EIR. Other CEQA considerations include environmental effects that were found not to be significant, irreversible environmental changes, growth-inducing impacts, significant and unavoidable adverse impacts, and potential secondary impacts.

A. ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

The Initial Study for the project, completed in May 2004, determined that the project would result in no impacts or less-than-significant impacts for two environmental issues. The Initial Study indicates why the project's potential effects on these issues were determined not to be significant and were, therefore, eliminated from further consideration in this Draft EIR. The Initial Study for the project is included in this Draft EIR as Appendix A. The issue areas determined to be less than significant by the Initial Study include the following:

1. Agricultural Resources

As identified in the Initial Study, the Los Angeles County Important Farmland 2002 map does not identify the project site as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the proposed project would not convert such uses to non-agricultural uses. In addition, there is no Williamson Act contract on the property. Although the County of Los Angeles Zoning Code designates the project site for agricultural uses, including A-2-1 (Heavy Agricultural), and A-1-1 and A-1-10,000 (Light Agricultural), permitted uses for areas zoned as A-1 include, but are not limited to, single family residences, crops, greenhouses, and the raising of cattle, horses, sheep, goats, poultry, etc. Areas zoned as A-2 may have A-1 permitted uses and animal hospitals, dairies, dog kennels, livestock feed lots, manure spreading, and oil wells. As such, the proposed project would not conflict with existing zoning for agricultural use or with a Williamson Act contract. The proposed project would not result in changes in the existing environment that could convert important Farmland to non-agricultural use.

2. Mineral Resources

The project area is not a designated mineral extraction site or a regionally or locally important significant mineral resource area. As such, project implementation would not result in

impacts associated with the loss or availability of a known mineral resource that would be of value to the region and the residents of the state.

B. IRREVERSIBLE ENVIRONMENTAL CHANGES

According to Section 15126.2(c) of the *State CEQA Guidelines*, “[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.” Therefore, the purpose of this analysis is to identify significant irreversible environmental effects of project implementation that cannot be avoided.

Both construction and operation of the project would necessarily lead to the consumption of limited, slowly renewable, and non-renewable resources, committing such resources to uses that future generations would be unable to reverse. The new development would require the commitment of resources that include: (1) building materials; (2) fuel and operational materials/resources; and (3) the transportation of goods and people to and from the project site.

Construction of the project would consume certain types of lumber and other forest products, the raw materials in steel, metals such as copper and lead, aggregate materials used in concrete and asphalt such as sand and stone, water, petrochemical construction materials such as plastic, petroleum based construction materials and other similar slowly renewable or nonrenewable resources. Additionally, fossil fuels for construction vehicles and equipment would also be consumed. In terms of project operations, the following slowly renewable and nonrenewable resources would be required: natural gas and electricity; petroleum based fuels; fossil fuels, and water. Title 24 of the California Administrative Code regulates the amount of energy consumed by new development for heating, cooling, ventilation, and lighting purposes. Nevertheless, the consumption of such resources would represent a long-term commitment of those resources.

The commitment of resources required for the construction and operation of the project would limit the availability of such resources for future generations or for other uses during the life of the project. However, continued use of such resources is consistent with the anticipated growth and planned changes within the Santa Clarita Valley area and Los Angeles County. Furthermore, impacts to energy supply would be less than significant, given the existing levels of development within the Santa Clarita Valley region in relation to the net increase in on-site density and use and since construction uses would be temporary. Energy supplies are available

to serve the project, and the project would incorporate design, materials, and technology that would advance energy conservation.

The project would result in commitment of approximately 622 acres of undeveloped land, which includes biotic resources, to an operating elementary school, a 12-acre public park, and 1,260 dwelling units, eliminating other options for its use, along with the long-term commitment of water supply, wastewater treatment services, and solid waste disposal. However, at the same time, the project would set aside approximately 1,551 acres as natural open space that might otherwise be subject to development. However, as indicated in the respective sections of this Draft EIR, impacts associated with these utilities and associated resources would be less than significant after implementation of mitigation measures.

C. GROWTH-INDUCING IMPACTS

Pursuant to Section 15126.2(d) of the *State CEQA Guidelines*, an EIR must address whether a project will directly or indirectly foster growth. Section 15126.2(d) reads as follows:

“[An EIR shall] discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of wastewater treatment plant, might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact. The characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively, should also be discussed. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.”

The analysis provided below evaluates whether the proposed project would directly, or indirectly, induce population, housing, or economic growth in the surrounding environment.

1. Direct Growth-Inducing Impacts in the Surrounding Environment

A project would directly induce growth if it would remove barriers to population growth such as a change to a jurisdiction's General Plan and Zoning Ordinance which allowed new residential development to occur. The proposed project would be developed through a Condition Use Permit (CUP) in accordance with the County Zoning Ordinance. In addition, the density of the project, which involves a density transfer from the northern portion of the site to the southern portion of the site, would be consistent with the provisions of the General Plan and the Santa

Clarita Valley Area Plan. This density transfer within the project site would allow the northern 1,551 acres of the site to remain undeveloped, concentrating residential development to the south. The placement of housing in the southern portion of the site would provide residential uses, a public school, and a public park, in areas adjacent to other residential neighborhoods, which lie immediately west and south of the project site already served by fully-established utility services and infrastructure.

As discussed in Section 4.R, Population, Housing and Employment, the significance of the population and housing increase associated with the proposed project was assessed by comparing the expected population increase during the 2007 to 2017 period with the population growth projected for the Local Area, the Subregion Area, and the Regional Area within which the project is located during the same period. As discussed therein, the population and housing increase generated by the proposed project is within growth forecasts for the area and represents a relatively small component of the expected growth projected by SCAG for these three geographic areas. As concluded, the population and housing impacts of the proposed project would not cause population or housing unit growth or accelerate development in an undeveloped area such that adopted growth projections with project occupancy/build out would be exceeded.

Similarly, the proposed project is forecast to result in a total employment increase of 62 new jobs from the development of the proposed school and parks. These employment opportunities generated by the project represent a negligible percentage of the SCAG employment growth forecast for the three geographical areas. As a result, the employment impacts of the proposed project would not cause employment growth or accelerate development in an undeveloped area that exceeds projected/planned levels for the year of project occupancy/build out.

However, the proposed project would result in economic growth in the surrounding area as it would contribute to the overall economic success of adjacent residential communities (i.e., increase property values) and commercial areas within the project vicinity. In addition, the project would generate annually-recurring revenue in the form of taxes and other fees (e.g., sales tax, property tax, utility fees, etc.) and expand the County's financial resources, which would be a beneficial impact.

2. Indirect Growth-Inducing Impacts in the Surrounding Environment

A project would indirectly induce growth if it would increase the capacity of infrastructure in an area in which public services currently meet demand. Examples would be increasing the capacity of a sewer treatment plant, or a roadway beyond that needed to meet existing demand.

On-site improvements to the existing water and wastewater distribution system, as well as storm drain systems, would be constructed to serve the proposed development and would be

sized according to agency requirements and projected demands, including maximum daily demands and loads. Project infrastructure improvements are required to meet the proposed flow and distribution needs of the proposed project. However, certain infrastructure improvements may also serve needs that go beyond the project, such as the extension of Whites Canyon Road and provision of a 24-inch sewer line in Sierra Highway. These improvements are not considered growth-inducing as such infrastructure is generally planned and anticipated and would not be constructed to support growth beyond what is anticipated with build out of the area.

D. SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL IMPACTS

State CEQA Guidelines § 15126.2(b) requires that an EIR describe significant environmental impacts that cannot be avoided, including those effects that can be mitigated but not reduced to a less-than-significant level. Following is a summary of the impacts that were concluded to be significant and unavoidable. These impacts are also described in detail in Chapter 4.0, Environmental Impact Analysis, of this Draft EIR.

1. Visual Qualities (See Section 4.E of this Draft EIR)

Implementation of the mitigation measures identified in Section 4.E, Visual Qualities, would reduce visual impacts. However, impacts associated with project construction activities and the change in views from the existing residential neighborhood to the west, particularly from those residences located west of the project site that are oriented to the east, would remain significant and unavoidable due to the alteration of a scenic vista and the modification of hillsides and ridgelines.

2. Traffic/Access (See Section 4.F of this Draft EIR)

As determined in Section 4.F, Traffic/Access, due to the speculative nature of the timing of implementation and availability of funding to implement the planned improvements to Highway 14, the reduction of the project's contribution to cumulative impacts on Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange to less than significant levels cannot be guaranteed, and as such, cumulative impacts to Highway 14 between Sand Canyon Road to south of the Sierra Highway interchange would remain significant and unavoidable.

3. Noise (See Section 4.G of this Draft EIR)

Implementation of the mitigation measures identified in Section 4.G, Noise, would attenuate construction-related noise levels. However, noise levels would continue to exceed the thresholds of significance during the movement of construction equipment and grading phases even with implementation of the mitigation measures. Therefore, construction activity would result in a significant and unavoidable impact to sensitive receptors in the project area.

As determined in Section 4.G, Noise, no on- or off-site point source significant unavoidable operational noise impacts would result from the Skyline Ranch project with the implementation of the recommended mitigation measures. However, noise levels at noise-sensitive uses along a number of the roadway segments affected by project traffic are already considered unacceptable under the City and State Guidelines and, as such, project noise impacts at these locations are considered to be significant under Criterion 3 (see Section 4.G for a discussion of the different criteria). Therefore, off-site mobile noise levels would result in significant and unavoidable impacts.

In addition, development of the proposed project and the related projects would result in significant cumulative noise impacts at sensitive receptor locations along segments of Sierra Highway and Whites Canyon Road under Criteria 2 and 3.

4. Air Quality (See Section 4.H of this Draft EIR)

Although the recommended mitigation measures would reduce the magnitude of construction- and operation-related emissions to some extent, feasible mitigation is not available to reduce all emissions to below the SCAQMD's recommended thresholds of significance. The project's construction-related regional emissions of PM₁₀, PM_{2.5}, CO, NO_x, and VOC and local emissions of PM₁₀, and PM_{2.5}, while temporary, would be significant and unavoidable. Similarly, the project's operation-related regional emissions of PM₁₀, PM_{2.5}, CO, NO_x, and VOC would be significant and unavoidable.

In addition, the project would contribute to a significant and unavoidable cumulative construction air quality impact given that the Basin is non-attainment for ozone, PM₁₀, and PM_{2.5}, and that the project results in short-term regional construction impacts for ozone precursors (VOC and NO_x), and PM₁₀ and PM_{2.5}. Moreover, project-related localized construction emissions would contribute to a significant unavoidable cumulative air quality impact.

Furthermore, implementation of the project would result in an increase in emissions which would contribute to region-wide emissions on a cumulative basis and as such, the project's contribution to cumulative air quality impact is concluded to be significant and unavoidable.

5. Solid Waste Disposal (See Section 4.K of this Draft EIR)

Although the project itself is not expected to have a significant impact on solid waste disposal, it is accepted that the uncertainties regarding future landfill capacity could result in a worst case scenario where shortages in landfill capacity could result. Thus, it is conservatively concluded that the project together with projected growth in the County could result in a cumulatively significant impact on solid waste disposal. If such shortages in landfill capacity

occur, it is expected that changes in regulations and increases in mitigation requirements would occur to address the impact. However, even with such efforts, impacts may remain cumulatively significant and unavoidable.

6. Law Enforcement Services (See Section 4.L of this Draft EIR)

While general fund revenues have historically supported adequate levels of law enforcement services in the area and the County currently collects a Law Enforcement Facilities Fee to fund the project's share of capital improvements, if sufficient funding for Sheriff's services is not maintained by the County or if sufficient funds are not allocated toward additional CHP staffing and facilities in the area, the project's impacts on law enforcement services would be significant and unavoidable. Therefore, even with implementation of mitigation measures, if County and State funds are not allocated to support increases in law enforcement services in the area, impacts would remain significant and unavoidable.

7. Global Climate Change (See Section 4.S of this Draft EIR)

Although the significance of the proposed project's impacts on global climate change are too speculative to determine, it was conservatively concluded that even with implementation of project features, GHG reduction measures, and mitigation measures, the proposed project's GHG emissions would represent a cumulatively considerable incremental contribution to significantly cumulative impacts associated with global climate change.

E. POTENTIAL SECONDARY EFFECTS

Section 15126.4(a)(1)(D) of the *State CEQA Guidelines* requires that, "If a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measure shall be discussed but in less detail than the significant effects of the project as proposed." With regard to this section of the *State CEQA Guidelines*, the potential impacts that could result with the implementation of each mitigation measure proposed for the project was reviewed. The following provides a discussion of the potential secondary impacts that could occur as a result of the implementation of the measures by environmental issue area.

1. Geotechnical Resources (See Section 4.A of this Draft EIR)

The mitigation measures contained in the Geotechnical Resources Section would require the incorporation and implementation of the recommendations provided in the geotechnical investigation report prepared for the project. These measures would ensure that no impacts

related to liquefaction, landslides, slope stability, expansive soils, and soil erosion would occur. The impacts that would result from implementation of these measures would occur during project construction and, as such, have been included in the analyses of project construction impacts in each of the environmental issue areas addressed in Chapter 4.0 of this Draft EIR. Therefore, no other physical changes to the environment would occur beyond those that would result during project construction as addressed in Section 4.A, Geotechnical Resources, and no secondary impacts would occur.

2. Hydrology and Water Quality (See Section 4.B of this Draft EIR)

The mitigation measure to reduce impacts to storm drains and flooding would require the construction of a culvert or bridge on-site within the floodplain area to off-set any displacement of floodplain area in the vicinity of Sierra Highway and its intersection with proposed Skyline Ranch Road. The impacts that would result from implementation of this measure would occur during project construction and, as such, have been included in the analyses of project construction impacts in each of the environmental issue areas addressed in Chapter 4.0 of this Draft EIR. Therefore, no other physical changes to the environment would occur beyond those that would result during project construction, and no secondary impacts would occur.

Implementation of standard conditions of grading permit approval, such as preparation of an ECP and a SWPPP that incorporate BMPs, including proper grading techniques, sedimentation control, and erosion control, would effectively limit sediment transport into the area's drainage system during construction activities. Similarly, implementation of standard conditions of a NPDES storm water permit approval, such as preparation of a SUSMP that incorporates BMPs for non-point source pollution control, would effectively address discharge of urban-related pollutants during project operation. As such, no other physical changes to the environment would occur beyond those that would result during project construction and operation as addressed in Section 4.B, Hydrology, and no secondary impacts would occur.

3. Biological Resources (See Section 4.C of this Draft EIR)

Mitigation Measure 4.C-1 involves preservation of habitat and open space within the SRCA. As such, this mitigation measure would not result in physical changes to the environment beyond those actions that would be implemented to maintain the long-term integrity of biological resources within the SRCA. Mitigation Measure 4.C-2 includes the preservation of 1.53 acres of southern vernal pool and artificial pools habitats within the SRCA subject to RWQCB jurisdiction and the establishment of 7.27 acres of sycamore/cottonwood riparian woodland within Plum Canyon. The preservation of the southern vernal pool and artificial habitat within the SRCA would not result in significant secondary effects, since development in these areas would be avoided. Additional restoration/revegetation efforts include the planting of sycamore trees in the vicinity of the holly-leaved cherry woodland in Plum Canyon to mimic

current conditions elsewhere on-site. On-site occurrences of both species indicate that they can exist concomitantly without the risk of conversion from one type to another altogether. With appropriate spacing and the use of drip irrigation on the planted sycamores, the existing swath of holly-leaved cherry will not be adversely affected by the addition of the sycamore riparian woodland. As a result, no substantial or significant physical changes to the environment beyond the minor ground disturbance during planting would result from implementation of this measure. The establishment of sycamore riparian woodland will be subject to ACOE, RWQCB, and CDFG approval and will be undertaken in a manner that will avoid significant indirect impacts. Mitigation Measure 4.C-3 ensures the implementation of the Migratory Bird Treaty Act (MBTA). This measure would require a biological survey be conducted prior to the removal of vegetation, if removal occurs between February and September. In the event that nesting is observed, the biologist shall recommend a buffer area with a specified radius to be established. Provision of a buffer area would not result in a significant effect but would rather provide an undisturbed area within which no intrusion shall be allowed until the young had fledged and left the nest. As such, no significant secondary impacts would result from implementation of this mitigation measure. Mitigation Measure 4.C-4 involves the replacement of one oak tree on the project site and potential replacement of one oak tree off-site, in the City of Santa Clarita. Implementation of this measure would be in accordance with the County's Oak Tree Ordinance and conditions of the City's oak tree removal permit and thus, would not result in any secondary impacts. Mitigation Measure 4.C-5 requires the use of native plant species within fuel modification zones adjacent to open space areas to the extent feasible. Because the plant palette within these fuel modification areas would be consistent with County Fire Department Guidelines, no secondary impacts would occur.

4. Cultural and Paleontological Resources (See Section 4.D of this Draft EIR)

Mitigation measures identified in Section 4.D, Cultural and Paleontological Resources, include site avoidance, testing and data recovery, monitoring, and orientation of construction workers regarding unanticipated discoveries of cultural resources. These measures would ensure that no impacts related to archaeological, Native American, and paleontological resources would occur. Implementation of these measures would not result in physical changes to the environment. As such, their implementation would not cause potential secondary effects on the environment.

5. Visual Qualities (See Section 4.E of this Draft EIR)

Mitigation Measure 4.E-1 involves locating construction equipment, stockpiles, and staging areas out of public and private views to reduce degradation of scenic views. Implementation of this measure is a procedural action to ensure that construction activities would be screened from public and private views to the maximum extent feasible. This measure would

not result in direct physical changes to the environment, and as such, its implementation would not cause potential secondary effects on the environment.

Mitigation Measure 4.E-2(a) involves landscaping of engineered slopes on both sides of Skyline Ranch Road, which would be implemented as part of project construction. The impacts that would result from project landscaping have been included in the analyses of project construction impacts in each of the environmental issue areas addressed in Chapter 4.0 of this Draft EIR. Mitigation Measure 4.E-2(b) involves preparation of a landscape plan. Implementation of this measure is a procedural action to ensure that project landscaping would not contrast in form and color with adjacent undeveloped areas. This measure would not result in direct physical changes to the environment, and, as such, its implementation would not cause potential secondary effects on the environment.

6. Traffic/Access (See Section 4.F of this Draft EIR)

All of the traffic mitigation measures require the project to pay its fair share contribution to implement intersection and other transportation improvements in the project vicinity or construct these improvements in order to provide access to the project. No significant effects would result from payment of fees. However, the physical improvements that would result from the payment of fair share contributions or construction of these improvements directly, such as restriping, installing a traffic signal, and widening, may result in potential secondary effects. In particular, Mitigation Measure 4.F-2(a) may necessitate some right-of-way acquisition. These traffic measures would require varying levels of construction activities, which could result in air quality, noise and traffic impacts. As these improvements are designed and implemented, appropriate construction practices intended to minimize impacts would be required. For example, the implementation of best management practices with regard to erosion, the watering of construction sites, the use of properly operating equipment, and the use of noise reduction devices would minimize environmental impacts. In addition, traffic flow during construction of the improvements would be considered by the appropriate agency.

7. Noise (See Section 4.G of this Draft EIR)

Mitigation Measures 4.G-1(a) through 4.G-2(d) would be implemented during construction of the project and would be temporary in nature. In addition, the impacts that would result from implementation of these measures have been included in the analyses of project construction impacts in each of the environmental issue areas addressed in Chapter 4.0 of this Draft EIR. Mitigation Measures 4.G-2(d), 4.G-3(a), 4.G-4(a), and 4.G-4(b) involve the preparation of detail acoustical analyses, which are considered procedural actions to ensure that noise levels at sensitive receptor locations are reduced to a minimum. As such, these measures would not result in direct physical changes to the environment, and, as such, their implementation would not cause potential secondary effects on the environment.

Mitigation Measures 4.G-3(b) and 4.G-3(c) involve additional features that the project would be required to implement to reduce exterior and interior noise levels at on-site single-family residences. These measures would not result in direct physical changes to the environment, and, as such, their implementation would not cause potential secondary effects on the environment. Mitigation Measure 4.G-3(a) involves the construction of a 6-foot masonry wall along Skyline Ranch Road west of its future intersection with Sierra Highway. The impacts resulting from implementation of this measure are not anticipated to go beyond those that have been identified in the analyses of project construction impacts in each of the environmental issue areas addressed in Chapter 4.0 of this Draft EIR.

8. Air Quality (See Section 4.H of this Draft EIR)

Mitigation Measures 4.H-1(a) through 4.H-1(c) would be implemented during construction of the project and, thus, would be temporary in nature. Generally, construction mitigation measures are prescribed to minimize emissions by controlling fugitive dust, regular maintenance of construction equipment, limiting idling of construction trucks and vehicles, suspension of construction equipment operations during first stage smog alerts, use of electricity rather than diesel or gasoline where practicable, and compliance with applicable SCAQMD rules and regulations. Because these measures represent procedural actions and would not result in physical changes to the environment, none of the measures would result in significant secondary impacts. In addition, the mitigation measures identified for project operation (Mitigation Measures 4.H-2(a) and 4.H-2(b)) are prescribed to limit stationary source emissions by complying with Title 24 of the California Code of Regulations (Energy Efficiency Standards for Residential and Nonresidential Buildings) and the use of energy-efficient lighting for public streets, parking areas and recreation areas. These operational mitigation measures would not result in secondary impacts.

9. Water Resources (See Section 4.I of this Draft EIR)

Mitigation Measures 4.I-1 and 4.I-2 involves the use of water efficient plumbing fixtures which would not result in significant secondary impacts. Mitigation Measure 4.I-3 and 4.I-4 would require the use of drip irrigation and drought-tolerant vegetation for landscaping. Because these measures would require the review of a landscape plan by the County, no secondary impacts, such as fire risks associated with certain plant materials, are anticipated. Mitigation Measure 4.I-5 would involve informing residents of the benefits of low-water using landscaping. The provision of such information would not result in physical changes to the environment, therefore no secondary impacts would occur.

10. Law Enforcement Services (See Section 4.L of this Draft EIR)

Mitigation Measures 4.L-1(a) and 4.L-1(b) involve coordination and consultation with the Sheriff's Department to address crime prevention features and emergency response. These measures would not result in direct physical changes to the environment, and, as such, their implementation would not cause potential secondary effects on the environment.

11. Fire Services and Hazards (See Section 4.L of this Draft EIR)

Mitigation Measures 4.M-1(a) through 4.M-1(i) involve payment of fees and implementation of fire prevention and suppression measures and adequate emergency access to the satisfaction of and approval by the Los Angeles County Fire Department (LACoFD). Implementation of these measures is a procedural action to ensure that sufficient fire protection features and adequate emergency access are provided by the project. These measures would not result in direct physical changes to the environment, and, as such, their implementation would not cause potential secondary effects on the environment. Mitigation Measure 4.M-2 involves preparation of a Fuel Modification Plan for submittal to the LACoFD. Similarly, implementation of this measure is a procedural action to ensure that the threat of wildfire is reduced to the minimum extent feasible. Impacts of fuel modification on Biological Resources were analyzed in Section 4.C of this Draft EIR.

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